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Before the

UNITED STATES POSTAL RATE COMMISSION

In the Matter of: POSTAL RATE AND FEE CHANGES

Docket No. R97-1

VOLUME 11

DATE: Monday, October 20, 1997

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BEFORE THE

POSTAL RATE COMMISSION

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In the Matter of: :

POSTAL RATE AND FEE CHANGES : Docket No. R97-1

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Third Floor Hearing Room
Postal Rate Commission
1333 H Street, N.W.
Washington, D.C. 20268

Volume 11
Monday, October 20, 1997

The above-entitled matter came on for hearing, pursuant to notice, at 9:30 a.m.

BEFORE:

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HON. W. H. "TREY" LeBLANC, III, COMMISSIONER
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MICHAEL D. BRADLEY				

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DOCUMENTS TRANSCRIBED INTO THE RECORD: [continued]	PAGE
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E X H I B I T S

EXHIBITS AND/OR TESTIMONY	IDENTIFIED	RECEIVED
Direct Testimony and Exhibits of Michael D. Bradley, Exhibit No. USPS-T-14	5241	5241
Designation of Written Cross-Examination of Michael D. Bradley		5243
Additional Designation of Written Cross-Examination of Michael D. Bradley		5517
Cross Examination Exhibit Nos. Time Warner-XE-1 and Time Warner-XE-2		5562
Direct Testimony and Exhibits of Ralph J. Moden, Exhibit No. USPS-T-4	5601	5601
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P R O C E E D I N G S

[9:30 a.m.]

CHAIRMAN GLEIMAN: Good morning, we continue hearings on Docket R97-1. The Postal Service requests for changes in rates and fees scheduled to appear is Postal Service witnesses Bradley and Moden.

Let me call everyone's attention to Presiding Officer's Ruling 49 which was issued last Friday. It certifies the full Commission three motions filed Thursday evening. These motions seek relief related to proposed admission into evidence of materials first made available as library references.

The time for responses to these motions have been extended to Friday the 24th to ensure that all participants are able to provide the Commission with their views. As is evidenced by my certification of these motions to the full Commission this is an extremely important matter.

I'm not going to paint a picture for you, but the options, I think, are quite clear that the Commission is faced with and they have far-reaching implications for the continued consideration of the Postal Service's proposals.

I want to encourage all parties to participate in this discussion.

The hearings previously scheduled for receipt of testimony sponsoring library references has been cancelled.

So, if we complete the cross-examination of the prefiled Postal Service testimony as scheduled on Wednesday the 22nd, there will be no hearings on the 23rd and 24th.

Copies of the ruling are available at the table in the front of the room.

Does any participant have a procedural matter to raise at this point in time?

[No response.]

CHAIRMAN GLEIMAN: If not, then we'll proceed with our first witness.

Counsellor?

MS. DUCHEK: The Postal Service calls Dr. Michael Bradley.

CHAIRMAN GLEIMAN: Dr. Bradley, is already under oath in these proceedings. If you would like to continue.

WHEREUPON,

MICHAEL D. BRADLEY,

a witness, was called for examination by counsel for the United States Postal Service and, having been previously duly sworn was examined and testified as follows:

DIRECT EXAMINATION

BY MS. DUCHEK:

Q Would you state your full name for the record ~~recommendations~~, please?

A Michael David Bradley.

Q Dr. Bradley, I'm handing you two copies of the document entitled "Direct Testimony of Michael D. Bradley on behalf of United States Postal Service" which has been designated as USPS T-14. Are you ~~Fannie Mae~~ familiar with that document?

A I am.

Q Was it prepared by you or under your supervision?

A It was.

Q Does it contain your revisions made on August 18 and October 16, 1997?

A It does.

Q And if you were to testify orally today, would this still be your testimony?

A It would.

MS. DUCHEK: Mr. Chairman I'm going to give the reporter two copies of Dr. Bradley's written testimony, USPS T-14 and ask that it be entered into evidence.

CHAIRMAN GLEIMAN: Are there any objections?

[No response.]

CHAIRMAN GLEIMAN: Hearing none, Dr. Bradley's testimony and exhibits are received into evidence. I direct that they be accepted into evidence, and is our practice, they will not be transcribed.

[Direct Testimony and Exhibits of Michael D. Bradley, Exhibit No. USPS-T-14 was marked for

identification and received into evidence.]

CHAIRMAN GLEIMAN: Dr. Bradley, I know that you have had an opportunity the review and designated written cross-examination, but I still need to ask you that question for the record. So, have you had an opportunity to examine the package that was made available earlier today?

THE WITNESS: Yes, I have.

CHAIRMAN GLEIMAN: If these questions were asked of you today, would your answers be the same as those you previously provided in writing?

THE WITNESS: They would.

CHAIRMAN GLEIMAN: And have there been any changes in the package?

THE WITNESS: Yes.

CHAIRMAN GLEIMAN: Counsellor, could you help us out on that?

MS. DUCHEK: Yes, I'd be happy to, Mr. Chairman.

There were a number of designations that were made that were not included in the initial packet. We've nowhad copies made and included those in the packets. Those were DMA USPS T-14-20, 23, and 24, 31, 37, 39, and 40. Those are now in the packet.

We also removed three items which had been designated, took them out of the packet. The first was DMA,

USPS T-14-10. It was merely a duplicate. One copy remains in the packet, one was removed.

The second item, Time Warner had designated DMA USPS T-14-34, however, that had been redirected from Dr. Bradley and was answered by the Postal Service.

We also removed ABP/USPS-T-34-10(c) which had been designated by OCA. That was answered by Dr. Bradley. It had been redirected from witness Tafique, however, that relates to Dr. Bradley's transportation testimony, USPS T-13. If my recollection is correct, I believe that was included in the packet with Dr. Bradley's designations on Tuesday, October 14th. If I'm mistaken about that the Postal Service would be happy to allow OCA to later designate that interrogatory for inclusion in the proceedings on October 14.

CHAIRMAN GLEIMAN: Thank you. If you would hand two copies of the corrected designated written cross-examination to the reporter, I'll direct that they be accepted into evidence and transcribed into the record at this point.

[Designation of Written Cross-Examination of Michael D. Bradley was received into evidence and transcribed into the record.]

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, DC 20268-0001

Postal Rate and Fee Changes, 1997 Docket No. R97-1

DESIGNATION OF WRITTEN CROSS-EXAMINATION
OF UNITED STATES POSTAL SERVICE
WITNESS MICHAEL D. BRADLEY
(USPS-T-14)

The parties listed below have designated answers to interrogatories directed to witness Bradley as written cross-examination.

Party	Answer To Interrogatories	
Direct Marketing Association	DMA\USPS:	Interrogatories T14-6, 11-13, 16-18 26, 33, 58.
	MPA\USPS:	Interrogatories T14-4.
Magazine Publishers of America	MPA\USPS:	Interrogatories T14-3-4.
	DMA\USPS:	Interrogatories T14-2, 10, 22, 25, 27-30, 38, 42, 44, 48-49, 55 and 58.
	NAA\USPS:	Interrogatories T14-1-4, 6, 10-11 and 17.
	OCA\USPS:	Interrogatories T14-2-3, 6-8, 13-15a.-c., 18, 24, 26 and 30.
	OCA\USPS:	Interrogatories T4-8c.-d., 10 redirected from witness Moden].
	UPS\USPS:	Interrogatories T14-6-7, 14, 17-18, 41-43, 45 and 53.
Major Mailers Association	MMA\USPS:	Interrogatories T14-1.
Newspaper Association of America	NAA\USPS:	Interrogatories T14-1-19.
	DMA\USPS:	Interrogatories T14-12, 23-24 and 37-40.
	OCA\USPS:	Interrogatories T14-1, 3, 15-16 and 23-24.
	OCA\USPS:	Interrogatories T4- 8c, 8d (redirected from witness Moden).
	UPS\USPS:	Interrogatories T14-3, 6-7, 15, 22, 41-42 and 54.
Office of the Consumer Advocate	OCA\USPS:	Interrogatories T14-1-3, 6(b)-9, and 10-15(a-c), 16-28(a), 29-38, T4-8(c-d) redirected from witness Moden, T4-10 and 13 redirected

		from witness Moden, T34-10(c) redirected from witness Taufique.
	ABA, et al.\USPS:	Interrogatory T14-1.
	DMA\USPS:	Interrogatories T14-2-6, part of 7, and 8-14.
	MPA\USPS:	Interrogatories T14-1-5.
	MMA\USPS:	Interrogatories T14-1.
	NAA\USPS:	Interrogatories T14-1-19.
	UPS\USPS:	Interrogatories T14-1-3, 5-9, 11-20-44(c) and 45-56.
	POIR:	POIR No. 3 Questions 29-31.
	POIR:	POIR No. 4 Questions 1-5.
Time Warner Inc.	DMA\USPS:	Interrogatories T14-16-18, 20, 26, 29, 31, 34, 47-49, 55-56 and 58.
	NAA\USPS:	Interrogatories T14-16-17.
	OCA\USPS:	Interrogatories T14-1-3, 6(b)-8 and 30-31.
	OCA\USPS:	T4-8(c-d), redirected from witness Moden
	UPS\USPS:	T14-42.
	POIR:	POIR No. 4, items 1-5.
United Parcel Service	UPS\USPS:	Interrogatories T14-2-3, 5, 8-9, 11-12, 15-16, 19-20, 22-35, 39-40, 50-55.
	DMA\USPS:	Interrogatories T14-15 and 26.
	NAA\USPS:	Interrogatories T14-12 and 14.

Respectfully submitted,

Cyril J. Pittack

Cyril J. Pittack
Acting Secretary

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-2. Please refer to page 13, lines 12-16 of your testimony. Please explain why current staffing in an operation may depend upon the volume in a previous period.

DMA/USPS-T14-2 Response:

If the adjustment in the work force to changes in piece handlings takes time, the hours in one accounting period may be influenced by the piece handlings in the previous period. Because I am trying to estimate the response in hours to a sustained increase in piece handlings, I wish to allow for the possibility that the adjustment in hours to an increase in piece handlings may take longer than one accounting period.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-3. Please refer to pages 16 and 17 of your testimony where you describe the "manual ratio" and page 9 where you list the elasticities you calculated for 25 mail processing operations.

a. In estimating each of these elasticities, did you use a manual ratio?

b. If the answer to a. above is no, for which activities did you not use a manual ratio?

c. Pages 16 and 17 describe the manual ratio for flats and letters? If you used a manual ratio for activities that are not flat or letter based, please describe the manual ratio.

DMA/USPS-T14-3 Response:

a. No. The manual ratio was used only for letter and flat operations.

b. On page 17 of my testimony, I state:

> As automation rises, the percentage of mail sorted on automated equipment rises and the manual ratio declines. I therefore include it in the equations for all of the letter and flat activities, regardless of sorting technology.

As I indicated, the manual ratio was used only for the letter and flat activities (the first six listed on page 9) and was not used for any of the other activities listed on page 9.

c. I did not use the manual ratio for activities that are not flat or letter based.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-4 Please refer to footnote 8 on pages 18-19 of your testimony which mentions a preliminary study underway to collect data on direct cost drivers for platform activities.

a. Who is performing the study?

b. When is it scheduled to be completed?

c. Are there plans to perform comparable studies for other allied activities?

DMA/USPS-T14-4 Response:

a. The study is being performed by Christensen Associates.

b. I am informed that the schedule of completion of the platform study is contingent on data acquistion that requires programming changes to some of the Postal Service's data systems. I have also been informed that the requests for these changes are in the queue but that no completion date has been set. Analysis of the data would be completed six to eight weeks after the data acquisition.

c. I am informed that analysis of other allied operations is being explored. I understand that these analyses would also require programming changes for data acquisitions. These changes are in the queue but no completion data is available.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-5 Please refer to pages 18 and 19 of your testimony. For allied activities, *does the current staffing in an AP depend upon the volume in the previous period?*

DMA/USPS-T14-5 Response:

Yes. Please see Table 8 on page 63 of my testimony for the estimated coefficients on the lagged terms.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-6. Please refer to page 18 of your testimony where you state that the BMCs report to the PIRS system. Please provide any Handbooks or other documentation which describes the PIRS system.

DMA/USPS-T14-6 Response:

In response to my repeated inquiries, the Postal Service informs me that it is unable to locate any such handbook or other documentation.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-7. On page 21 of your testimony, you state that you use Total Equivalent Pieces (TEP) as the measure of workload at BMCs. Please describe the derivation of TEP.

a. For which operations does TEP use actual counts and on which operations are counts derived from conversion factors?

b. If any TEP are derived by conversion factors, please provide them.

c. If any TEP are derived by conversion factors, when were the conversion factors developed?

DMA/USPS-T14-7 Response:

The calculation of TEP for my analysis is provided on page H148-14 of Library Reference H148, under the heading of "The Output Data Set." TEP is the sum of T045, T075, TPPSM, TSSM, TNMO, TIPP AND T115. In English, this says that TEP is the sum of piece handlings in the Bulk Business Mail Letter Tray activity, the Bulk Business Mail Flat Trays activity, the Primary Parcel Sorting Machine activity, the Sack Sorting Machine activity, the Non-Machinable Outside activity, the Irregular Parcel Post activity and the Bulk Business Mail Sack Opening activity.

a. This part of the interrogatory has been redirected.

b. This part of the interrogatory has been redirected.

c. This part of the interrogatory has been redirected.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-8. Do you use a lag in estimating the elasticity for the remote encoding activity?

DMA/USPS-T14-8 Response:

As shown in Table 11, page 68 of my testimony, the elasticity for the remote encoding activity does not use a lag. Please note that because of the very short and irregular time span of the data, it would not be practical to estimate a lag term.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-9. Do you use a lag for estimating the elasticity of the registry activity?

DMA/USPS-T14-9 Response:

As shown on in Table 12 on page 69, the registry activity does not include a lag. Please note that the registry data used in this analysis is at the quarterly frequency not at the accounting period frequency.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-10. On page 31 you state that if a site has more than one set of continuous data, you use the most recent set in estimating elasticities. Why did you not use all continuous sets? In how many instances is there more than one set of continuous *data*?

DMA/USPS-T14-10 Response:

I did use as many continuous sets of data as I thought was possible. It seems to me that it would not be possible to use more than one continuous set of data for any site. If two otherwise continuous series from one site were simply joined, then the resulting single series would appear to be discontinuous, as was the original series. For example, suppose that a site reports 104 valid data points over a total of 105 periods. Further suppose that the break in the data occurred after the tenth observation because the eleventh observation was missing. This would be a discontinuous series. However, this site could be viewed as having two continuous sub-series, one of 10 observations and one of 94. Combining and using the two sub-series would be tantamount to using the original series, which was discontinuous. As I state in my testimony on page 31:

> Continuous data facilitate the estimation of accurate seasonal effects, secular non-volume trends, and serial correlation corrections. Because of the large amount of data available for this analysis, the loss in efficiency from dropping a small amount of data is outweighed by the gains in data quality associated with continuity.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

+On page 31 of my testimony, however, I raise the possibility that there may be instances in which there are two continuous series, each with more than the required 39 observations. In that instance a choice must be made as to which of the two continuous series would be used. As I state in my testimony on page 31, "When this occurs, the more recent continuous series with at least thirty-nine observations is selected."

I interpret your question, therefore, as asking how often a site had two series that were continuous and longer than 39 observations. I did not calculate this number in my analysis but I believe it to be relatively small. Consider, the manual letter operation which includes the most sites at 309. For a site to possibly have two continuous series with more than 39 observations it must satisfy two conditions:

1. It must report data for a period covering at least 79 periods in the pre-scrub data set. It must have two continuous series of 39 or more it must report data in at least 78 periods and a one period break.
2. It must have less than 77 observations in the final data set. If it had more, the "other" not used series would be less than 39 observations as 77+1+39=117 where 117 is the maximum number of observations for one site over the period from 8801-9613.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

These two conditions eliminate all but 23 sites as possibly having two continuous series with more than 39 observations. A manual review of these 23 individual sites reveals that only 5 of them had a second continuous series of that length.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-11. Please refer to your discussion of backstop activities on page 58. If service standards were less stringent, would backstop activities be staffed at a lower level?

DMA/USPS-T14-11 Response:

Less stringent service standards should expand the window in which mail processing activities could be accomplished. This should allow for reduced staffing in backstop activities.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-12 Please refer to your discussion of gateway activities on page 57 and 58. If service standards were less stringent, would gateway activities be staffed at a lower level?

DMA/USPS-T14-12 Response:

It is difficult to say. Even with reduced service standards, gateway activities, like the facing and canceling of mail would have to be accomplished. This mitigates against the possibility of reducing staffing in these operations. On the other hand, if service standards are reduced enough, the Postal Service may be able to reduce staffing in gateway operations because the consequence of being short staffed at a particular point in time would be diminished.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS-T14-13. Please refer to Page H148-5 of Library Reference H148.

a. Please confirm that the ratio of TMANF to HMANF from data set VDA1.DATA for the facility with the IDNUM of 19 for FYAP 9308 is .8553. Please confirm that this refers to a productivity of 855.3 handlings per hour.

b. Please confirm that TMANF ("Manual Flat TPH") is in thousands of TPH and that HMANF ("Manual Flat Workhours") is in hours.

c. Please confirm that, for *all* fields in VVDA1.DATA, workhours are in hours and TPH are in thousands.

d. Please confirm that, for all data described in Library Reference H-148, workhours are in hours and TPH are in thousands.

DMA/USPS-T14-13 Response:

a. Confirmed.

b. Confirmed.

c. Confirmed.

d. Confirmed.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

DMA/USPS\T14-14. Please refer to Page H148-10 and H148-11 of Library Reference H148. Please confirm that the TOCB field refers to total piece handlings on OCRs and the HOCB field refers to total workhours on OCRs.

DMA/USPS-T14-14 Response:

Not confirmed. Please see page H148-9 of Library Reference H148 where it states:

> To calculate the number of piece handlings in automated letter sorting operations, the data creation program combines the piece handlings from the OCR activity with the piece handlings from the BCS activity. The combined piece handlings are titled TOCB

In similar fashion HOCB refers to combined hours for the OCR and BCS activities.

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DMA/USPS-T14-15. Please refer to Library Reference H-146 and Library Reference H-148.

a. Please confirm that the MODS codes which you define as belonging to the flat sorting machine MODS operation ("FSB") for your regression are only a subset of those which are assigned to witness Degen's flat sorting machine cost pool.

b. If sub-part (a) is confirmed, please explain the reasons that you used only a subset of the MODS codes.

c. Please describe all other cases where you use only a subset of the MODS codes assigned by witness Degen to the corresponding cost pool and explain the reasons for using only a subset.

DMA/USPS-T14-15 Response:

a. Confirmed. It is my understanding that the cost pool formed by witness Degen includes MODS codes for the single position flat sorting machine operations (191, 194-197), and the FSM 1000 operations (441-444, 446 and 448). These MODS codes are not included in my definition of the FSM activity for variability estimation. It is also my understanding that costs associated with these MODS codes make up far less than one percent (0.054%) of witness Degen's FSM cost pool.

b. I do not include these MODS codes because these are operations which are reported by only a small number of offices, which are being phased out, or which

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have not been widely deployed in the time period of my analysis. Because these operations do not report consistent data through time, their inclusion could reduce the accuracy of the econometric estimation.

c. Please see the response to OCA/USPS-T12-29. In all cases, the reasons are the same as explained in part b. above.

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DMA/USPS-T14-16. Please refer to data set VVDA1.DAT from Library Reference H-148.

a. Please confirm that labor productivity, defined as total piece handlings ("TPH") per work hour, on an optical character reader ("OCR") for a given year (e.g., FY1988) can be derived from VVDA1.DAT through the following process:

1. Sum the value of TOCR over all rows where the first two characters of FYAP are "88."
2. Sum the value of HOCR over all rows where the first two characters of FYAP are "88."
3. Divide the result of Step 1 by the result of step 2.

b. If sub-part (a) is not confirmed, please explain how one can calculate OCR labor productivity for a given year (e.g., FY1988) more accurately from VVDA1.DAT or from any other source.

c. Please confirm that the general process of summing TPH for a given year and operation and dividing this figure by the sum of work hours for that operation and year can be used to calculate labor productivity for any direct MODS operation for any given year.

DMA/USPS-T14-16 Response:

a. I can confirm that is a method for calculating an annual labor productivity in the OCR activity. I would recommend, however, that this calculation not be performed on VVDA1.DAT, because that data set is not "scrubbed." To calculate a more accurate measure of productivity, I would recommend performing the calculation on the scrubbed data set. The scrubbed data set is called VVMPO.DATA and is provided in Library Reference H-148.

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b. As described in my answer to part a., I would recommend performing the calculation on the scrubbed data set. The scrubbed data set is called VVMPO.DATA and is provided in Library Reference H-148.

c. Confirmed.

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DMA/USPS-T14-17. Please refer to data set VVDA1.DAT from Library Reference H-148.

a. Please confirm that the labor productivity for sorting flats at a MODS facility for a given year (e.g., FY1988) can be derived from VVDA1.DAT through the following process:

1. Create TFLAT=TFSB+TMANF.
2. Sum TFLAT over all rows where the first two characters of FYAP are "88."
3. Create HFLAT=TFSB+TMANF.
4. Sum HFLAT over all rows where the first two characters of FYAP are "88."
5. Divide TFLAT by HFLAT.

b. If sub-part (a) is not confirmed, please explain how one can calculate flat sorting productivity for a given year (e.g., FY1988) more accurately from VVDA1.DAT or from any other source.

c. Please confirm that the general process of summing TPH for a given year and shape and dividing this figure by the sum of work hours for that year and shape can be used to calculate labor productivity for MODS facilities for any shape for any given year.

DMA/USPS-T14-17 Response:

a. Not confirmed.

b. I would recommend calculating the variable HFLAT by summing the variable HFSB and HMANF instead of TFSB and TMANF. I would also recommend that this calculation not be performed on VVDA1.DAT, because that data set is not "scrubbed." To calculate a more accurate measure of productivity, I would

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recommend performing the revised calculation on the scrubbed data set. The scrubbed data set is called VVMPO.DATA and is provided in Library Reference H-148.

c. Confirmed.

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DMA/USPS-T14-18. Please refer to data set BMC.DAT from Library Reference H-148.

a. Please confirm that labor productivity on a sack sorting machine ("SSM") at a Bulk Mail Center ("BMC") in a given year (e.g., FY1989) can be derived from BMC.DAT through the following process:

   1. Sum the value of TSSM over all rows where the first two characters of FYAP are "89."
   2. Sum the value of HSSM over all rows where the first two characters of FYAP are "89."
   3. Divide the result of step 1 by the result of step 2.

b. If sub-part (a) is not confirmed, please explain how one can calculate SSM productivity for a given year (e.g., FY1989) more accurately from BMC.DAT or from any other source.

c. Please confirm that the general process of summing TPH for a given year and operation and dividing this figure by the sum of work hours for that year and operation can be used to calculate labor productivity for any direct BMC operation for any given year.

DMA/USPS-T14-18 Response:

a. I can confirm that is a method for calculating an annual labor productivity in the SSM activity. I would recommend, however, that this calculation not be performed on BMC.DAT, because that data set is not "scrubbed." To calculate a more accurate measure of productivity, I would recommend performing the calculation on the scrubbed data set. The scrubbed data set is called SCRUBMCB.DATA and is provided in Library Reference H-148.

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b. As described in my answer to part a., I would recommend performing the calculation on the scrubbed data set.

c. Confirmed.

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DMA/USPS-T14-20. Please consider the following hypothetical: Suppose a group of N workers at a MODS office clocks into an optical character reader (OCR) sorting activity to sort a quantity Q of unsorted letter mail. They load the Q pieces of mail into the OCR for a primary sort and run the sort.

a. Please confirm that if no other OCR processing is performed in the current AP at this facility, and the sort is completed without errors in one hour, the process generates a value of N for the variable HOCR, and a value of Q for the variable TOCR at this facility in this period. If not confirmed, please explain.

b. Suppose instead that, after running the Q pieces of letter mail through the primary sort described above, the same N workers collect the sorted mail and reload it into the same OCR for a secondary sort.

(i) Please confirm that if no other OCR processing is performed in the current AP at this facility, and both sorts are completed without errors in two hours, the process generates a value of 2N for the variable HOCR, and a value of 2Q for the variable TOCR at this facility in this period. If not confirmed, please explain.

(ii) How would your answer to subpart b. (i) change if, halfway through the secondary sort, the OCR breaks down?

(a.) Would the workers typically clock out of the operation while repairs are made?

(b.) What would the workers typically do during the time the machine is being repaired?

(c.) What is the probable disposition of the mail that is halfway through its secondary sort – would it be set aside until repairs are completed, moved to another OCR, or sorted under a different activity code?

(d.) Regardless of your answers to subparts b. (ii) (a)-(c), how would this breakdown likely affect the values ascribed to HOCR and TOCR for this operation, if at all?

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DMA/USPS-T14-20 Response:

a. My confirmation depends upon the meaning of the term, "the sort" used in your hypothetical. If, in your hypothetical, the term "the sort" includes bringing the mail to the OCR, setting up the sort scheme, running the mail and sweeping the bins, I can confirm. On the other hand, the hypothetical seems to indicate that the term "the sort" refers only to the running of the mail through the machine. (Part b, for example refers to "collecting" the sorted mail. This presumably refers to sweeping the bins and would have already been accomplished if the term "the sort" was more broadly defined). In this case, I cannot confirm, because the time required to complete the sortation includes the time required for things like obtaining the mail, setting up the operation and sweeping the bins. This amount of time would exceed N.

b.(i.) Subject to the caveats outlined in part a. I can confirm this part of your hypothetical. Please keep in mind that any site with such small about of volume would not pass the threshold scrubs and would not be included in the econometric analysis.

b.(ii.) (a.) Employees would remain clocked into the operations during a temporary equipment breakdown of ten minutes or less.

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b.(ii.)(b.) During a temporary equipment breakdown, employees would typically continue activities associated with the operation. For example, they may be loading mail to be processed, sweeping mail from bins to containers, or obtaining mail from staging areas.

b.(ii.)(c.) Being specific is not possible because the disposition of mail depends upon several factors like the duration of the equipment outage, the availability of other similar equipment, and the local processing and dispatch schedules. If the equipment outage were temporary, the mail may remain at that location. If other similar equipment were available, the mail may be moved to the other equipment. If local processing and dispatch schedules would be impacted, the mail may be moved to the most efficient alternative processing method. If the mail were moved to a processing method different from the original, the mail volume and work hours would also be moved to the new operation.

b.(ii.)(d.) If the breakdown were temporary and the work could be finished on an OCR, HOCR and TOCR would not be affected. If the remaining mail was moved to another operation, HOCR and TOCR would be reduced.

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DMA/USPS-T14-22. Please refer to page 12 of your direct testimony (USPS-T-14) where you state: "The dependent variable in a cost equation should be a variable that captures the additional cost associated with providing the output being produced. *For mail processing labor cost, the variations in mail processing hours are the variations in cost*" (emphasis added). Please confirm:

a. that variations in the wage rates paid to clerks and mail handlers can affect the cost associated with processing mail.

b. that variations in the benefits package provided to clerks and mail handlers can affect the cost associated with processing mail.

c. that variations in the mix of skills and abilities in the labor force performing mail processing tasks can affect the cost associated with processing mail.

d. that variations in the capital intensity of mail processing activities can affect the cost associated with processing mail.

DMA/USPS-T14-22 Response:

a. Not confirmed in the context of my testimony. To understand the meaning of the sentence, it is importance to be aware of its context. Earlier on page 12 in my testimony, at line 6, I state:

> To find the volume variability of mail processing labor costs for these activities, I estimate an econometric cost equation for each individual activity.

This sentence makes clear that this page in my testimony is discussing the estimation of the volume variability of mail processing labor. What this means, as indicated in the

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first sentence of the quotation, is that I am discussing the variations in cost caused by a variation in volume. When volume changes, however, Postal Service wage rates do not respond to those changes in volume. Your interrogatory seems to be based upon a misunderstanding of volume variability. Volume variability measures the change in cost caused by a change in volume. It does not measure the change in cost associated with non-volume factors such as wage rates. Within the context of volume variability estimation, the sentence emphasized in your interrogatory is referring to variations in cost caused by variations in volume. At the risk of being redundant, one could modify that sentence without changing its meaning, to say: "For mail processing labor cost, the variation in mail processing hours are the variations in cost caused by variations in volume." Because wages do not change in response to variations in volume, they are not part of the variation in cost associated with variations in volume. Obviously, variations in wage rates paid to clerks and mail handlers "affect" the cost of processing mail. However, these wages are accounted for in the formation of cost pools, not in volume variability estimation.

b. Not confirmed in the context of my testimony. Please see my explanation in part a.

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c. Not confirmed in the context of my testimony. Please see my explanation in part a. I would also note that the skill level tends to be homogenous with activities because certain operations are associated with particular crafts. For example, mail handlers work the platform whereas clerks work automation equipment.

d. Not confirmed in the context of my testimony. Please see my explanation in part a. I would note that capital intensity should not vary greatly within an activity although there may be variations in capital intensity at the level of the facility.

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DMA/USPS-T14-23. Please refer to page 13, lines 12-16, of your direct testimony (USPS-T-14) where you state: "The nature of the labor adjustment process in mail processing facilities is such that current staffing may depend not only upon volume in the current period but also upon volume in the previous period. To allow for this gradual labor force adjustment to changes in piece-handlings, I included a lagged TPH term along with the current TPH term."

a. Besides the reasoning cited above concerning the time lag in the labor adjustment process in mail processing discussed in your testimony, are there any other reasons to introduce a lagged TPH term in your mail processing labor cost equations?

b. Did you experiment with additional lag terms (either higher-order lags in TPH or lags in MANR) in the specification of any of your cost equations? If so, what were the results? If not, why not?

c. Your discussion focused only on the problem of adjusting staffing levels at a facility to mail processing labor requirements within a given activity. Is there also an *overall* constraint operating in mail processing, such that the Postal Service faces short-term rigidities in its ability to match the overall number of clerks and mail handlers it employs at a facility to the total mail processing labor requirements across all MODS activities at that facility?

DMA/USPS-T14-23 Response:

a. Not that I am aware of.

b. In estimating the equations for my testimony, I did not try longer lags. In earlier research, however, I did examine additional lags and found that adding them did not affect the estimated variability.

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c. This part of the interrogatory was redirected.

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DMA/USPS-T14-24. Please refer to page 13, line 17, of your direct testimony (USPS-T-14) through equations (1) on page 16, where you describe the specification of your segmented autonomous trend variable.

a. Please confirm that, in general, an autonomous trend variable included in a linear regression will capture the net effect on the dependent variable of *all* time-varying factors not otherwise included in the model. If not confirmed, please explain.

b. In your judgement, is there anything else besides the introduction of new technologies (which includes not only the introduction of new machines, but also new purposes to which pre-existing activities or machines are put) that a trend variable included in your regressions might pick up? Please explain.

c. Please explain in greater detail why you chose FY 1993 as the break point for your trend variable. Have you performed any sensitivity analyses to test whether any of your results are sensitive to the presence, or the precise location, of the breakpoint? If so, please provide the results of such analyses.

DMA/USPS-T14-24 Response.

a. Confirmed.

b. Yes. It could pick up things like autonomous changes in the quality of the workforce, improved efficiency of the machinery, or more effective integration of the machine into the operating system, if such things are taking place.

c. I chose FY 1993 as the breakpoint because I was informed that there was a potentially material restructuring of mail processing at that time. To allow for the possibility that

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such restructuring could affect the individual activities, I included the segmented trend. Because the break point was chosen on the basis of exogenous, non-statistical information, I did not pursue any sensitivity analyses of alternative breaks.

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DMA/USPS-T14-25. Please refer to page 31, lines 2-5, of your direct testimony (USPS-T-14) where you state that "[t]he first scrub requires that a site have at least thirty-nine *continuous* observations in any activity. The time dimension is an important part of the nature of panel data and if possible, it is preferable to have *continuous* data" (emphases added).

a. Define "continuous" as you use it in this context.

b. Please explain why using "continuous" data is so important to your analysis.

c. Please refer to the following SAS code excerpted from Bcs.txt (found in LR-H-149):

```
*************************************************************;
* TO CHECK FOR DATA SUFFICIENCY THE PROGRAM IDENTIFIES      ;
* THE NUMBER OF OBS. PER SITE                               ;
*************************************************************;

PROC MEANS NOPRINT;
     BY IDNUM;
     VAR TPH;
     OUTPUT OUT=OUT1 N=N;

PROC SORT;
     BY IDNUM;

*****************************************************;
* ELIMINATING ANY SITES THAT DO NOT HAVE 39 OBS     ;
*****************************************************;

DATA OPER;
     MERGE OPER OUT1;
     BY IDNUM;

DATA MODSET;
     SET OPER;

DATA OPER SHORT;
     SET MODSET;
     IF N< 39 THEN OUTPUT SHORT;
     IF N > 38 THEN  OUTPUT OPER;
```

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such restructuring could affect the individual activities, I included the segmented trend. Because the break point was chosen on the basis of exogenous, non-statistical information, I did not pursue any sensitivity analyses of alternative breaks.

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(i) Please confirm that this scrub eliminates sites that do not have at least 39 observations, continuous or otherwise. If not confirmed, please explain.

(ii) For each regression, please list how many observations were eliminated as a result of this scrub.

(iii) For each regression, please list how many observations would have been eliminated if sites having fewer than thirty-nine *continuous* observations in any activity were dropped?

DMA/USPS-T14-25 Response:

a. Uninterrupted in time or sequence. In particular, continuous data require that a site have a sequence of observations from consecutive accounting periods.

b. Continuity is important because of the time series dimension of panel data:[1]

> In most cross-section studies the unavailability of observations on the dependent variable makes any information about explanatory variables useless. For example, if we are predicting individual auto purchases on the basis of annual income, data on income for which there are no corresponding automobile expenditures are likely to be of no value. The income observations (without expenditures) are best dropped from the model. In time series analysis, however, missing-dependent-variable observations present a serious problem and necessitate a solution procedure.

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1 See, Robert S. Pindyck and Daniel L. Rubinfeld, Econometric Models and Economic Forecasts, 1981, McGraw Hill at page 246.

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In a time series, the observations are ordered in a particular sequence and the estimation of certain parts of the model is dependent upon this sequence. Breaks in the sequence can affect the estimated parameters. For example, consider the estimation of the serial correlation coefficient. Under serial correlation, the value for the stochastic error term in the current period depends upon the value in the previous period. That is:

$$\varepsilon_t = \rho \varepsilon_{t-1} + \xi_t$$

Estimation of the model requires accounting for the sequential relationship in the error structure but discontinuous data destroys this structure. In similar fashion, estimation of the coefficient on a lagged term, as in the current model with lagged piece handlings, requires sequential or continuous observations. Also, please keep in mind that the problem is not so simple as the existence of a single break, or missing observation, in a single time period for all sites. The data set instead contains breaks for individual sites that occur in different periods. An individual site, in addition, could have multiple breaks or missing observations for more than one period. Identifying and interpolating or otherwise resolving each of these breaks would be a complex and difficult problem. In sum, requiring continuity is a solution procedure for resolving a menu of econometric problems and issues.

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Finally, in assessing the continuity requirement, it is important to consider its costs as well as its benefits. Requiring continuity implies a reduction in the amount of data available for estimation of the parameters of the model. In technical terms, this is called a loss in efficiency. However, a review of the econometric results reveals that there are still many observations available for the estimation of individual parameters and the loss of data from imposing continuity does not cause a low level of efficiency.

c.(i.) Not confirmed. Only sites with continuous data are read into this program so only sites with continuous data could be deleted.

c.(ii.) Zero. This is a redundant scrub to ensure that scrub program, VVMALLSC.CNTL, did not allow inclusion of any sites with less than 39 continuous observations. As review of any of the programs in Workpaper WP-1 show, it did not.

c.(iii.) Sites with fewer than 39 continuous observations were dropped. For a description of the number of observations lost please see Table H148-1 on page H148-7 in Library Reference H148.

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DMA/USPS-T14-26. Please refer to pages 31-32 of your direct testimony (USPS-T-14), where you suggest that the fact that MODS is "an operational data set" used for management decision making "raises the possibility that, on occasion, the data may be misreported."

a. Please explain the reasoning underlying this assertion.

b. In your judgement are some variables more likely than others to be misreported? If so, please list these variables and explain.

DMA/USPS-T14-26 Response:

a. Because MODS is an operational data set rather than a specific statistical study undertaken for the purposes of estimating volume variable costs, the data collection process may not be held to the exacting standards of rate cases. Therefore, there is the possibility that, on occasion, the data may be misreported.

b. I had no expectations, *a priori*. After cleaning the data, however, it would appear as if the parcel and priority activities had more data problems.

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DMA/USPS-T14-27. Please refer to page 32, lines 3-25, of your direct testimony (USPS-T-14) *where you describe the four steps of your "one-percent outlier" data scrub.*

a. Did you examine any of the observations eliminated by this scrub to assess whether or not they were the result of obvious mechanical (e.g., keypunch) errors? If so, what conclusions did you draw?

b. Please provide a complete accounting of how many observations were eliminated by this scrub for each activity, on both an absolute and a percentage basis, and indicate the effect that these deletions had on each of your final variability estimates.

DMA/USPS-T14-27 Response:

a. The eliminated observations clearly contained some extreme values, in some cases beyond what is considered to be physically possible. In those instances, I would conclude that the recorded observations were subject to some type of data entry error.

b. Please see Table H148-1 in Library Reference H148 and my response to UPS/USPS-T14-11.

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DMA/USPS-T14-28. Referring to equation (3) on page 38 of your direct testimony (USPS-T-14), please explain why you omitted time-trend interaction terms from your allied activities regressions.

DMA/USPS-T14-28 Response:

Equation 3 on page 38 of my testimony already has 34 right-hand-side variables. Interacting the time trends with the volume variables would have added another 40 right-hand-side variables. I felt that the additional flexibility of such a specification was not worth the reduction in efficiency and the potential multicollinearity associated with the additional 40 terms.

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DMA/USPS-T14-29. Referring to equation (5) on page 40 of your direct testimony (USPS-T-14),

a. Please confirm that the fixed-effects estimator of the parameters of this equation restricts the slope coefficients (represented by the vector β) to be identical across facilities, while all of the time-invariant, facility-specific fixed effects operate through a facility-specific intercept shifter (the α_i).

b. Did you test this restriction against a more general alternative hypothesis that allows some or all of the slopes to vary across facilities? If so, please provide the results of this test. If not, please explain.

.DMA/USPS-T14-29 Response:

a. Confirmed.

b. No. The goal of my research is to estimate the volume variability for a single national cost pool for each activity. This necessitates the construction of a single variability for that cost pool. The restriction of estimating a single slope coefficient from each econometric model accomplishes this goal. It is true, of course, that separate slope coefficients could be estimated for each site, but those many estimated coefficients would have to be combined in some way. There is no single correct way to combine these coefficients and the estimation of a single slope coefficient directly brings all of the data to bear on the estimation of the system-wide response to changes in volume.

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DMA/USPS-T14-30. Please refer to pages 41-42 of your direct testimony (USPS-T-14), where you discuss the Gauss-Newton Regression (GNR) tests of site-specific effects.

a. For each regression model for which you performed a GNR test, please provide a list of the variables that were included in the final specification which you chose to omit from the regression used to generate the residuals used in the GNR test.

b. Please explain why you omitted these variables specified in response to sub-part (a) when generating the GNR residuals.

DMA/USPS-T14-30 Response:

a. In all cases, the variables that account for facility-specific effects and the time-period specific effects in the final regressions were omitted from the regressions generating the residuals for the GNRs.

b. These variables were omitted because the point of the GNR procedure is to test if the variables should be included in the final specification. Including them in the original equation that generates the residuals would seem to subvert this test.

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DMA/USPS-T14-31. Please refer to pages 80-84 of your direct testimony (USPS-T-14), where you discuss the problem of measurement errors in the right-hand-side variables of your cost equations and your errors-in-variables estimator of β.

a. Please confirm that your model of measurement error in the total piece-handlings variable, embodied in equations (17) and (18) on page 81, assumes a linear error process. If not confirmed, please explain.

b. Please list all of the assumptions about how measurement errors are distributed (other than the linearity referred to in subpart a) that you relied on to derive the probability limits of the estimated fixed-effects and first-differenced coefficients in equations (19) and (21) on pages 81-82.

c. Please refer to page 83, lines 1-3, of your direct testimony (USPS-T-14), where you state: "In the mail processing analysis, measurement error is of particular concern for the manual letter and flat operations, in which the mail is weighed to produce volume counts."

(i) Please confirm that conversion factors based on linear feet, as well as weight, are used to estimate first handling pieces (FHP) in the MOD system when console or meter readings of mechanical equipment, or actual counts from mailers' statements, are unavailable (see MODS Handbook M-32, chapter 4).

(ii) Please confirm that when FHP estimates in manual letter and flat operations are obtained using conversion factors based on weight, the procedure consists of weighing the quantity of mail to be processed and dividing by an assumed average weight per piece. If not confirmed, please explain.

(iii) Please confirm that when FHP estimates in manual letter and flat operations are obtained using conversion factors based on linear measurement, the procedure consists of measuring the linear footage of inventoried mail to be processed and multiplying by an assumed average number of pieces per linear foot. If not confirmed, please explain.

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(iv) Regardless of your answers to subparts c. (I)-(iii), please confirm that subsequent handling pieces (SHP) are always derived from initial FHP, and thus reflect any errors inherent in the latter. Please confirm also that total piece handlings (TPH) in a MODS operation is the sum of FHP and SHP in that operation (see MODS Handbook M-32, *op. cit.*)

(v) Taking into account your answers to subparts c. (i)-(iv), please confirm that the most likely source of measurement error in manual letter and flat operations is through the use of conversion factors that are either too high or too low. If not confirmed, please explain.

(vi) If subpart (v) is confirmed, please confirm that subparts c (i)-(v) together imply a non-linear error process with a non-unit mean error, rather than an additive process as you imply. If you disagree, please explain.

DMA/USPS-T14-31 Response:

a. Not confirmed. The distribution of the measurement error, ψ, is lognormal, which is a nonlinear distribution.

b. The measurement errors are assumed to be individually and identically distributed as a lognormal distribution with variance σ_{ψ}.

c(i.) Confirmed. Please see at M-32, section 411.b: "Record letters and flat mail by weight, other than machine counts or actual pieces from mailers' statements.

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Linear measurements can be used for inventories or in rare situations when scales are not available."

c(ii.) Not confirmed. First handling piece volumes for manual letter and flat operations may be recorded by weight. The number of first handling pieces would be obtained by multiplying the net weight of the mail by the appropriate conversion factor for that mail shape and type. Please see M-32, at section 413.1.

c(iii.) Linear measurements may be used to determine the number of first handling pieces in rare situations when scales are not available. If this situation occurred, the number of first handling pieces would be obtained by multiplying the number of feet of mail by the appropriate conversion factor for that mail shape and type. Please see M-32, at section 411.b.

c(iv.) Not confirmed. SHP is projected to downstream manual letter and flat operations based upon local mail flow densities. Subsequent handling pieces may be flowed from FHP or TPH. Please see M-32 at section 412.3. The total of the FHP and SHP volumes becomes the TPH volume in manual letter and flat operations. TPH in automated operations and mechanized letter and flat operations is determined

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from mail processing equipment meter readings rather than from projections. Please see M-32 at section 412.4.

c(v.) Not confirmed. The responses to c(i) through c(iv.) establish that use of conversion factors is a possible source of measurement error, but they in no way establish the magnitude of those errors. It is thus impossible to draw the inference from those answers that the use of conversion factors that are either too high or too low is the most likely source of measurement error.

c(vi.) Not confirmed. Subpart c(v.) is not confirmed. Moreover, the hypothetical generation of measurement errors as described in your questions c(i.) through c(iv.) is consistent with a lognormal measurement error that is additive in the logs. To see this, suppose that the sole source of measurement error is from the use of conversion factors for mail being weighed. Then let the hypothetical true volume (V) be described as:

$$V = \theta Z,$$

where V is volume (piece handlings), z is the weight of mail and θ is the true density for that mail in pieces per pound. In this scenario, hypothetical measured volume

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would be:

$$\hat{v} = \bar{\theta} z,$$

where the bar indicates that the average conversion factor is used. Using the definition of the hypothetical true piece volume given above, we can rewrite the measured volume as:

$$\hat{v} = \frac{\bar{\theta}}{\theta} v.$$

From this expression, it is clear that the measurement error is generated by error in the conversion factor. If the actual conversion factor equaled the average, then there would be no measurement error. However, when we take logs to estimate the equation the log of the measured volume is expressed as:

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$$\ln(\hat{V}) = \ln V + \ln\left(\frac{\bar{\theta}}{\theta}\right)$$

$$= \ln V + \psi$$

This similar to the form of the measurement error for the model on page 81 of my testimony.

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DMA/USPS-T14-33. Please refer to your response to DMA/USPS-T14-2.

a. Please confirm that casual or part time workers may be called to work when there is an unexpected increase in volume so that workhours for a given period accurately reflect the TPH for that period and there would be no reason to consider the volume from a previous period. If not confirmed, please explain fully.

b. If current staffing is partially based on volume from the prior accounting period and TPH in the current period are fewer than the previous period so that some workers are idle, would the increase in workhours accurately reflect the volume of TPH from the current period. Please explain fully.

c. Assume that TPH in the current period are fewer that in the previous period. Please explain how long it would take to readjust the number of workers during the current period to reflect the decreased number of actual piece handlings in the current time period. Please explain fully.

DMA/USPS-T14-33 Response:

a. Not confirmed. It is my understanding that, on average, part time and casual workers are already working close to a full work week. Please see the response to DMA-T4-26 for a discussion of the average work week for part time and casual workers. Also, please recall that the period of analysis in the econometric equation is an accounting period. As I say in my response to DMA/USPS-T14-2:

> If the adjustment in the work force to changes in piece handlings takes time, the hours in one accounting period may be influenced by the piece handlings in the previous period.

The econometric equations thus measure the response in hours to a sustained increase in volume. I included lag terms in the econometric equations to test the hypothesis that hours would adjust, in part, with a lag to sustained increases in

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volume. The econometric results support a small but, in many cases, statistically significant lagged response.

b. As written, the question contains a *non sequiter*. If volume is declining, as in the premise of the question, what is the source of the increase in hours posed in the end of the question? Secondly, I do not accept the premise that workers are idle. To understand how the lagged adjustment mechanism works, consider the econometric equation for the LSM activity. The coefficient on the contemporaneous piece handling term is 0.8687 and the coefficient on the lagged piece handling term is 0.0360. This means that a sustained 5% decline in piece handlings will lead to a 4.34% decline in hours in the contemporaneous period and 0.18% (less than a quarter of a percent) decline in the subsequent period.

c. As explained in my response to part b. above, examination of the coefficients on the contemporaneous and lagged terms shows how much of the adjustment takes place in current period and how much takes place in the subsequent period. In the case of the LSM equation, most of the adjustment takes place in the current period. In the case of the FSM equation, more (relative to the LSM equation) of the adjustment takes place in the subsequent period. (The contemporaneous and lagged coefficients are 0.7807 and 0.1376)

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DMA/USPS-T14-37. Please refer to Table 1 on page 9 of your testimony.

a. Please confirm that the table shows that the cost elasticities you estimate range from a high of 100 percent for remote encoding to a low of 15 percent for registry.

b. Can you explain the wide variation in the elasticities as a function of the activities that are performed in each of them? Is so, please do so.

DMA/SUSP-T14-37 Response:

a. Confirmed.

b. Yes. Each of the elasticities presented in Table 1 is for an individual mail processing activity. The estimated variablity reflects the characteristics of that activity relative to variations in volume. Please see pages 54-60 of my testimony for a detailed description of the factors that explain the range of variabilities. As explained there, the factors include the degree of economies of scale in the activity, the technology of production in the activity, and the way the activity is used in the mail processing flow. The very low variability for the Registry activity reflects the fact that this is primarily an administrative-type function.

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DMA/USPS-T14-38. Please refer to Table 1 on page 9 of your testimony.

a. Please confirm that the table shows a cost elasticity of 80 percent for manual letters, of 87 percent for manual flats, and of 40 percent for manual parcels.

b. Please explain how the variation in the elasticities for these operations reflects the work elements that are performed in each of them.

DMA/USPS-T14-38 Response.

a. Confirmed.

b. The manual letter and flat variabilities are less than those from the mechanized and automated operations, reflecting the characteristic of human-paced operations to be subject to economies of scale. As I state on page 59 of my testimony:

> The variabilities for the manual letter and flat variabilities are, on average, lower than those for the machine-based activities. These lower variabilities reflect the human component of the activities and their use as backstop technologies.

In addition, the manual parcel and manual Priority Mail activities in MODS offices are very small, and thus would not be large enough to capture the economies associated with manual letter and flat operations. As I explain on pages 59 and 60 of my testimony:

> Because the manual Priority and parcel activities are manual activities, we would expect them to have relatively low variabilities. In addition, because they are relatively small

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activities, they have not yet achieved the economies associated with other manual activities.[1] This will lower the variability further. Finally, all sites must be prepared to sort parcels on a daily basis, even though volumes in these activities are low. Most sites, in addition, do not have a mechanized parcel sorting activity.[2] Thus, the manual parcel sorting activity serves as both a gateway activity and a reserve capacity activity. It is the combination of all these factors occurring in one activity that gives the activity its low variability.

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1 The parcel sorting activities in MODS offices are small because of the relatively small size of the parcel mail stream and because most parcel sorting takes place in the BMCs.

2 Only six MODS sites reported having the mechanized parcel sorting activity.

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DMA/USPS-T14-39. Please assume that there are two different operations within a multi-activity firm (each with a production function where labor is the only variable input), that initially their cost elasticities are identical, and that there is no excess labor in the firm. Please further assume that at some later time, excess labor arises in the firm and is assigned to one of the operations but not to the other. Both operations then experience a small increase in volume. Please confirm that at the operation without excess capacity, processing the increased volume would require a percentage increase in staffing approximately equal to the product of the cost elasticity and the percentage increase in volume. Please also confirm that at the operation with excess capacity, processing the increased volume would require a percentage increase in staffing less than the product of the initial cost elasticity and the percentage increase in volume.

DMA/USPS-T14-39.

I confirm that for the operation without excess capacity, the increase in hours would equal the variability times the percentage increase in hours.

If the question is assuming that the excess capacity is fixed and does not vary with volume, then I can confirm that the actual variability for the operation with excess capacity is less than initial variability. As such, the initial variability overstates the actual variability and, as you indicate, multiplying it times the percentage increase in volume would overstate the increase in hours.

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DMA/USPS-T14-40. Please assume that one activity within a growing multi-activity firm has always been staffed with the excess labor of the firm. Further assume that the amount of work to be performed at this activity is increasing and the amount of excess labor is growing at a slower rate than the activity to which it is assigned. If one collected time series data on staffing and work load in the over-staffed activity, and then estimated a cost elasticity for it using these data, how would the estimated elasticity for the over-staffed activity compare to the elasticity one would have estimated had the activity been efficiently staffed? How would your answer differ if the amount of excess labor were growing at a faster rate than the activity to which it is assigned?

DMA/USPS-T14-40 Response.

If the percentage response of excess labor to increases in volume is less than the percentage response of "regular" labor to the increase in volume, then estimated variability for actual hours would be less than the estimated variability for hours in an efficiently staffed activity.

If the percentage response of excess labor to increases in volume is greater than the percentage response of "regular" labor to the increase in volume, then estimated variability for actual hours would be greater than the estimated variability for hours in an efficiently staffed activity.

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DMA/USPS-T14-42. Please refer to your response to DMA/USPS-T14-26.

a. Please explain and quantify whether, and the extent to which, MODS data was misreported. Has the Postal Service conducted any statistical studies (either full or pilot) of the accuracy and reliability of MODS data? If so, please identify, describe and produce such study or studies. If not, are any such studies planned for this purpose?

b. Please explain how you identified the "data problems" with parcel and priority activities: specify what indicator(s) you relied on to determine that problems existed in these data, and quantify them relative to the "data problems" in other activities. Please also specify whether the parcels with "data problems" include Standard (A) parcels.

c. Please explain fully the reasons that the Postal Service chose MODS to calculate volume variable costs for mail processing. When was MODS chosen as the appropriate data system? If the decision to rely on MODS for this purpose was a process that occurred over a period of time, when was it first considered, and when was the final decision made?

d. Were any other alternative data systems considered by the Postal Service? If so, please describe all alternative data systems the Postal Service considered, and the reasons that these alternative systems were not chosen.

e. In assessing the pros and cons of the alternative data systems considered in subpart (d), if any, did the Postal Service perform any cost variability analyses using the data derived from alternative systems? If so, please provide the results of these studies.

f. Please describe all characteristics and information that the Postal Service considered essential when deciding on a data set to calculate the volume variability of mail processing labor costs (including, but not limited to, the inclusion of observations on mail volume and work hours).

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DMA/USPS-T14-42 Response:

a. I have no quantitative information on the degree or frequency of misreporting of MODS data. The only studies that I am aware of relating to MODS data are contained in Library References H-220 and H-236.

b. I identified data problems by examining Table 1 in Library Reference H-148. I examined the number of observations lost to the various scrubs and based my answer upon that. I do not have any information relative to specific classes of mail covered by these scrubs.

c. MODS was chosen to calculate volume variable costs for mail processing labor for several reasons. First, it is an operational data system, meaning that the product costs would be based upon operational data, providing a closer link between operational reality and those costs. Second, piece handlings are the cost driver for mail processing labor, and MODS records both piece handlings and hours. Third, MODS data can be organized in a way which reflects the mail flows on the workroom floor. This provides insight into the nature of cost generation in mail processing. Fourth, MODS is a "live" data system that captures new operations (like remote bar coding) as they come on line. It thus represents a way to provide

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a flexible model of mail processing costs that will adjust product costs as the actual operating costs change. Fifth, MODS data are collected at many sites and are available on the corporate data base at an accounting period frequency. This means that a large data set could be assembled and the data could be organized as a panel.

MODS was chosen as the appropriate data system from the outset.

d. No.

e. No. Alternative systems (for the Registry and remote encoding activities) were used only when MODS data were not available.

f. I would say that the essential characteristics were having data available on hours and piece handlings (the cost driver), and having sufficient data to permit econometric estimation of the variabilities.

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DMA/USPS-T14-44. Please assume that, in addition to the problem of adjusting staffing levels at a mail processing facility to labor requirements within a given mail processing operation, there is also an *overall* constraint operating in mail processing, such that Postal management faces short-term rigidities in its ability to match the overall number of clerks and mail handlers it employs at a facility to the total mail processing labor requirements across all MODS operations at that facility. How would your methodology for estimating volume variabilities of mail processing labor costs change, if at all?

DMA/USPS-T14-44. Response:

My methodology for estimating volume variabilities would not change because a volume variability is the response in the real labor input to a sustained increase in volume. My analysis thus allows for short-term rigidities in the mail processing workforce. I would not expect there to be long-term rigidities of this sort in response to a sustained increase in volume.

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DMA/USPS-T14-47. Please refer to your response to DMA/USPS-T14-20b(ii)(d).

a. Please explain what you meant by "HOCR and TOCR would not be affected."

b. Please confirm that the value ascribed to TOCR would be unaffected while that ascribed to HOCR would be larger by N times the length of additional time that it took to complete the sortation of the mail due to the breakdown (i.e., as a result of having to wait for the OCR to be fixed, move the mail to another machine, etc.). If not confirmed, please explain.

DMA/USPS-T14-47 Response:

a. I meant that if the breakdown was temporary and productive work (sweeping bins and loading ledges, etc.) could continue, then the amounts recorded for HOCR and TOCR would be unchanged.

b. Not confirmed. Although it is impossible to be specific without knowing about the nature of the breakdown, according to my understanding of the process, I can think of outcomes in which HOCR is increased, decreased, or stays the same. I can think of outcomes in which TOCR is decreased or stays the same. To try to illustrate my thinking consider the following three scenarios.

Scenario I: Breakdown is temporary, productive work continues during breakdown, no additional time is necessary to complete the sort scheme. Under this scenario, TOCR and HOCR would be unchanged.

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Scenario 2: Breakdown is temporary, productive work is slowed, so additional tiime is required to complete the sort scheme. Under this scenario, HOCR would rise, but TOCR remain the same.

Scenario 3: Breakdown is more long-lasting, mail must be moved to another activity to complete the sorting. Under this scenario, HOCR would fall and TOCR would fall.

Incidentally, I have no empirical data as to which of these hypothetical outcomes happens more often.

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DMA/USPS-T14-48. Please refer your response to DMA/USPS-T14-22, bearing in mind that the question referred you to your discussion of the choice of the *dependent variable* in a cost function.

a. Confirm that in common English parlance, the term "cost" refers to magnitudes of value denominated in dollars (or other currency units), not work hours or other "quantity" units. If you do not confirm, please explain.

b. Confirm that in the economic theory of production, the term "cost" refers to magnitudes of value denominated in dollars (or other currency units), not work hours or other "quantity" units. If you do not confirm, please explain.

c Confirm that the economic theory of production derives the cost function from the behavioral model of a firm minimizing its costs subject to the wages, prices, and technical possibilities it faces. If you do not confirm, please explain.

d. Confirm that the results of the cost-minimization exercise described in subpart c. include a cost function of the general form $C=f(p,w,Q)$, where C is the minimum cost of producing the desired quantity (or quantities) of the relevant good(s) and/or service(s), Q is said desired quantity (quantities), $f(.)$ is a function, p represents the relevant input price(s), and w represents the relevant wage(s). If you do not confirm, please explain.

e. Do you believe that the U.S. Postal Service strives to minimize its costs:
   (I) In its mail processing operations?
   (ii) In its other activities?
   Please explain fully.

DMA/USPS-T14-48 Response:

First, please let me make a slight correction in your question. DMA/USPS-T14-22 refers to my discussion of the choice of dependent variable in a cost equation not a cost function. I make this correction not to quibble with your question or mince words. Because cost equations are quite different than cost functions, I was careful to try always to couch the discussion of my econometric equation in terms of cost equations. A cost function is

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derived from the cost minimization process that you describe below. A cost equation is not A cost equation is simply an equation relating cost to its cost driver in a way that presumes the existence of a reasonably well-defined set of operating procedures used to process mail. It does not require or depend upon cost minimization.

a. Being an economics professor, I may not be the best source of "common English parlance" for economic terms. (My profession is well known for using terms somewhat differently than the general public.) I do agree, though, that when most people think of the term cost, they think of dollar or "nominal" cost. However, this is not typically what economists think of as cost. Economists tend to think about "real resource" or "opportunity costs."

b. Not confirmed. The theory of production is concerned with the real resource cost. While there are many cases in which the real resource is accurately captured by traditional dollar costs, there are also instances when it is not. For example:[1]

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[1] See, Arthur A. Thompson, Jr., Economics of the Firm: Theory and Practice, 4th ed., Prentice Hall, 1985 at 242.

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> Mention of the word *cost* immediately conjures up the thought of "money outlays." In the context of business operations, costs are commonly viewed as a firm's actual or historical expenditures for resource inputs. However, for many decision purposes historical costs are of limited significance.

One such instance would be when the opportunity costs deviate from the dollar costs:[2]

> [F]or some purposes the best measure of the true economic worth (cost) of a resource input may be the resource inputs' opportunity costs rather than the dollar outlays for the input appearing in historical accounting records.

I understand the point of this question to argue that my use of hours instead of dollar costs in the mail processing cost equations is somehow at variance with standard economic practice. And I would readily concede that most empirical estimates of cost functions use some measure of dollar costs as the dependent variable. I would note, however, that the instant analysis is different for two important reasons, each of which justifies the use of hours. First, as you indicate in a subsequent question, dollar costs are a function of both the amount of output (or the cost driver) and input prices. Thus, total dollar cost in a mail processing

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[2] Id. At 244.

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activity could increase either because volume was rising or because input prices (wages) have increased. Because there is no measure of wages paid at individual sites for individual mail processing activities, the best way to control for potentially misleading wage effects is to strip them out by using hours instead of costs. This brings us to the second reason. The motivation behind estimating the econometric equations is measuring volume variability, the percentage response in cost to a given small sustained percentage increase in volume. As I showed in my response to OCA-T14-24, when variations in wages are accounted for, the use of hours and dollar costs are equivalent for measuring volume variability.

c. Confirmed.

d. Confirmed.

e. I have not studied whether or not the Postal Service minimizes its cost. As pointed out earlier in this response, such an assumption is not required for measuring volume variability.

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DMA/USPS-T14-49. Please refer to Table 7 of your direct testimony.

a. Confirm that the coefficient on "Manual Ratio" is negative and statistically significant in the Manual Letters, Manual Flats, and LSM cost pool regressions.

b. If subpart (a) is confirmed, please provide a qualitative interpretation of these results; since you interpret the manual ratio as an indicator of "the average quality of the mail remaining in the manual activities," please address what would appear to be an anomalous result. If subpart a is not confirmed, please explain.

c. Confirm that the coefficient on "Time Trend 1" is negative and statistically significant, and the coefficient on "Time Trend 2" is positive and statistically significant, in the Manual Letters, OCR, BCS, LSM, and FSM cost pool regressions.

d. If subpart c. is confirmed, please provide a qualitative interpretation of these results. If subpart c. is not confirmed, please explain.

e. Confirm that the coefficients on "Time Trend 1" and "Time Trend 2" are positive and statistically significant in the SPBS and Manual Priority cost pool regressions.

f. If subpart (e) is confirmed, please provide a qualitative interpretation of these results. If subpart (e) is not confirmed, please explain.

DMA/USPS-T14-49. Response.

a. Confirmed.

b. I don't think the result is anomalous, although my explanation of it may not have been as clear as it could have been. As more and more mail is diverted to automation, the mail stream for manual (and LSM) activities becomes dirtier. Thus,

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mail quality falls. An increase in automation thus implies a decline in the manual ratio and a decline in mail quality in the manual operations. This decline in mail quality means that more hours are required for the same number of TPH — hence the negative coefficient.

c. Confirmed.

d. The negative coefficient for Time Trend 1 would mean that there was an autonomous decline in hours in these activities in the 1988-1992 period and a positive coefficient for Time Trend 2 would mean that there was an autonomous increase in hours in these activities for the 1993-1996 period.

e. Confirmed.

f. A positive coefficient for both Time Trend 1 and Time Trend 2 means that there was an autonomous increase in hours in both periods.

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DMA/USPS-T14-55. Please refer to your response to DMA/USPS-T14-29b, where you state that the goal of your research was "to estimate the volume variability for a single national cost pool for each activity."

a. Please confirm that by "national cost pool" you meant the aggregate costs (i.e., work hours) for all facilities that perform mail processing activities within each cost pool. If you do not confirm, please explain.
b. Please confirm that, for a given cost pool, the set of observations in your data set from any one facility reflects the work hours and associated total piece handlings not of the entire "national cost pool," but rather of a component thereof. If you do not confirm, please explain.
c. Confirm that the costs (i.e., work hours) for the "national cost pool for each activity" may be obtained by aggregating work hours for said activity over all facilities within a cost pool by AP, that the total piece handlings for the "national cost pool for each activity" may be obtained in similar fashion, and that the manual ratio for the "national cost pool for each activity" may obtained by aggregating the numerator and the denominator values of said ratio over all facilities within a cost pool by AP and then forming the ratio for each AP and cost pool. If you do confirm, please provide any weights or other ancillary information necessary to properly aggregate across facilities within a cost pool. If you do not confirm, please explain.
d. Did you run any mail processing labor cost (i.e., work hours) variability regressions using aggregate time series data on hours and piece handlings rather than the panel data you used for the analysis you presented in your direct testimony? If so, please provide the log and listing files from all such runs.

DMA/USPS-T14-55 Response:

a. Confirmed.

b. If the question is asking if the hours and piece handlings for any activity at one facility is less than the total national hours and piece handlings for that activity, then I confirm.

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c. For a particular activity, in a given AP, one could certainly aggregate the hours across facilities to come up with an estimate of the national hours for that activity for that AP. The result would be an aggregate time series for hours. One could aggregate piece handlings in a similar manner. The result would be an aggregate time series for piece handlings. One could calculate an aggregate manual ratio by the method you suggest, but whether or not the aggregate manual ratio is meaningful is less clear to me and would take further study.

d. With the exception of the Registry activity, I did not. The aggregate time series approach suffers from two difficulties. Not all sites report hours and piece handlings in each accounting period, so some care would have to be taken to make sure the aggregate accounting period values were comparable through time. Second, the aggregate time series approach reduces the maximum number of observations for any activity to 117 (9 years times 13 accounting periods per year). This is a tremendous reduction in information. For example, in the manual letter activity this would reduce the number of observations used to estimate the coefficients from 25,090 to (at most) 117.

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DMA/USPS-T14-56. Please refer to pages 41-42 of your direct testimony, and to your response to DMA/USPS-T14-30a.

a. Confirm that, to generate the OLS residuals used in the GNR regressions to test for site-specific effects, you regressed the mean-centered natural logarithm of work hours on the mean-centered natural logarithm of total piece handlings and its square, the mean-centered natural logarithm of the manual ratio and its square, and the interaction of the logarithms of the mean-centered piece handlings and manual ratio variables, thereby omitting the time trends, AP dummies, and the lagged piece handling variables. If you do not confirm, please explain.

b. Which omitted variables listed in subpart (a) "account for [the] facility-specific effects" mentioned in your response?

c. Is it a fair characterization of the method used to generate the parameter estimates reported in Tables 1 and 7 to say that the fixed facility-specific effects were "swept out" of the data, and not considered further except insofar as they shifted the individual facility intercept terms up or down? If not, please explain fully.

d. If your response to subpart c. is anything other than an unqualified "no," please explain how any of the included variables in your final model "account for" the facility-specific effects.

DMA/USPS-T14-55 Response:

a. Almost confirmed. The OLS estimation used for the GNR regressions also embodied the site-specific dummy variables used in the fixed effects model to control for site-specific effects.

b. The site-specific dummy variables used in the fixed-effects model to control for site-specific effects.

c. As explained on page 40 of my testimony, the fixed effects method includes a set of site-specific dummy variables that are used to control for non-volume site-specific

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effects. As you describe it in the question, this provides an intercept dummy for each of the facilities. However, when there are many cross sectional units, it is computationally inconvenient to recover the site-specific dummy coefficients. An alternative but exactly equivalent method the obviates the need for recovering the hundreds of individual coefficients, is to "sweep out" the site-specific effects. The phrase that the facility-specific effects are "not considered further" seems to suggest that they were not properly considered in the estimation. I think that that characterization is unfair. It is in the estimation of the volume variability that one must control for the facility-specific effects regardless of the whether the dummy coefficients are estimated explicitly or they are "swept out."

d. Suppose, for example, that a particular site is more productive than others, at any level of volume, because it is blessed with extraordinarily good weather and thus highly motivated workers. This favorable condition would cause its productivity to be higher at all levels of volume, as compared to other sites. A facility-specific dummy variable would control for this non-volume effect by estimating a negative coefficient for its dummy variable, controlling for the fact that a given amount of volume takes fewer hours at this site as compared to other sites.

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DMA/USPS-T14-58. In witness Moden's response to DMA/USPS-T14-1, he stated that Postal managers at mail processing facilities generally have "adequate flexibility to size the workforce to the work-load": *within a shift*, by clocking out Casual and Part-Time Flexible employees, polling Full-Time Regular employees for those willing to take Annual Leave or Leave Without Pay, or rescheduling non-pref volumes for immediate processing; *within an AP*, by planning "week-by-week their estimated casual and Part Time Flexible needs;" and *over the course of a year*, through attrition and "contractual provisions for reassignment and termination."

a. Were you provided with witness Moden's expert opinion prior to specifying and estimating your variability regressions, similar to the presentation to you of exogenous information about the "fundamental restructuring of Postal Service operations in FY 1993" as noted on page 15, lines 13-14, of your direct testimony?

b. If your answer to subpart (a) is "no," would you have included a lag term in total piece handlings if you had been? Please explain your response fully. If your answer to subpart (a) is "yes," please explain fully your reasons for including a lag term in total piece handlings despite Moden's response.

c. Please refer to your response to DMA/USPS-T4-33, subpart c., where you state that "examination of the coefficients on the contemporaneous and lagged terms shows how much of the adjustment takes place in current period and how much takes place in the subsequent period." Please confirm that the figures contained in the following table are the lagged piece handling coefficients as a percentage of their corresponding current piece handling coefficients, based on Table 7 of your direct testimony:

MODs Sorting Operation	Lagged TPH Coefficient As Percent of Current TPH Coefficient
Manual Letters	3.3
Manual Flats	15.8
OCR	25.2
BCS	22.2
LSM	4.1
FSM	17.6
SPBS Priority	29.5
SPBS Non-Priority	26.5
Manual Priority	11.1

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Manual Parcels	31.7
Cancel & Mtr. Prep	15.7

If not confirmed, please provide the correct figures.

d. Based upon your response to subpart (c), do you find any contradiction between your econometric results and Moden's response concerning the applicability of a lagged TPH coefficient? Please explain your response fully.

e. In light of witness Moden's response, how would you explain your finding of large, statistically significant lagged effects for a number of MODS operations?

f. Please discuss the possible existence of other possible phenomena besides staffing rigidities that might explain the significant lagged terms in your regressions. In responding, please consider (but do not limit yourself to) both statistical issues (e.g., misspecification of the functional form, failure to adequately model the error structure, failure to include one or more regressors in the model) and managerial/operational issues (e.g., misreporting of MODS data, workers being clocked into operations that they are not really working on, use of outdated or incorrect conversion factors).

DMA/USPS-T14-58 Response:

For the sake of accuracy, it is probably worthwhile repeating witness Moden's complete answer to say, part b. of DMA/USPS-T14:

> Certainly there are limits. Our managers understand that mail volume varies day-by-day throughout the month, and they plan week-by-week their estimated Casual and Part Time Flexible needs. This ability to reduce Casual and Part Time Flexible schedules generally provides sufficient flexibility to size the workforce to the workload. (Emphasis added).

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

Please note the Witness Moden does not argue that there is unlimited or instantaneous flexibility. Moreover, there is nothing in witness Moden's statement inconsistent with the less-then-perfect adjustment in the workforce suggested by a one-period lag.

a. No. However, I was provided with the expert opinion of other Postal Service mail processing experts before specifying the equations and I was provided with witness Moden's expert opinion before finalizing my testimony.

b. Yes. There is nothing in witness Moden's response that argues against including a single period lag. As witness Moden pointed out, there are limits to the adjustment of the workforce to changes in workload. An appropriate way to test for the significance of those limits is by including a lagged term for workload.

c. I confirm your calculation, but I think the ratio you calculate is a bit misleading. For example, suppose I simply reversed the ratio, so that I calculate the current TPH coefficient as a percent of the lagged TPH coefficient:

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

MODS Sorting Operation	*Current TPH Coefficient as a Percent of the Lagged TPH Coefficient.*
MANUAL LETTERS	3038.6%
MANUAL FLATS	631.7%
OCR	397.0%
BCS	451.0%
LSM	2413.1%
FSM	567.4%
SPBS PRIORITY	338.7%
SPBS NON-PRIORITY	376.7%
MANUAL PRIORITY	897.6%
MANUAL PARCELS	315.1%
CANCEL AND MTR. PREP.	638.4%

Now the same ratio tells a dramatically different story — the current TPH coefficient seems to be massively larger than the lagged TPH coefficient. Perhaps a better way to look at this issue is to calculate what percentage of the total effect is accounted for by each of the coefficients. This can be calculated

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by dividing each of the coefficients by the sum of the two. This set of calculations is presented below:

	% of Total Effect Contributed by the Current Coefficient on TPH	% of Total Effect Contributed by the Lagged Coefficient on TPH
MANUAL LETTERS	96.8%	3.2%
MANUAL FLATS	86.3%	13.7%
OCR	79.9%	20.1%
BCS	81.9%	18.1%
LSM	96.0%	4.0%
FSM	85.0%	15.0%
SPBS PRIORITY	77.2%	22.8%
SPBS NON-PRIORITY	79.0%	21.0%
MANUAL PRIORITY	90.0%	10.0%
MANUAL PARCELS	75.9%	24.1%
CANCEL AND MTR. PREP.	86.5%	13.5%

This table shows that in most cases 80% to 90% of the adjustment to the volume change takes place in the first period with the remaining 10% to 20% takes place in the second period. I think this is exactly what witness Moden had in mind when he suggested that there is substantial but limited flexibility in responding to sustained volume changes.

Response of United States Postal Service Witness Bradley
to
Interrogatories of DMA

d. I think that my finding of a moderate lagged effect is entire consistent with witness Moden's response.

e. I would not characterize the lagged effect as "large." As I explain in my response to part c., I think the size of the effect is entirely consistent with witness Moden's response.

f. I think the econometric results on the lagged term are reasonable and capture the less-than-perfect adjustment in mail processing hours. I think that specifying such a lag is a step toward modeling operational reality and that it does not reflect any infirmity in the specification.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

MPA/USPS-T14-1. Please refer to your statement on page 6 of your testimony that "witness Degen has disaggregated total mail procesing labor costs into activity-specific cost pools. I follow his approach and estimate cost elasticities at the activity level".

a. Did you conduct any independent appraisal of the appropriateness of Witness Degen's activity-specific cost pools for you variability analysis. If yes, please explain your analysis and provide any written documentation of your assessment. If no, please explain why you did not.

b. If you did not conduct any independent analysis of the activity-specific cost pool disaggregation, please describe the type of analysis you would have undertaken to determine whether, and how, to disaggreate mail processing labor costs, had you done so.

MPA/USPS-T14-1 Response:

a. Yes. As I explain on page 27 of my testimony:

> In estimating econometric equations, I was faced with a choice of the appropriate level of analysis. One important consideration in making that choice is the homogeneity of the cost driver. It is preferable to specify a model in which the cost driver represents a relatively homogeneous activity. In the technology of mail processing, this homogeneity occurs at the level of the activity, like manual letter sorting or mechanized flat sorting. The cost driver is essentially the same for all of the individual operations within this activity, but is very different across activities. I thus chose to estimate the equations at the level of the activity.
>
> In addition, because of the local variations in recording hours and volume described above, the MODS data are most reliable at the level of the activity. The activity is defined as a group of three-digit MODS codes all associated with the same technology. For example, workers "clock in" to an operation and a site records those hours under that three-digit code.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

Workers clock into the piece of equipment that they are working on, but may or may not "reclock" when the sort scheme is changed. For this additional reason, I pursue my econometric analysis at the activity level.

b. Not applicable.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

MPA/USPS-T14-2 Please refer to pages 7-8 and 90 of your testimony where you discuss activities for which you were unable to estimate cost elasticities, in particular activities at non-MODS offices and sorting of mail at stations and branches and your selection of proxy variability for these costs.

a. Does the system variability from MODS offices apply to both non-MODs offices and stations and branches of MODS offices? If not, what is the variability for stations and branches.

b. Please describe any alternative variability assumptions or calculations you considered for non-MODS offices. Please explain why your rejected each alternative considered.

MPA/USPS-T14-2 Response:

a. The system variability is applied to non-MODS offices. In the case of stations and branches for MODS facilities, I used the variability from the corresponding MODS activity. For example, for manual sorting at stations and branches I recommended using the MODS variability for manual letter and flat sorting. A complete listing of the proxy variabilities used for stations and branches is provided in Table 20 on page 90 of my testimony.

b. Please see the response to OCA/USPS-T14-1.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

MPA/USPS-T14-3 Please refer to you testimony at page 12 where you discuss the appropriateness of using MODS hours by accounting period as the dependent variables in your labor cost equations. Please confirm that using accounting period data will not capture the variability of mail processing labor costs within an accounting period. If you do not confirm, please explain.

MPA/USPS-T14-3 Response:

Not confirmed. I agree that by using accounting period data, I cannot describe the short-term dynamics of mail processing labor costs within the month. However, certain types of variability will be captured by the accounting period data. For example, if piece handlings for each week in a particular accounting were higher than the values for the same week in the previous accounting period, then the measured piece handlings for that accounting period would exceed those of the previous accounting period.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

MPA/USPS-T14-4 Please refer to page 13 of your testimony where you describe the inclusion of a lagged TPH term in your equations and page 55 where you discuss coeficients for the lagged piece-handling terms.

a. Please provide all sources of information on which you relied to conclude that "The nature of the labor adjustment process in mail processing facilities is such that current staffing may depend not only upon volume in the current period but also upon volume in the previous period."

b. Please explain in which "cases" the coefficients on the lagged piece-handling terms are "still important" even though they are much smaller than the current piece-handling coefficients.

c. Please confirm that because you add the current and lagged terms to calculate the elasticity, the net effect of adding the lagged piece-handling term to your analysis is to increase variability estimates for each activity-specific cost pool. If you do not confirm, please explain fully.

MPA/USPS-T14-4 Response:

a. Please note that the statement is not a conclusion but a proposition. The basis for the proposition that staffing may depend upon volume in the previous period was based upon the expert opinion of mail processing operations experts.

b. The cases I was referring to were those mail processing activities in which the size of the estimated coefficient on the lagged piece handling term was material.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

c. Not confirmed. Confirmation would require assuming that the sum of the coefficients on the current and lagged piece handling terms when the model is estimated with both included would exceed the coefficient on the current coefficient when the lagged term is excluded.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MPA

MPA/USPS-T14-5 Please refer to page 18, footnote 8, of your testimony where you discuss the difficulty of measuring workload for allied activities at MODS offices.

a. Please provide any written reports or papers you prepared for the Postal Service discussing possible future research on direct cost drivers for allied activities.

b. Please describe your involvement, if any, in the preliminary study underway to begin to collect data on direct cost drivers for the platform.

MPA/USPS-T14-5 Response:

a. I have not written any such reports or papers.

b. During formulation of the study, I was involved in discussions about what the appropriate cost drivers might be. I have not been involved in the study since it began.

Response of United States Postal Service Witness Bradley
to
Interrogatories of MMA

MMA/USPS-T14-1. On page 3 of your testimony you state that "[I]n the past, the Postal Service has simply assumed that mail processing labor costs were proportional to volume" You go on to note that the purpose of your testimony is to produce econometric evidence that permits the evaluation of this assumption. Then you conclude that labor costs (for all labor intensive operations) are less than 100% variable with volume. (See Table 1, page 9)

a. Is this a correct characterization of your testimony? If not please explain.

b. Did you or any other USPS witness perform any kind of study or analysis to determine which labor processing operations generate costs that are not variable with volume? If so, please provide the results of your study.

MMA/USPS-T14-1.

a. This is generally correct, assuming the that term "labor intensive operations" is referring to mail processing operations. In addition, I would add a refinement. A substantial portion of my testimony is devoted to measuring the volume variability of different mail processing activities.

b. Please consider the mail processing activities listed in Table 1, page 9 of my testimony. For any activity in which the estimated variability is less than 100%, volume variable costs will be less than accrued costs. The difference between accrued cost and volume variable cost has been called "institutional" cost but can also be considered "non-volume variable" cost.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-1. Please refer to page 14 of your written testimony where you discuss the selection of a time trend variable to represent technological change.

a. Please provide all supporting data and analyses that demonstrate that an exponential time trend appropriately reflects technological change in postal service processing operations.

b. Please identify all other statistical approaches that you considered before selecting a time trend methodology, and explain why each was rejected.

NAA/USPS-T14-1 Response:

a. As I indicated in my testimony on page 14, the use of a time trend (in this case an "exponential" trend because of the log form of the model) is the standard econometric approach to capturing autonomous time effects like technological change. The analysis required to determine the appropriateness of this specification is an investigation of the statistical significance of its estimated coefficient. As Tables 7, 8, and 9 reveal, the time trend is generally significant and its inclusion is appropriate and necessary.

b. As indicated on page 15 of my testimony, I went beyond the simple exponential trend in three ways:

1. I allowed for the possibility of a non-linear (in the logs) time trend.

2. I allowed for a segmented trend.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

3. I incorporated the manual ratio variable in the equations for letter and flat activities.

None of these alternatives to the simple trend was rejected and all are included in my testimony. Finally, when I estimated the equations on annual data, I did not use a time trend. As I state on page 75 of my testimony:

> In addition, each site will have no more than nine observations and many sites will have fewer. This small number of observations makes it impossible to estimate a reliable segmented trend. Instead, I used year-specific dummy variables, entering one for each year from Fiscal Year 1989 through Fiscal Year 1996.

This approach was not adopted because the annual results were not adopted, as indicated at page 76 of my testimony:

> The results based upon the annual data generally support the results from the AP data in the sense of replicating the pattern and magnitude of the estimated variabilities. The annual results are not preferred, however, because they are based upon substantially less data than the accounting period data and thus do not embody an effective way to capture non-volume time-related effects.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-2. Please refer to pages 16-7 (sic) of your written testimony where you discuss your choice of the "manual ratio" as a non-volumetric explanatory variable.

a. Please provide the correlation of each manual ratio variable with the total volumes processed on mechanized and automated equipment.

b. Please explain why, in your opinion, the coefficient on this manual ratio variable reflects only "non-volume" changes in mail processing labor hours.

NAA/USPS-T14-2 Response:

a. For this interrogatory, I assume that you are referring to piece-handlings as volume.

Correlations Between the Manual Ratio Variables and the Total Volumes Processed on Mechanized & Automated Equipment		
	Manual Letter Ratio	Manual Flat Ratio
OCR Volume	-0.0562	-0.1663
BCS Volume	-0.3299	-0.4056
LSM Volume	0.2678	0.0077
FSM Volume	0.0838	-0.0705

b. The manual ratio variable is included in the equations to capture possible variations in the conditions in mail processing activities associated with the automation of the letter and flat mail streams. These conditions, are not associated with variations in

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

volume, per se, but with a modification in the way that volume is processed. For example as I point out on page 17 of my testimony:

> If the diversion of mail from manual activities to automated activities causes the quality of the remaining mail to fall, then the hours required to sort a given volume of mail will rise. This means that a decrease in the manual ratio would cause an increase in the hours associated with any level of piece handlings. (footnote omitted).

The manual ratio variable is intended to capture changes in the operating environment that occur due to changing mail processing methods, not changes in volume. It is for this reason that if reflects non-volume effects.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-3. Please refer to page 47 of your written testimony where you discuss your choice of a generalized seasonality model with 12 dummy variables.

a. Please explain fully whether or not the seasonal dummy variables include any volumetric effects.

b. Please provide econometric results shown in Tables 7, 8 ,9 and 10 when the seasonal dummy variables are excluded.

NAA/USPS-T14-3 Response:

a. I interpret the term "volumetric effects" to refer to volume variability or the effect on hours of a sustained increase in volume. The seasonal dummies do not include volumetric effects. Rather, they account for the seasonal variations in hours and volume that occur because of the seasonal patterns in mailings. If they were excluded, the estimated volume variabilities would be mismeasured because they would be inadvertently capturing seasonal effects.

b. I have not performed the exercises that you describe. Moreover, given the well known seasonal patterns in Postal Service volumes and given the importance of the seasonal dummies for controlling for seasonal effects, I would suggest that doing so would be inappropriate. If you wish to perform these exercises, they could be done with modifications to the programs provided in my Workpapers WP-1 through WP-3.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-4 Please refer to Tables 7, 8, 9 and 10 of your written testimony.

a. Please explain the proper interpretation of the positive sign on Time Trend 2 coefficients in Table 7, 8, 9, and 10.

b. Please provide the correlation between the post-9301 time trend variable and the volume variables used in these equations. Please indicate whether multicollinearity exists between these variables.

c. Please provide the econometric results shown in Tables 7, 8, 9, and 10 when both time trend variables are excluded.

d. Please provide the econometric results show in Tables 7, 8 , 9, and 10 when the Time Trend 2 is excluded.

NAA/USPS-T14-4 Response:

a. As I state on page 61 of my testimony, the positive sign on the Time Trend 2 coefficients implies that there was an autonomous increase in hours for the 1993-1996 period.

b. I have not calculated any such correlations in the course of my analysis and do not need to. It is the very fact that mail volumes follow a trend that requires the inclusion of the time trend. If a trend term was not included, the estimation of the volume variability would be confounded with the effects of the autonomous trend. Multicollinearity is not a problem because there is sufficient non-trend variation in

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to
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volume to permit separate identification of the volume effect and the autonomous time trend.

c. I have not estimated the models without the time trends and would suggest that it is not appropriate to do so. Not only is it well known the mail processing variables have trends, the econometric results indicate that the trends are important explanatory variables and should not be omitted.

d. I have not estimated the models without the time trends and would suggest that it is not appropriate to do so. Not only is it well known the mail processing variables have trends, the econometric results indicate that the trends are important explanatory variables and should not be omitted.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-5. Please refer to page 55, lines 6 to 8 of your written testimony. Please explain fully why the second order terms containing volume are not included in the elasticity calculation.

NAA/USPS-T14-5 Response:

The elasticity is the percentage change in hours for a given percentage change in piece handlings. For a mean centered translog equation, this elasticity is found by taking the derivative of the estimated equation with respect to piece handlings and evaluating that derivative at the mean values for the right-hand-side variables. When this is done, the higher order terms drop from the calculation. More formally, consider a mean-centered translog equation:

$$\ln y - \ln \bar{y} = \alpha + \beta_1 (\ln x - \ln \bar{x}) + \beta_2 (\ln x - \ln \bar{x})^2$$

The elasticity is given by:

$$\frac{\partial \ln y}{\partial \ln x} = \beta_1 + 2\beta_2 (\ln \bar{x} - \ln \bar{x})$$

$$= \beta_1$$

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-6. At page 55, lines 13-14, you conclude that you "find very little support for the Postal Service's old assumption of proportionality between costs and volume."

a. Please confirm that your equations show little support for the assumption of proportionality between labor hours and volume within each sorting activity. If you disagree with the characterization, please explain specifically what you can concluded from your analysis.

b. Please confirm that you have not analyzed the relationship between total mail processing labor costs or labor hours and volume across all processing options. If you cannot confirm, please explain.

NAA/USPS-T14-6 Response:

a. Confirmed.

b. Confirmed for my testimony. However, in previous research I analyzed total facility cost and volumes across processing operations and found evidence that the overall variability is less than one. See, Michael D. Bradley and Donald M. Baron, "Measuring Performance in A Multi-product Firm: An Application to the U.S. Postal Service," Operations Research. Vol.41, No. 3, May-June 1993.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-7 Please provide any statistical, econometric or other types of analyses or studies performed by either the Postal Service or its contractors that evaluate the relationship between mail processing costs or labor hours and volume. (For example, are overtime costs higher during periods of high volume?)

NAA/USPS-T14-7 Response:

Studies and analyses of the relationship between mail processing costs or labor hours and volume performed by the Postal Service or its contractors are provided in Library Reference H-224, Materials Provided in Response to NAA/USPS-T14-7.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-8. Please provide all analyses and studies performed by the Postal Service that address the issue of whether higher cost processing activities, such as mechanized equipment and manual sortation, are used more than proportionately during periods of higher volume.

NAA/USPS-T14-8 Response:

I response to my inquiries, the Postal Service informed me that it could not locate any studies performed by the Postal Service that address the issue of whether higher cost processing activities, such as mechanized equipment and manual sortation, are used more than proportionately during periods of higher volume.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-9. Please provide specific definitions of the terms "elasticity" and used in Tables 7, 8, 9, and 10 and the term "variability" used in Table 13. Please explain the relationship between the two terms.

NAA/USPS-T14-9 Response:

The elasticity is the percentage change in hours for a given percentage change in piece handlings. As I state on page 5 of my testimony:

> In postal costing, this elasticity is often called the "volume variability" of cost although it is formally the variability of cost with respect to movements in the cost driver. To avoid confusion, I maintain that convention here and use the terms "volume variability" and "cost elasticity" interchangeably throughout my testimony.

Thus, variability and elasticity are the same thing.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-10. Please refer to Table 14 of your written testimony.

a. Please explain the proper interpretation of the positive sign on the time trend coefficient shown in Table 14 (the two-way panel model).

b. Please provide the correlation between the volume variable and the time trend in these equations and identify whether collinearity between volume and the time trend posed a problem when estimating the coefficients of these variables.

NAA/USPS-T14-10 Response:

a. A positive time trend would imply an autonomous increase in hours.

b. I have not calculated any such correlations in the course of my analysis and do not need to. It is the very fact that mail volumes follow a trend that requires the inclusion of the time trend. If a trend term was not included, the estimation of the volume variability would be confounded with the effects of the autonomous trend. Multicollinearity is not a problem because there is sufficient non-trend variation in volume to permit separate identification of the volume effect and the autonomous time trend.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-11. Please refer to your written testimony at page 75. You selected year-specific dummy variables for the regression analysis using annual data. Please explain whether or not the annual dummy variables incorporate volumetric effects.

NAA/USPS-T14-11 Response:

Annual dummy variables capture autonomous time-related effects. They do not incorporate volume effects.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-12. Please refer to your written testimony at page 55, lines 17-18 and page 56, lines 1-3. You conclude that "[c]ertain [mail processing] functions, like setting up mail processing equipment or tying down a manual case are done for each sorting activity and are not sensitive to the amount of volume sorted."

a. In your opinion, are these costs "fixed" in the short run, the long run or both? Please explain your response fully.

b. In your opinion, is the amount of mail processing equipment used by the Postal Service related to the expected volume of mail to be processed? Please explain fully.

NAA/USPS-T14-12 Response:

a. These costs are not fixed in either the short run or the long run. Fixed costs represent costs that must be paid regardless of how much the firm produces or whether it produces at all. In contrast, If the Postal Service ceased operations at a facility, costs such as setting up mail processing equipment would not have to be paid. However, I do consider these costs to be unresponsive to volume in the sense that increases in volume generate only small additional amounts of these costs.

b. Yes. It is my understanding that the Postal Service purchases equipment, in part, based upon how much volume it expects to receive.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-13. Please refer to your written testimony at page 56, lines 7-10. Please provide all analyses and studies performed by the Postal Service indicate that changes in the volume of mail, rather than technological changes, have improved mail processing productivity.

NAA/USPS-T14-13 Response:

I response to my inquiries, the Postal Service informed me that it could not locate any studies performed by the Postal Service that investigate whether changes in the volume of mail, rather than technological changes, have improved mail processing productivity.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-14. Please refer to your written testimony at page 57, line 22 and page 58, lines 1-4.

a. Please specify the range of volume over which your assertion that piece productivity rises as volume rises applies. Please provide all supporting analyses and studies performed by the Postal Service.

b. Please evaluate the likely impact of marginal increases in mail volume when mail volume exceeds the range specified in (a) above on marginal piece productivity and labor costs in "gateway" activities.

NAA/USPS-T14-14 Response:

a. The range of volume that I had in mind is the normal range of operating volumes in Postal Service facilities.

b. I would expect that a marginal increase in mail volume would cause an increase in the labor costs in gateway activities and would increase the piece productivity in those activities, even if mail volume exceeds the normal operation range.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-15. Please refer to your written testimony at page 58, lines 15-17: Please provide all analyses and studies performed by the Postal Service indicating that labor hours required for "backstop" activities over the long term are not proportionately related to mail volume.

NAA/USPS-T14-15 Response:

In response to my inquiries, the Postal Service informed me that it could not locate any studies performed by the Postal Service that investigate the long term relationship between labor hours required for "backstop" activities and mail volume.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-16. Please refer to your direct testimony at page 90, lines 24-28.

a. Please confirm that the variabilities for activities at non-MODS offices are not calculated directly in any of your analyses.

b. Please confirm that the variability for non-MODS offices is assumed to equal the average or system variability for the MODS offices.

c. Do non-MODS offices tend to be smaller mail processing facilities compared to MODS offices? Please provide the average size of the non-MODS offices and the MODS offices in terms of mail volumes processed.

d. Did you perform any econometric analyses with the size of the facility as an independent variable? If no, please explain why not. If yes, please provide copies of these analyses.

NAA/USPS-T14-16 Response:

a. If the term "directly" implies that the variabilities are not estimated using piece handling volumes from non-MODS offices, then I confirm. Piece-handlings are currently not collected for activities in non-MODS offices.

b. Confirmed.

c. It is my understanding that the non-MODS offices are smaller, on average, than the MODS offices but that there is considerable overlap between the smaller MODS offices and the larger non-MODS offices. As I said in my testimony at page 90,

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there is currently no system that measures piece handlings at non-MODS offices. I thus cannot provide comparisons of the volumes of mail processed.

d. Yes. As you know, my analysis is performed at the level of the mail processing activity. To the extent the size of a facility is measured by volume in the activity, then the size of the facility is included as a right-hand-side variable. Furthermore, to the extent there is some other measure of facility size that is relevant, its effect would be captured by the facility-specific variables in the panel data analysis. As I suggest on page 40 of my testimony:

> Now, α_i^* represents a vector of facility-specific effects that cause hours to vary across sites for the same amount of TPH. My experience in studying mail processing activities strongly suggests that there are significant non-volume variations across facilities. The ages and sizes of facilities vary widely across the postal network; some facilities are in urban areas others are not. In fact, in previous work I found that non-volume variations in facility characteristics have an important impact on productivity. (footnote omitted.)

Copies of these analyses have been provided in my workpapers WP-1 through WP-5.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-17. Please refer to the direct testimony of Postal Service Witness Moden (USPS-T-4) at page 22, lines 17-20, where he states:

> "In smaller facilities not covered by MODS, sorting schemes are often simpler, the workroom floor is smaller, clerks have greater personal knowledge of the local delivery area, and their very size makes it easier to keep a steady flow of mail to operations such as manual letters and flats."

a. Is the steady flow of mail to operations such as manual flats and letters likely to result in higher productivity for these activities at non-MODS offices compared to the productivity of these activities at MODS office? If no please explain why not.

b. Please refer to your direct testimony at page 58, lines 14-17. Please explain fully how a steady flow of mail to manual letter and flat operations would affect the variabilities of these operations.

NAA/USPS-T14-17 Response:

To clarify my answer, I think it would be helpful to complete the paragraph in witness Moden's testimony on page 22, lines 20-23 where he states:

> Nonetheless, the equipment and mailflows are similar to those at facilities reporting to MODS, and the factors accounting for volume variability would thus be much the same regardless of facility size.

a. It is difficult to draw such broad comparisons for two reasons. First, there is a wide range of average productivities within MODS offices, so I would assume that there

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

would also be a wide range of average productivities in non-MODS offices. Second, there are a variety of factors, such as the quality of the mail, the negotiated local labor agreement, variations in physical plant and operating schedules, that could cause average productivities to vary between non-MODS and MODS offices. I do think, however, that an increase in mail volume at a non-MODS office that generated a more steady flow than before would be likely to increase average productivity.

b. Without additional data, I cannot quantify witness Moden's observation about the steady flow of mail to manual operations. Intuitively, it would seem like a smooth steady flow would allow a tighter matching of hours to volume, which implies a higher variability then would otherwise occur at non-MODS offices. This is not to imply that variabilities at non-MODS offices are higher or lower than at MODS offices.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-18. Please refer to the direct testimony of Postal Service Witness Moden (USPS-T-4) at page 20, lines 23-30 and page 21, lines 1-5.

a. Do you agree that there is likely to be adjustment period when automated equipment is installed at a facility that delays achievement of optimal productivity? If no, please explain the basis for your disagreement.

b. If such an adjustment period exists, do you agree that productivity during this adjustment period would be lower than the productivity achieved after the adjustment period? If no, please explain the basis for your disagreement.

c. Was any attempt made in your analysis to exclude data during the adjustment period of a facility? If yes, please explain what data were excluded and on what basis the exclusion was made. If no, please explain why not.

d. Was any attempt made in your analysis to segregate the effects of lower productivities during the adjustment period or to otherwise account for the effect of the learning curve on variabilities? If yes, please explain how you analysis accounted for these effects. If no, please explain.

NAA/USPS-T14-18 Response:

a. Yes.

b. No. Please keep in mind that the optimal productivity in an operation may not be the highest possible productivity in that operation. For example, productivity in the MLOCR operation could be increased by running only the cleanest mail through the machines. This might not be optimal, however, because it implies sorting more mail in lower-productivity manual operations. A below-maximum productivity on the MLOCR may still be above the manual sorting productivity. When a new machine

Response of United States Postal Service Witness Bradley
to
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is put into place, it may be that only clean mail is run over it at first. As time passes, dirtier mail may might be fed into the machine, causing the productivity to fall.

c. Yes. Each activity was subject to a threshold scrub. Data were excluded for an operation until the size of that operation (as measured by piece handlings) was large enough to indicate that the activity was in the normal operating range. I obtained these thresholds from operations experts and for the automated activities, the threshold was set at 100,000 piece-handlings per accounting period.

d. Yes, as explained in my answer to part c., above a threshold scrub was used to control for the initial startup of an activity. in addition, any "learning-curve" type effects were captured in two ways. First, a time trend was included in the econometric model. As discussed in my testimony, this time trend captures, *inter alia*, the effect of adjustments in the use of an automated operation through time. Second, the manual ratio is included in the econometric equations for the letter and flat operations. As mail is diverted from manual operations to automated operations, this manual ratio will fall. It is thus a measure of the changing use of automated operations and controls for possible learning curves as well as changes in mail quality.

Response of United States Postal Service Witness Bradley
to
Interrogatories of NAA

NAA/USPS-T14-19. Please refer to your response to Interrogatory NAA/USPS-T14-18(c).

a. On average, how many piece-handlings per day would it take to achieve 100,000 piece-handlings per accounting period?

b. Please provide the average number of piece-handlings per accounting period for a mid-sized MODS facility by type of mail processing equipment, (BCS and OCR).

c. How many accounting periods does it typically take for newly-installed automated equipment to achieve the 100,000 piece-handling per accounting period threshold.

NAA/USPS-T14-19 Response:

a. Based upon 24 working days in an accounting period, I calculate a required average of 4,166.67 pieces handlings per day.

b. As shown in Table 7 on page 54 of my testimony, for my data set, the average number of piece handlings per accounting period is for the OCR activity is 15,454,000 and the average number of piece handlings per accounting period for the BCS activity is 37,572,000.

c. I am informed that once an automated machine has been accepted from the manufacturer, it will typically only take one or two accounting periods to reach the minimum threshold for normal operations.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-1. Please refer to page 1 of USPS-14B where you state "This system variability is applied to non-MODS offices and certain general support operation in MODS offices." Is it your testimony that the variabilities you calculated for MODS offices are appropriate for application to non-MODS offices? If so, please provide all justification for your assumptions concerning these two types of facilities.

OCA/USPS-T14-1 Response:

As I state on page 90 of my testimony:

> There is currently no system for recording hours and piece-handings for individual activities in non-MODS offices.

The absence of piece handling data makes it impossible to econometrically estimate a variability for activities in the non-MODS offices, so another approach must be found. One approach, of course, would be to continue to assume that the variability is 100 percent in all operations at non-MODS offices. However, given the compelling evidence that the variabilities at MODS offices are significantly below 100 percent, this approach would require assuming that activities in non-MODS offices are greatly different from activities in MODS offices. Please keep in mind that the variability calculations are done at the activity level, not the facility level, so the appropriate comparison is between activities in non-MODS offices and activities in MODS offices.

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to
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Witness Moden describes the nature of the activities in non-MODS offices on page 22 of his testimony:

> [T]he equipment and mailflows are similar to those at facilities reporting to MODS, and the factors accounting for volume variability would thus be much the same regardless of facility size.

This similarity suggests that variabilities from activities in MODS offices would serve as good proxies for the variabilities for similar activities in non-MODS offices. It also speaks against making strong assumptions about differences in variabilities for activities in non-MODS offices from those at MODS offices.

Because there is not a workhour reporting system that readily calculates cost pool by activity for non-MODS offices, the most straightforward way to form the non-MODS proxy variability is by simply using the "system" or average value from the MODS offices. Yet, the application of the MODS system variability may raise the question of the distribution of costs across activities in MODS and non-MODS offices. For example, to the extent non-MODS offices have less automated and mechanized equipment, the MODS system variability could overstate the variability at non-MODS offices.

An alternative approach is to apply the MODS-based variabilities on a disaggregated basis.

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For example, the IOCS tallies from the non-MODS offices could be used to form sub-pools for non-MODS costs by sorting activity. The corresponding MODS-based activity-specific variabilities could then be applied to the individual sub-pools. As the following table shows, however, the results are quite similar when the non-MODS variability is calculated at the disaggregated level. In fact, the average variability from the disaggregated analysis is slightly below the MODS system variability. The disaggregated non-MODS variability is 77.9 percent and the MODS system variability is 78.6 percent.

The following table produces the IOCS-based cost sub-pools for the non-MODS offices, which I received from witness Degen. I then multiplied the accrued cost for each of these cost sub-pools by the corresponding MODS-based variability to calculate the volume-variable costs for each sub-pool. The overall average variability is calculated by summing the total volume variable costs across the sub-pools ($1,725,175,000) and dividing by the total accrued costs ($2,214,032,000).[1]

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[1]Two of the calculations require additional discussion. First, the cost pool entitled "All Processing Other than Distribution" is allied labor and I used the average variability from the four allied labor activities at the MODS offices as a proxy for this sub-pool. Second, the cost pool entitled "Manual Sorting-Mixed Shapes" does not break out the cost by shape. I thus assume that the mixed shaped distribution in this manual cost sub-pool reflects the distribution across the three shape-specific non-MODS manual sorting sub-pools. The variability that is applied to the "Manual Sorting-Mixed Shapes" sub-pool is thus the average variability for the shape-specific manual cost pools in non-MODS offices.

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Non-MODS Sub-Pool	MODS-Based Proxy Variablity	Accrued Cost	MODS-Based Variability	Volume-Variable Cost
Manual Letter Sorting	Manual Letter	$844,769	79.7%	$673,281
Manual Flat Sorting	Manual Flat	$379,035	86.6%	$328,244
Manual Parcel Sorting	Manual Parcel	$101,457	39.5%	$40,076
Manual Sorting - Mixed Shapes	Manual Letter, Flat & Parcel	$318,419	78.6%	$250,264
Mechanized Letter Sorting	LSM	$12,528	90.5%	$11,338
Mechanized Flat Sorting	FSM	$2,300	91.8%	$2,112
Automated Letter Sorting - OCR	OCR	$2,279	78.6%	$1,791
Automated Letter Sorting - BCS	BCS	$51,564	94.5%	$48,728
Other Distribution - Express	Express Mail	$14,286	44.8%	$6,400
Other Distribution - Mech. Parcels	Mechanized Parcel	$338	90.2%	$305
Other Distribution - SPBS Other	SPBS Non-Priority	$762	46.9%	$357
All Processing Other than Distribution	Average Allied Labor	$486,295	74.5%	$362,280
Total Processing		$2,214,032	77.9%	$1,725,175

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OCA/USPS-T14-2. Suppose that an operation is so poorly managed or inefficient that workhours do not vary regardless of expected mail volumes to be processed. Under this scenario, is it possible that estimated variabilities would be lower than an otherwise similar operation that is well-managed? Please explain.

OCA/USPS-T14-2 Response:

If, for any reason, "workhours [in an activity] do not vary regardless of expected mail volumes" then it is a tautology to state that the variability for that activity is zero. Moreover, it is a mathematical certainty that if the variability for the similar and so-called "well-managed" activity was greater than zero, than any activity that had a zero variability would have a lower variability.

More generally, there is not a unique effect of inefficiency on variability. That is to say, the existence of inefficiency does not necessarily cause a lower or higher variability. For example, an inefficiently managed enterprise may find it more difficult than an efficiently managed enterprise to constrain costs as volume rises. If so, the volume variability would be higher at the inefficient enterprise than at the efficient enterprise.

It is important not to confuse average productivity with volume variability. To determine the effect of excess capacity on variability, one must have a model of how that excess capacity, itself, varies with volume. It is quite possible, for example, that inefficiency is

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correlated with volume. That is, large activities could be more inefficient than small activities. If this is so, and not controlled for, then the estimated variabilites would overstate the variabilities associated with well-managed operations.

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OCA/USPS-T14-3. Please refer to page 2 of the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236. This report states, "Our review of opening unit operations (110-117 and 180-189) at the 25 P&DCs disclosed management inefficiencies regarding these workhours representing 36 percent of total LDC 17 workhours." Table 8 of your testimony indicates that the elasticities for "Opening Pref." and "Opening BBM" to be 0.720 and 0.741, respectively.

a. If opening unit inefficiencies account for 36 percent of workhours, please confirm that your elasticity estimates would understate variabilities for well-managed opening unit operations. If you do not confirm, please explain.

b. Suppose that at an average volume level about a third of the workhours in opening unit operations are not utilized. If expected mail volumes for the next day are up by ten percent, then please confirm that there is no need to increase staffing level for that day.

c. Do your econometric models take into account the fact that some operations are run inefficiently? If so, how do you model this inefficiency?

OCA/USPS-T14-3 Response:

a. Not confirmed. First of all, I believe you misunderstood the sentence. The sentence states that <u>total</u> opening unit workhours (which contain some inefficiencies) represent 36 percent of total LDC workhours, not that opening unit inefficiencies represent 36 percent of total LDC workhours. Had you read on to page 14, you would have found a sentence which clarifies this issue. On page 14, the report states:

> Review of LDC17 operations disclosed opening units still accounted for 36 percent of total LDC 17 workhours.

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Secondly, and more importantly, there is not determinative link between inefficiency and variability. It is quite possible, for example, that inefficiency is correlated with volume. That is, large activities could be more inefficient than small activities. If this is so, and not controlled for, then the estimated variabilites would overstate the variabilities associated with well-managed operations.

Also, please recognize that the econometric estimates of volume variability do not require equal efficiencies across offices. In fact, the variability estimates are designed to control for varying degrees of productivity in which the "inefficient" sites differ from the "efficient" sites, in that the former requires more hours for the same workload. This is because the site-specific effects included in the specification control for such site-specific variations in productivity.

b. Not confirmed. The flow of mail to opening units is closely tied to dock activity, which, in turn, is determined by truck arrivals. These truck arrivals are not entirely predictable and staffing on the platform and in the opening units must be such that the mail can be processed on a timely basis. This is the essential characteristic of a "gateway" operation. Because of this characteristic a single snapshot on a given day may appear to reveal "unused capacity." This is not to say, however, that

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"unused capacity" measured in this way does not increase with expected volume. I would caution you, though, to not use day-to-day variations in hours to understand the estimated variabilities. Those variabilities are estimated on accounting period data or even annual data and the day-to-day variations in productivity are subsumed in the overall volume and hours for the entire period. Thus the volume variability measures the response in cost to sustained change in volume, not a day-to-day variation.

c. Yes. As explained in my response to part a., variations in efficiency across the activities at different sites would be captured by the site-specific variables in the panel data model. On the other hand, if all sites always have the same degree of inefficiency, then its existence has no impact on the measure of volume variability.

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OCA/USPS-T14-6. Please refer to page 10 of the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236. This states, "At the P&DCs, LDC 17 supervisors generally expressed that their focus was to keep the employees in budgeted positions 'busy', and minimize overtime hours."

a. Please confirm that LDC 17, Other Direct Operations, refers to MODS allied activities in your testimony. If you do not confirm, please explain the differences between the terms "allied activities" and "LDC 17 operations."

b. Please confirm that if the above quote reflects the typical LDC 17 supervisor focus, the effect on variabilities would be to decrease them from what they otherwise would be if employees were clocked in to LDC 17 operations only when really needed.

OCA/USPS-T14-6 Response:

a. This part of the interrogatory has been redirected.

b. Not confirmed. As explained in my responses to OCA/USPS-T14-2 and OCA/USPS-T14-3, there is no basis for presuming that excess capacity (if it exists) causes the measured volume variability to be below what it otherwise would be. To determine the effect of excess capacity on variability, one must have a model of how that excess capacity, itself, varies with volume. Finally, if the term "busy" is used to mean employing workers productively during the waiting time between truck arrivals, it is a productivity-enhancing practice. Platform and allied operations inherently involve some waiting time and must be staffed to handle the discrete workload associated with truck arrivals and departures and the flow of mail in and out of the facility.

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to
Interrogatories of OCA

OCA/USPS-T14-7. Please refer to the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236.

a. Are the data at any of the 25 sites reviewed in this audit so unreliable that they should be excluded from your variability analysis? Please explain.

b. Are the data scrubs described at pages 31-33 of your testimony designed to identify and eliminate the types of errors identified by this audit? Please explain.

OCA/USPS-T14-7 Response:

a. The report itself is not sophisticated enough to serve as a basis for excluding data. However, to the extent the data from any of the sites reviewed in the report happened to be unreliable, they were removed from my analysis via the scrubbing process. Please recall that a stringent scrub was put into place in the case of the allied activities. If a site had a single accounting period in which its allied labor productivity (as measured by total direct piece handlings relative to allied labor hours) was in the one-percent tail of the distribution of productivities, then the entire data series for the site was eliminated from the econometric analysis.

It is worth considering, nonetheless, what the effects of unreliable data would imply for the econometric estimation. The statistical embodiment of unreliable clock rings is a large unexplained variations in hours. If the clock rings do not bear a reliable relationship to the driver of cost, piece handlings, then any equation that attempts

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to explain variations in hours as a result of variations in piece handlings will fail. Failure will be detected by large unexplained variation in hours that would be revealed, for example, by an extremely low R^2 statistic. In fact, if the data were totally unreliable, then the R^2 statistic should be zero. As a review of my results will indicate, the models do a good job explaining the variations in hours and this is strong evidence that the MODS data are suitable for my purposes.

b. I was not aware of the National Coordination Audit of Allied Workhours when I performed my analysis, so I cannot say the scrubs were designed to identify and eliminate exactly the types of errors identified by the audit. However, I would say that the scrubs were designed generally to identify and eliminate, *inter alia*, data generated through misreporting errors.

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OCA/USPS-T14-8. Please refer to page 2 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220.

a. Are the data at any of the 20 sites reviewed in this audit so unreliable that they should be excluded from your variability analysis? Please explain.

b. Are the data scrubs described at pages 31-33 of your testimony designed to identify and eliminate the types of errors identified by this audit? Please explain.

OCA/USPS-T14-8 Response:

a. The report itself is not sophisticated enough to serve as a basis for excluding data. However, to the extent that data from any of the sites reviewed in this study happened to be unreliable, they would have been removed from my analysis via the scrubbing process. Please also recall that the scrubs were performed separately for each of the activities, so that each sites data were examined repeatedly on an activity basis.

I would also note that several of the report's findings are irrelevant for my analysis because much of the data set used in my analysis is not based upon FHPs, but rather on the end-of-run data and machine counts. This is true for all automated and mechanized activities. The issues of measurement error due to inaccurate weighing and/or conversion factors is an issue only in the manual activities.

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Because of this additional source of possible measurement error, I pursued an errors-in-variables analysis for those activities.

b. To the extent these measurement errors cause extreme values (high and low) in measured productivities, the data based upon the measurement error would be removed from my econometric analysis. However, given the anecdotal nature of the report and the fact that the report focuses on FHP rather than the TPH data that I use, it is not possible to conclude from the report that there are serious errors in the data I use in my analysis.

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OCA/USPS-T14-9. Please refer to your direct testimony on page 5, line 12. Please define "accrued cost" as you use it in your analysis.

OCA/USPS-T14-9 Response:

I am using the term as it is used in the "Summary Description of USPS Development of Costs by Segments and Components." This document has been filed as Library Reference H-1. In particular please see page vi of that document for a description of the role of accrued cost.

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OCA/USPS-T14-10. Please refer to page 5. Is an accurate description of what is termed volume variability or cost elasticity the percentage of change in total cost given a unit increase in the measured output? If not, please explain.

OCA/USPS-T14-10 Response:

No, it is not accurate. Volume variability or cost elasticity is the percentage response in total cost to a percentage change in the relevant output.

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OCA/USPS-T14-11. Is your general approach suitable and extendible to other steps in the mail handling process, e.g., distribution, acceptance? Please explain. Include in your explanation all alterations in your analysis that would have to be made if your analysis was used to examine other areas of the mail handling process.

OCA/USPS-T14-11 Response:

My general approach is the application of econometric equations to measure the elasticity of cost with respect to the relevant cost driver. I cannot tell from the question what other areas you have in mind so it is impossible to be specific in my answer.[1] Nevertheless, I would think that my general approach would be applicable in cases in which the underlying cost relationship was appropriately modeled by an econometric equation and in which there are sufficient data available.

[1] For example, my analysis is already applied to distribution activities, one of the "other" activities listed in the question.

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OCA/USPS-T14-12. Is the Postal Service considering or planning to use your volume variability analysis in other areas of the mail handling process? If so, which areas? And, if so, with what modifications to the current methodology? If you are not personally aware of any such considerations or plans, please refer this interrogatory to the Postal Service for an institutional response.

OCA/USPS-T14-12 Response.

To the best of my knowledge, at this time there are no plans to extend the volume variability analysis into other areas. In addition, in response to my inquiries, the Postal Service informs me that it has no plans to extend the analysis to other areas.

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to
Interrogatories of OCA

OCA/USPS-T14-13. Please refer to page 15 where you state that because of the fundamental restructuring of Postal Service operations in FY1993, you allowed for a segmented trend.

a. Please describe the FY1993 changes you consider relevant.

b. Did you do a statistical test to determine if in fact there was a significant change in the time trend before and after this restructuring period? Please comment.

OCA/USPS-T14-13 Response:

a. It is my understanding that Postmaster General Marvin Runyon instituted a reorganization of how mail processing operations were managed. For example, a given physical location was split between its processing and distribution responsibilities and its customer service responsibilities. It is also my understanding that Postmaster General Runyon instituted certain policies to improve service quality. Let me make clear that I did not investigate the individual policies but rather formed the hypothesis that such a set of management changes could affect the autonomous time trend. I then estimated the model in such a way so as to allow for this possibility.

b. No. The changes in the estimated coefficients were sufficiently revealing. For example, in many of the econometric equations, the estimated coefficient for the time trend changed sign across the two periods while being statistically significant

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in each period. If one wished to check this judgement, one could perform a test of equality of the regression coefficients.

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OCA/USPS-T14-14. Please refer to page 16 where you discuss your use of the "manual ratio."

a. Rather than use a manual ratio, couldn't an alternative specification be used that explicitly chooses manual activity productivity as an independent variable? Please discuss.

b. How is the specification chosen superior, or easier to use than the manual ratio? Please comment.

OCA/USPS-T14-14. Response:

a. No, not really. Productivity is measured as the number of piece handlings per hour. It is thus the ratio of the econometric equations primary independent variable to its dependent variable. One should always be careful when specifing an equation that includes the ratio of the dependent to independent variable as an explanatory variable. In the case of the translog specification, your alternative specification is particularly bad because it induces perfect multicollinearity and renders the equation unestimable. Consider the translog without the productivity included:

$$\ln Hours = \alpha + \beta_1 \ln TPH + \beta_2 (\ln TPH)^2$$

Now let's include the productivity measure that you suggest. Productivity is measured as the ratio of TPH to hours. It would thus be entered in the translog specification as the ratio of TPH to hours:

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$$\ln Hours = \alpha + \gamma_1 \ln TPH + \gamma_2 \ln\left(\frac{TPH}{Hours}\right) + \gamma_3 (\ln TPH)^2 + \gamma_4 \ln\left(\frac{TPH}{Hours}\right)^2$$
$$+ \gamma_5 \ln TPH \ln\left(\frac{TPH}{Hours}\right)$$

But, of course the first three terms on the right hand side can be written as:

$$\ln Hours = \alpha + \gamma_1 \ln TPH + \gamma_2 \ln TPH - \gamma_2 \ln Hours + \ldots$$

The source of the multicollinearity is immediately obvious.

b. The specification I chose employs the manual ratio. Please see page 16 of my testimony. The manual ratio specification is superior because of the reasons outlined in part a. above.

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OCA/USPS-T14-15. Your analysis appears to make extensive use of the Management Operating Data System ("MODS"). Thus, you state on page 12 that you "use an activity's recorded MODS or PIRS hours as the dependent variable in its cost equation." See also page 25 et seq. You note on page 26 that in MODS, "[a] mail volume count is provided in operations that distribute or handle mail." Please now refer to Library Reference H-220. The said library reference is entitled "Mail Volume Measurement and Reporting Systems," and was issued in December of 1996 by the Inspector General of the Postal Service. Its summary of findings states the following about MODS at page 2:

> Our audit of MODS scale transactions at 20 P&DCs revealed large variances between the mail pieces projected from MODS and actual pieces run for FHP volume. MODS low level of accuracy as an indicator of mail volume results from inadequate conversion factors, improper data input by employees, and scales out of tolerance. Management's lack of confidence in daily MODS data diminished the usefulness of the MODS system as a management tool. We recommended the elimination of the MODS scale weight system, for volume data collection. Postal management has efforts underway to develop a system using actual piece counts obtained from processing machines in place of weights and conversions for mail volume data collection.

a. Assume that the findings of the Inspector General are correct. How does the methodology and analysis in your direct testimony seek to ensure that the types of errors described in the Inspector General's report do not cause errors in your results?

b. Were you aware of the Inspector General's report when you prepared your analysis? Please discuss.

c. The Inspector General's Report also found problems in other areas such as the ODIS, RPW, and DUVRS systems. Explain the extent to which those findings affect your methodology and analysis, including, but not limited to, your analysis of possible measurement errors infecting the data (see, e.g., page 83 of your direct testimony)

d. Please describe what steps Postal Service management has taken to rectify the problems perceived by the Inspector General. If you do not have personal knowledge of what steps have been taken, please redirect this question to the Postal Service for an institutional response.

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OCA/USPS-T14-15 Response:

I assume in that your question actually refers to a report with the same title prepared by the United States Postal Inspection Service. I am not aware of any such document produced by the Inspector General.

a. In four ways. (1) Through the use of TPH rather than FHP; (2) Through the use of machine counts for both automated and mechanized operations; (3) Through the use of data scrubs; and (4) Through the application of an errors-in variables estimator for those manual operations that depend upon the weighing of mail to determine piece handlings.

b. I became aware of the Inspection Service report before I filed my testimony but not before I performed my analysis. However, I was aware that MODS is an operational data system, not a special statistical study, and for the reasons discussed in my testimony, I instituted the procedures discussed in part a. above.

c. I do not use the ODIS or DUVRS systems. Those findings would not affect my methodology or analysis. I make use of the RPW system only in a very limited way, to estimate the variability for the registry activity. Given my small use of the RPW data, the reports findings on that system do note affect my methodology or analysis.

d. This part of the interrogatory has been redirected.

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to
Interrogatories of OCA

OCA/USPS-T14-16. Please clarify how you define and quantify the term "start-up" period at line 24 on page 30 of your direct testimony.

a. Is the "start-up" period the same for all types of activities or does it differ as to each activity? Please discuss.

b. Please provide the duration of the start-up periods you used for each activity where such a start-up adjustment was necessary. Please provide an empirical basis for your determinations.

OCA/USPS-T14-16 Response:

For a discussion of how the start-up periods were defined, please see my response to NAA/USPS-T14-18, particularly part c. and my response to UPS/USPS-T14-15.

a. It differs. As discussed in Library Reference H-148:

> **Threshold Scrub:** Eliminate all observations for periods in which the activity was "ramping up." For letter and flat activities the threshold is 100,000 piece handlings per accounting period. For parcel activities the threshold is 15,000 piece handlings per activity.

b. It is not that the start up periods were specified in terms of a time duration. Rather the duration was determined by the amount of time it took a site to get above a threshold level of activity. For a listing of the number of observations deleted by the threshold scrub, by activity, please see Table H148-1 on page H148-7 in Library Reference H-148.

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OCA/USPS-T14-17. Refer to page 30, line 19. How did you verify reporting omissions?

OCA/USPS-T14-17 Response:

Reporting omissions were verified by identifying those observation for which data were not reported.

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OCA/USPS-T14-18. You state on page 32 that the "final scrub" eliminates observations that imply extreme values, either high or low, for productivity. This is done because data "may be misreported."

a. What verification was done to determine if the outliers were actually misreported data and not actual observations?

b. If no verification was done, why not? Please provide references to the econometrics literature to support your position.

OCA/USPS-T14-18 Response:

a. Discussions were held with Postal Service experts knowledgeable about mail processing operations about the values of the outliers and these discussions led to the conclusion that misreporting of data was occurring. For example, in several cases the productivity values exceeded machine throughputs or what is thought to be humanly possible. In those cases, the outliers are unquestionably the results of misreporting. In other cases, productivity values were sufficienty low as to present strong evidence of misreporting.

b. Not applicable

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-19. Please refer to pages 31-33. Was an attempt made to complete the analysis without the continuity, outlier, and allied scrubs, in order to determine the impact of deleting such data? If so, what was the impact and what conclusions can be drawn from it? If not, why not? Please provide a response as to each type of scrub used.

OCA/USPS-T14-19 Response:

Once I became aware of potential reporting issues associated with the MODS data, I decided that we should scrub the data. Following that decision, I worked only with the scrubbed data. Because of the size and complexity of the analysis, I did not have the time to rerun all of the equations "with" and "without" the individual scrubs. I have presented the unscrubbed data in Library Reference H-148 along with detailed documentation of the scrubs so that this course is open to any who wish to pursue it.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-20. Please refer to equation number three on page 38. The specification of functional form includes ten terms that are apparently designed to measure cross-effects of some sort. Explain the cross-effects that are expected to be captured in these terms and justify their inclusion.

OCA/USPS-T14-20 Response:

The translog functional form is a second-order approximation to an unknown functional form. The "cross-effects" are part of the second-order approximation.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-21. On page 51 you state: "The registry equation is thus estimated with a time series regression."

a. Please specify the regression equation used.

b. Was a correction for serial correlation used here?

OCA/USPS-T14-21 Response:

a. Please see page 69 of my testimony where it states:

> The other activity for which an alternative cost driver was available was the registry activity. Here, the total registry hours for MODS offices were regressed against national RPW volumes for registry mail in a mean-centered, translog equation with a time trend and a dummy variable for the fourth quarter. (The fourth quarter contains four accounting periods, but the other quarters contain only three.) The econometric results are presented in Table 12.

b. No. I did not correct for serial correlation because the data are at the quarterly rather than accounting period frequency.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-22. Please refer to your discussion of remote encoding data in the last paragraph on page 51 where you state that you choose to estimate the preliminary remote encoding equation as a simple constant elasticity pooled model.

a. Is it possible to calculate the Hausman Chi squared statistic for remote encoding data or are not enough observations available?

b. Please comment on the potential bias or worse fit caused by relying on a pooled model for this proceeding (e.g., the assumption of homogeneity across sites). What impact is this likely to have on the hours estimate or volume variability?

OCA/USPS-T14-22 Response:

a. There are sufficient data for calculating that statistic. To do so, one would first have to estimate a fixed effects model.

b. Please see page 85 of my testimony where I present econometric results for both the pooled model and the fixed-effects model. The variability from the pooled model is 1.005 and the variability from the fixed-effects model is 0.9859. This would indicate that relying upon the pooled model led to a slightly higher variability.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-23. On page 56 you state: "For example, a large volume permits dedication of the same workers to an activity on a regular basis. This regularity increases their familiarity with the activity and, as a result, their efficiency." Please comment on the following series of propositions: For many jobs under factory or other automation conditions, the job can be learned very quickly, perhaps in a few days or so. Included within this definition of "learning" would be the worker's ability to adopt efficient shortcuts, as well as to improve the manual dexterity necessary for the task. Enthusiasm for the newness of the job, and motivation to make a good first impression may further increase productivity. Once sufficient time has passed, however, boredom may set in. Further, as the worker becomes more secure with the passage of time he is less anxious about making a good impression. Consequently, productivity over the long run declines.

OCA/USPS-T14-23 Response:

This statement appears to be an attempt at explaining declining average productivity through time. I would also note that my statement (on page 56) relates to an effects of volume on productivity whereas the interrogatory relates to an effect of time on productivity.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA-T14-24. On page 59, line 11-13, you state: "Recall that the variability measures the *percentage* response in cost to a given percentage change in volume."

a. Is it more correct to state that, as presented, variability measures the percentage response in hours to a given percentage change in volume? Please comment.

b. Is it not correct to say that costs may increase faster than hours when a facility is working at capacity and additional workers or overtime pay will drive up costs per hours the facility is running? Please discuss.

OCA-T14-24 Response:

a. No it is not more correct. For the purpose of calculating variability, wages and hours are equivalent. Wages are set by collective bargaining, not volume. Therefore, the percentage change in hours represents the percentage change in cost. Recall that volume variability holds constant exogenous factors like seasonal patterns and wage rates. Total labor costs, C, can be defined as:

$$C = \bar{\omega}\, h(v)$$

where ω represents the wage scale and $h(v)$ represents the hours function. In log space this is:

$$\ln C = \ln \bar{\omega} + \ln h(v)$$

Volume variability (cost elasticity) is defined as:

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

$$\frac{\partial \ln C}{\partial \ln v} = \frac{\partial \ln \bar{\omega}}{\partial \ln v} + \frac{\partial \ln h(v)}{\partial \ln v}$$

$$= \frac{\partial \ln h(v)}{\partial \ln v}$$

as the wage structure is not influenced by small changes in volume.

b. No, It is not correct to say this when discussing volume variability. Volume variability measures the response of cost to a sustained increase or decrease in volume, holding other things constant. It does not measure the day-to-day responses in cost to volume changes that would reflect things like temporary capacity constraints or overtime pay. The calculation of volume variability should hold things like seasonal variations in volume and ratios of overtime hours constant.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA-T14-25. What would be the impact of omitted variables (cost drivers) on volume variability, generally speaking?

OCA-T14-25 Response:

The effect of omitted variables on the estimated variability, in general, depends upon the relationship between the omitted variable and volume. For example, if the omitted variable is positively correlated with volume, then the estimated variability with omitted variables is biased upward. The converse is also true. Avoiding omitted variable bias is an important reason for employing a fixed effects estimator and for including explanatory variables other than volume. For a further discussion, please see my response to OCA-T14-26. The high R^2 values also suggest that I have not omitted important explanatory variables.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-26. What steps were taken to ensure that all relevant cost drivers were included in you regression equations?

OCA/USPS-T14-26 Response:

I include in the econometric specification a non-volume cost driver (the manual ratio), a sophisticated time trend, and seasonality terms. In addition, I am fortunate to work with a panel data set, so I can use the econometric techniques that have been developed for panel data sets to control for omitted variables. As I state on page 24 of my testimony:

> Perhaps the most important advantage of panel data, however, is its ability to mitigate or eliminate estimation bias:[1]
>
> > Besides the advantage that panel data allows us to construct and test more complicated behavioral models than purely cross-sectional or time-series data, the use of panel data also provides a means of resolving or reducing the magnitude of a key econometric problem that often arises in empirical studies, namely, the often-heard assertion that the real reason one finds (or does not find) certain effects is because of omitted (mismeasured, not observed) variables that are correlated with explanatory variables. By utilizing information on both the intertemporal dynamics and the individuality of the entities being investigated, one is better able to control in a more natural way for the effects of missing or unobserved variables.

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[1] See Cheng Hsiao, Analysis of Panel Data, Cambridge University Press, New York, 1986 at page 3.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-27. You state on page 68 that you estimated variabilities for two MODS activities that do not have piece-handling measures, including the remote encoding activity.

a. As to the remote encoding activity, did you consult with the September 1995 GAO report entitled "Performing Remote Barcoding In-House Costs More Than Contracting Out?" Note that the GAO Report contains productivity statistics for as far back as FY1994. If not, why not?

b. What impact, if any, does the analysis contained in the GAO Report affect your analysis for remote encoding activities? Specifically comment on the Report's observations about the past and projected changing labor mix among contract labor, career Postal Service labor, and transitional Postal Service labor. For example, does your analysis take such shifts into account?

OCA/USPS-T14-27. Response:

a. I did not consult the GAO Report that you mention because I was not aware of its existence.

b. I have not read the GAO report because, as stated above, I was not aware of its existence. Given that the current estimated variability for the remote encoding activity is 100 percent, the only impact, if any, that the analysis in the GAO report could have would be to reduce the variability. As I have not read the report, I cannot comment on any of its observations.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-28. Please refer to Table 19 ("Proxy Variabilities for Mail Processing Activities Without Recorded Piece Handlings") and Table 20 ("Proxy Variabilities for Customer Service Activities)." Each table lists two different types of activities: an activity that *requires* a proxy variability, and an activity *providing* the proxy variability.

a. As to both tables, please list for each activity that required a proxy variability all activities providing a proxy variability that were considered and dismissed, setting forth for each the reasons why they were dismissed. Please list separately those dismissed proxies that were considered most similar to the activity requiring a proxy but for which there were no estimated variabilities.

b. For each activity providing the proxy variability please describe in what ways that activity is (1) identical to (2) substantially similar to, and (3) different from the activity requiring a proxy variability with which it is matched.

OCA/USPS-T14-28 Response:

a. When the cost pools were formed it became apparent that certain cost pools existed for which I was not able to econometrically estimate a variability. These are the activities listed in Table 19 and Table 20. My first approach was to apply the system variability to all of these cost pools. Discussions with operational experts informed me that a better method of finding proxies was available by drawing upon their knowledge of operations. I thus rejected the application of the system variability in favor of operation-specific proxy variabilities. The proxy variabilities that are in Tables 19 and 20 are the result of further discussion with operational experts. To the best of my recollection, no other proxies were considered.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-29. Please refer to page 90 where you discuss the lack of information about the activities taking place in non-MODS offices. Confirm that you apply the average or system variability from MODS offices to the overall mail processing costs for non-MODS offices. If not confirmed, please explain.

OCA/USPS-T14-29 Response:

Confirmed.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-30. How would credible testimony establishing the following affect your analysis, methodology and conclusions regarding volume variabilities?

a. Testimony that equipment and mailflows are not identical at MODS and non-MODS facilities?

b. Testimony that equipment and mailflows are not identical at facilities of different sizes and types?

OCA/USPS-T14-30 Response:

a. It would not affect my analysis, methodology or conclusions as they do not depend upon the assumption that the equipment and mailflows are identical at MODs and non-MODs offices. For a further discussion of the formation of a variability for non-MODs offices please see my response to OCA/USPS-T14-1.

b. It would not affect my analysis, methodology, or conclusions as they do not depend upon the assumption that the equipment and mailflows are identical at faciliites of different sizes and types. Please recall that my analysis is performed at the activity level, not the facility level, and that sorting technology at the activity level is homogenous. Moreover, it is often advantageous for econometric analysis to have observations from both small and large activities.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-31. Please provide the source of the volume or piece handlings for each of the cost pools in your MODS variability analysis. This source should specify the method or methods used to collect the piece handlings information. For example, were the volumes determined by the SWS (weighing mail and applying conversion factors to produce volumes), actual piece counts, counting trays (and applying a conversion factor to get volumes), or other methods? Please specify.

OCA/USPS-T14-31 Response:

The specific source of volume or piece handlings for each of the MODS operation codes or cost pools is not available. The method of data collection is not preserved with the data, only the amount of volume or piece handlings. However the methods of data collection are common across activities and MODS operations codes and those methods are described below.

I use total piece handlings (TPH) as the volume measure in my MODS variability analysis. Data collection methods for TPH are as follows: TPH in manual letter and flat operations are the sum of first handling pieces (FHP) and subsequent handling pieces(SHP). FHP volumes for letter or flat operations may be recorded from machine counts, mailers statements, weight, or by linear measurements in rare situations when scales are not available (Please see M-32 at section 411). SHP is projected to downstream manual letter and flat operations based on local mail flow densities, weight, or actual machine counts. Subsequent handling pieces may be flowed from FHP or

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

TPH. (Please see M-32 at section 412.3) TPH in automated and mechanized letter and flat operations are determined from mail processing equipment meter readings. (Please see M-32 at section 412.4). TPH in manual parcel operations are recorded by container count or individual piece count. Container counts are converted to pieces using national conversion factors for the number of pieces per container. (Please see M-32 at section 411).

The M-32 manual has been provided in Library Reference H-147.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-32. Please provide the source of the volume or piece handlings for each of the MODS codes included in the cost pools in your MODS variability analysis. This source should specify the method or methods used to collect the piece handlings information. For example, were the volumes determined by the SWS (weighing mail and applying conversion factors to produce volumes), actual piece counts, counting trays (and applying a conversion factor to get volumes), or other methods? Please specify.

OCA/USPS-T14-32 Response:

Please see my response to OCA/USPS-T14-31.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-33. Please confirm that all piece handling or volume data used in your variability analysis (except for remote encoding activity and registry activity) were captured as part of the MODS system and included in the MODS data sets. If you do not confirm, please explain.

OCA/USPS-T14-33 Response:

Not confirmed. The data used in the econometric equations for the BMCs was taken from the PIRS system. Please see page 20 of my testimony.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-34. Please provide MODS volume or piece handling counts for FY 1996 by CAG for each of the MODS cost pools.

OCA/USPS-T14-34 Response:

The basic unit of observation in my data is a MODS site. A single MODS site, might have more than one finance number associated with it. For example, a single mail processing plant will often have a processing and distribution finance number and a customer service finance number. Many MODS sites, therefore, roll up into more than one CAG, through the different finance numbers. Because there is not a unique CAG for each of the MODS sites in my data, I am unable to provide the information that your request by CAG.

I am informed, however, the requested information was provided in response to OCA/USPS-T4-19.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-35. Please provide MODS volume or piece handling counts for FY 1996 by CAG for each of the MODS codes used in your cost pools.

OCA/USPS-T14-35 Response:

Please see my response to OCA/USPS-T14-34, and witness Degen's response to

OCA/USPS-T4-19, redirected from witness Moden.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-36. For each of the nine fiscal years of MODS data used in your analysis please provide the MODS volume or piece handling counts by CAG for each of the MODS cost pools.

OCA/USPS-T14-36 Response:

MODS is an operational data system, not a financial reporting data system. Consequently, the basic unit of observation in my data is a MODS site. A single MODS site, furthermore, might have more than one finance number associated with it. For example, a single mail processing plant will often have a processing and distribution finance number and a customer service finance number. Many MODS sites, therefore, roll up into more than one CAG, through the different finance numbers. Because the relationship between finance numbers and MODS sites is not constant through time, it is my understanding that there is no way for me to go back and restate the historical MODS data by CAG.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-37. For each of the nine fiscal years of MODS data used in your analysis please provide the MODS volume or piece handling counts by CAG for each of the MODS codes used in your cost pools.

OCA/USPS-T14-37 Response:

Please see my response to OCA/USPS-T14-36.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA

OCA/USPS-T14-38. Please confirm that the variabilities developed for the BCS cost pool are applicable to clerk/mailhandler costs related to delivery point sequencing (DPS) operations. If you do not confirm, please explain.

OCA/USPS-T14-38:

Confirmed that the BCS variability is applicable to DPS operations in that the BCS hours and TPH include data from several MODS operations numbers related to DPS.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA
(Redirected from Witness Moden)

OCA/USPS-T4-8.

c. Please confirm that the factors accounting for volume variability are not identical for facilities of different types. Please provide all documents relating to comparisons of volume variabilty for mail processing equipment by facility type.

d. Please confirm that the factors accounting for volume variability are not identical for facilities of different sizes. Please provided all documents relating to comparisons of volume variability for mail processing equipment by facility size.

OCA/USPS-T4-8 Response:

c. Partially confirmed, as it depends upon the type of facility. Because the mail processing activities in MODS and non-MODS offices are quite similar, the factors determining volume variabilities in these two types of facilities are also quite similar. To the degree that the mail processing activities in BMCs are different from those in MODS offices, the factors determining variabilities should also be expected to be different in BMCs. For a presentation of the variabilites for both MODS facilities and BMCs please see my testimony, USPS-T-14. For a discussion of volume variabilities for MODS and non-MODS offices please see OCA/USPS-T14-1.

d. I am not able to confirm this. The factors determining volume variability may well be the same across facilities of different sizes, although the exact values for those

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA
(Redirected from Witness Moden)

factors will not. In fact, the exact values for the factors will not be identical in facilities of similar sizes. Also, please recall that the factors determining volume variability are activity-specific, not facility-specific. The estimation of volume variability depends upon the relationship between cost and piece handlings at both large and small facilities and volume variability is not a function of facility size, *per se*. In fact, one should control for facility size (by using panel data or some other method) to avoid contaminating the calculation of volume variability with non-volume facility-specific cost influences.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA
(Redirected from Witness Moden)

OCA/USPS-T4-10

b. Please confirm that the MODS data used by witness Bradley to develop cost pool variability estimates relied on data subject to the problems noted above. If you do not confirm, please explain all steps taken to remove inaccuracies from the historical MODS data used by witness Bradley.

c. If management lacks confidence in MODS data, than how can confidence be placed in the use of MODS data to develop cost pool variability estimates? Please explain.

OCA/USPS-T4-10 Response:

b. Not confirmed. First of all, the data used in my analysis are TPH not FHP. Second, for mechanized and automated activities, the TPH data are taken from machine counts, not scale weights. In the case of manual activities, where the data are developed from weight, I employed an errors-in-variables analysis to ascertain the implications of possible error. As that analysis showed, the scrubbed MODS data appear to be robust to such measurement error.

Data inaccuracies are removed through an extensive data scrubbing proceess. Please see pages of 31 through 33 of my testimony and Library Reference H-148 for a detailed presentatien of these data scrubs.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA
(Redirected from Witness Moden)

c. I am not convinced that management lacks confidence in MODS. It is my understanding that the MODS data are widely used by local, regional, and national management. In any event, the reliability of my results can be judged from examining the goodness of fit statistics that describe how well the data are fit by the models. Given that my results provide economically sensible results and that the models have a good fit, I believe that one can confidently use the MODS data for the purpose to which I put it.

Response of United States Postal Service Witness Bradley
to
Interrogatories of OCA
(Redirected from Witness Moden)

OCA/USPS-T4-13

b. Please confirm that FHP was used in each of the nine fiscal years of MODS data that witness Bradley uses to estimate variabilities. If you do not confirm, please list how volumes were determined for each of those nine years.

OCA/USPS-T4-13 Response:

b. Not confirmed. I use TPH, not FHP, in each of the nine fiscal years of MODS data that I used to estimate variabilities.

Response of United States Postal Service Witness Bradley
to
Interrogatories of ABA et. al.

ABA et. al/USPS-T14-1. The premise of your study of volume variabilities of mail processing labor costs is that they have been assumed to be 100% volume variable in the past but have never been studied to see whether that assumption is true.

a. Please confirm that (1) you have not tested all possible model specifications which would test the 100% variability assumption, and that (2) your model may not be the true specification of the real world; that (3) the true model, if not yours, could reveal volume variabilities to be higher, even approaching 100% volume variability.

b. Please confirm that it is in the nature of regression analysis that unexplained or residual variation nearly always exists.

c. Please confirm that in your very use of regression analysis per se, you have virtually assured that result that volume variabilities will be less than 100%.

d. Please confirm that had your used regression analysis to examine, e.g. city carrier office direct labor costs, that cost segment would in the nature of regression analysis, also have ended up being less than 100% volume variable.

ABA et. al/USPS-T14-1. Response:

a. (1) I confirm that I have not tested all possible model specifications which could test the 100% variability assumption, nor do I think it is feasible or appropriate to do so.

(2) I confirm that my model may not be the "true" specification. In fact, I employ a translog functional form. This is a flexible form approximation to the true but unknown functional form.

Response of United States Postal Service Witness Bradley
to
Interrogatories of ABA et. al.

(3) I confirm that the "true" model, if not mine, could produce either higher or lower variabilities.

b. Confirmed.

c. Not confirmed. There is nothing in the regression methodology that precludes the estimated variability from being 100% or greater than 100%. For example, as shown in Table 1, page 9 of my testimony, the estimated variability for the remote encoding activity is 100%. The existence of unexplained variation does not imply variabilities less than 100%.

d. Not confirmed. It is an open question. If the nature of cost generation in city carrier office direct labor costs is such that the true variability is less than one hundred percent, I would expect the regression analysis to reveal that fact. Alternatively, if the nature of cost generation in city carrier office direct labor costs is such that the true variability is one hundred percent, I would expect the regression analysis to reveal that fact.

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #3

29. Please discuss the instances in which local facility managers can customize the MODS codes to their own management needs and the distortion that this has on the aggregation of data for national purposes. In particular, what is the extent of the customization, does the customization isolate hours and pieces handled data into pools that are not captured in the 46 cost pools created by witness Degen, and how is this effect accounted for by witnesses Degen and Bradley in their analyses?

29. Response:

(Please note that witnesses Degen and Moden are also answering this information request.)

The customization or multiple code option that local facility managers have is limited. Managers can assign greater detail only for certain sets of three digit MODS codes. For example, MODS codes 110, 111, 112, 113, and 114 are all for Opening Unit Outgoing - Pref. and can be assigned to greater detail within that activity. For a listing of mail processing operations that have multiple MODS codes, please see the listing of MODS operation numbers presented in Exhibit USPS-14A, to my testimony.

I account for this effect in my analysis by grouping MODS three digit codes to the level of the mail processing activity. For example, I combine all Opening Unit - Pref MODS codes into one activity and estimate a single equation for that activity. In this way, I control for any local variation in assigning the individual three digit codes in the activity.

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #3

30. Please provide additional descriptive information on the "fundamental restructuring of Postal Service operations in FY 1993" that led to the use of the segmented time trend in witness Bradley's econometric analysis of mail processing. In particular, describe the specific changes that constituted the "potentially material restructuring of mail processing at that time" referred to in the response to DMA/USPS-T14-24 and the "reorganization of the workroom floor that occurred in FY 1993" referred to in the response to UPS/USPS-T14-19. Also, discuss how these changes impacted the time trend so significantly.

30. Response.

(Please note that witness Moden is also providing a response to this information request. I am responding to the last sentence of the response.)

A segmented or broken trend can be thought of as representing a regime change in which the autonomous (non-volume) forces affecting hours have changed. In my case, the well-known Postal restructuring raised the possibility that the use of individual mail processing operations was shifted, and thus the autonomous influences would be different post-1992. These types of changes would affect the time trend significantly if the subsequent regime is materially different from the previous regime. If so, the external forces on the operation would have changed and the estimated coefficients would reflect this change.

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #3

31. Please confirm that some processing facilities locate portions of their automation work, in particular Delivery Point Sorting on Bar Code Sorting machines, in delivery units; and that the manhours and pieces processed there are not captured by the MODS system. If confirmed, how do witnesses Degen and Bradley account for this in their analyses?

31. Response

(Please note that witness Degen is also answering this information request.)

To the extent the delivery units are part of a processing and distribution facility that reports to MODS, the hours and pieces processed from the delivery unit would be rolled up with other BCS hours and pieces processed. On the other hand, if the hours and pieces processed are at delivery units not associated with MODS sites, they would not be included in my analysis. It is not necessary to have data from every site that uses a BCS to estimate an accurate equation for the BCS activity. Given the volume of data that I already have for estimating a BCS variability (22,572 observations), I believe that sufficient data have been collected to be representative of all BCS operations.

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #4

1. In a short-run analysis, economists typically consider a fixed production plant, i.e., a plant with a fixed capacity, and consider the costs of operating at various volume levels. Moving from one volume level to another can be said to involve changing the utilization rate of capacity. Such movements might occur for many reasons, including seasonality. If there is substantial fixity in the plant's operations, the marginal costs would be expected to be low, as would the volume variability of the costs. In a long-run analysis, consideration would be given to how the costs would respond to a larger volume, given that the capacity of the plant could be adjusted to accommodate that larger volume.

An analysis of postal operations using accounting period data would seem to focus on changes in the utilization rate. On the other hand, using data that reflect increases in volume throughout the year (in each season), would seem to include the effect of changes in capacity.

a. Please discuss which cost effects, short-run or longer-run, are more relevant for rate purposes.

b. Assuming the analysis should focus on longer-run volume adjustments, please discuss whether this information can be obtained from an analysis based on accounting period data.

1. Response:

The preamble to the question seems to suggest that because of fixity in a plant's operations, the short run marginal cost would be "low" and thus be less than the long run marginal cost. If made, this inference would not be completely accurate as the short run marginal cost (and variability) may be either greater than or less than the long run marginal cost (and variability). In particular, substantial fixity may mean that the plant's cost response to increases in volume is greater in the short-run, when the flexibility of some

Response of United States Postal Service Witness Bradley
to
Presiding Officer's Information Request #4

inputs is restricted, than it is in the long run, when the plant is free to choose any combination of inputs.

a. The relevant cost effects for rate purposes are the actual marginal costs incurred from a sustained change in volume. This was first explained in Docket No. R87-1 by witness William J. Baumol, who stated:[1]

> A final matter to be touched on briefly here is the choice of marginal costs upon which the rates should properly be based. Should these marginal costs be short run or long run in nature? As I will show, the answer is that they should be the actual marginal costs, whichever of those that may be. When an output of a service is increased (or decreased), there is only one amount of cost actually added (or saved), not two or three. The actual marginal costs are normally closest to what economists call short run marginal costs (SRMC). But it must be emphasized that these actual marginal costs do include cost consequences of a current volume change that may occur in future periods. [Emphasis in original]

This approach has been reaffirmed by witness Panzar in the current case:[2]

> One should attempt to base prices on the marginal costs that will actually be incurred by the firm to serve a sustained

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[1] See, Testimony of William J. Baumol On Behalf of the United States Postal Service, Docket No. R87-1 at 12.

[2] See, Response of John C. Panzar to NAA/USPS-T11-7.

Response of United States Postal Service Witness Bradley
to
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increase in volume over the time period during which the prices will be in effect. Taken literally, this would require that some version of short-run marginal costs should be used.

b. Yes, accounting period data may be used to examine longer run cost effects, particularly when the data are organized as a panel. The use of high frequency (monthly) data does not preclude estimation of long run effects.[3] Volume variability measures the percentage increase in cost from a sustained increase in volume. As I explain in my response to UPS/USPS-T14-41, one should control for short-term variations in hours not caused by sustained variations in volume. Also please note that my data set covers a relatively long time period (9 years) and thus includes changes in capacity through time.

The econometric results based upon the accounting period data cover a range of variabilities, so there is nothing inherent in the frequency of the data which preordains a variability to be "high" or "low". Finally, econometric results on annual data and on SPLY data are presented on pages 75-79 of my testimony. While less

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[3] See, for example, Dennis L. Hoffman and Robert H. Rasche, "Long-Run Income and Interest Elasticities of Money Demand in the United States," Review of Economics and Statistics, Vol. 73, No.4, 1991.

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accurate than the analysis based upon the accounting period data,[4] these results do serve to indicate that the econometric results are not a manifestation of the frequency of the data.

[4] For example, the annual data have only a few observation per site. They are therefore not as accurate as the accounting period data for eliminating the heterogeneity bias associated with a pooled model.

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2. Please identify the statistical properties that are assumed in the "errors in variables" analysis presented by witness Bradley in USPS-T-14 at pages 80-84; e.g., requirements for the distribution of the measurement errors. Please confirm that each assumption is satisfied and provide the rationale for the confirmation.

2. Response:

The primary assumption is that the measurement error is unobservable and measurement error is thus modeled as an independently and identically distributed random variable with a finite variance. To see what statistical properties this implies, consider the following model:

$$y_{it} = \alpha_i + \beta z_{it} + \varepsilon_{it},$$

where I = 1, 2, . . . N and t = 1, 2, . . . T. Suppose that the z_{it} are observed with measurement error:

$$x_{it} = z_{it} + \zeta_{it}.$$

Then, under the stochastic assumption for the measurement error, we can see that the following statistical properties are assumed to hold: $C(Z_{it}, \zeta_{it}) = 0$, $C(\alpha_i, \zeta_{it}) = 0$, $C(\varepsilon_{it}, \zeta_{it}) = 0$, and $V(\zeta_{it}) = \sigma_\zeta$. For an intuitive discussion of how such a measurement error could

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arise, please see my response to DMA/USPS-T14-31 c(vi.). By its very nature, the measurement error is unobservable. Consequently, there are no statistical tests that can be run to confirm the stochastic assumptions.

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3. The analyses of the manual operations in Workpaper 1 of USPS-T-14 demonstrate that the variabilities obtained when running the pooled regression model, with various combinations of variables, produces variabilities in the neighborhood of one. Whereas, introduction of the fixed effects model, plus the AP and lag variables, substantially reduces variabilities and provides results obtained by witness Bradley. Additionally, witness Bradley demonstrates in USPS-T-14, pages 39-43, the importance of site specific effects.

a. Please provide results such as the variabilities given in Table 1 of USPS-T-14, page 9, that distinguish the impact of the fixed effects model from the impact of the other variables. In particular, please provide results obtained for the following cases: (1) a regression analysis involving only the variables "hours worked" (HRS) and "Total Pieces Handled" (TPH) and a constant term when using the pooled model and a fixed effects model; (2) case (1) with the lag variable added; and (3) case (1) with all other variables added.

b. Please discuss in detail why the introduction of the "manual ratio" (MANR) and time variables in the analyses presented in USPS-T-1 Workpaper 1 do not seem to demonstrate a substantial impact on the variability until the use of the fixed effects model. Also, please provide a discussion of the way in which the fixed-effects model helps estimate the desired variabilities without confounding volume-related cost differences between facilities with cost differences caused by other factors. In the course of answering this question, please explain in operational terms how the interpretation of the variabilities in the simple pooled regression model differs from the interpretation of the variabilities in the fixed-effects models.

3. Response:

a. The question makes clear its intent is to ferret out the roles played by the fixed effect estimator and other the variables in the model. Thus, in implementing the requested econometric equations, I have tried to pursue an analysis that will best illuminate these separate roles. To do so, several decisions have to be made and they are discussed before the results are presented. For example, the question

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does not specify a functional form for the requested econometric analyses, yet one must be specified for an equation to be estimated. To ensure consistency, I used a translog functional form for estimating all the variabilities estimated below. In this way, the results are directly comparable without the additional complication of varied functional forms. In addition, the question is silent on whether or not the requested regressions should or should not be corrected for serial correlation. To ensure comparison with the results presented in my testimony, the results should be corrected for serial correlation. On the other hand, the Presiding Officer may wish to see the extremely simple models described in the question without such a correction. To facilitate a fuller understanding of these issues, I am thus providing all of the requested econometric results both ways: with a correction for serial correlation in place and without a correction for serial correlation.

The results presented below, in combination with the GNR tests presented on page 43 of my testimony, clearly and dramatically demonstrate that the pooled model presents biased estimates. This is not surprising, as the panel data estimator was developed to control for just such a bias:[5]

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[5] See, Keane and Runkel, "On the Estimation of Panel-Data Models withe Serial Correlation when Instruments are not Strictly Exogenous," Journal of Business and

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> In recent years, researchers in many disciplines, including economics, accounting, finance, and marketing have increasingly relied on panel data to model the behavior of individual firms. They have done so because panel data allows them to control for persistent unobserved differences among individuals or firms that in many instances may bias estimates obtained from the cross-sections.

Moreover, failure to control for site-specific effects can have serious consequences for the results:[6]

> Ignoring such parameter heterogeneity among cross-sectional or time series units could lead to inconsistent or meaningless estimates of interesting parameters.

Because these results are demonstrably and materially biased, they are not proper candidates for consideration by the Commission. I am pleased to produce these results to enhance the Presiding Officer's understanding of these issues, but I am reluctant to sponsor them, even in an indirect manner.

Several patterns in the results emerge. First, these results clearly corroborate the results of the statistical tests in my testimony that reveal the facility-specific effects are important and that the pooled results are thus biased. In many instances, the

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Economic Statistics, Vol. 11, No. 1., Jan. 1992.

[6] See, C. Hsiao, Analysis of Panel Data, Cambridge University Press, New York, 1986 at 5.

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pooled results are well above 100 percent variability, topping out at about 112 percent for manual flats in the specification with all of the variables included. Moreover, because just correcting for serial correlation is an indirect way of reducing the bias from non-volume facility specific effects, the variabilities for the pooled model results with the serial correlation correction are always less than the results without the correction.[7] Such is not true for the fixed effects model in which the serial correlation correction sometimes increases and sometimes decreases the estimated variability.

Second, the more general specification that allows for a lagged effect to TPH changes generally has a material effect and usually increases the estimated variability. This general result corroborates my use of the lag term in the fixed effect model with all of the control variables.

Third, the results show that the manual ratio variable and the time-related variables play an important role in accurately estimating the variability.[8] As expected, these

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[7] To see this, compares rows one and two of each set of results.

[8] To see this, compare the third and fourth columns of each set of results.

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variables are more important in some equations than in others, but consider the letter and flat operations. As highlighted below, the additional variables are important in controlling non-volume effect and generally, although not always, increase the variabilities in both the pooled and fixed effects regressions.

CHANGE IN VARIABILITIES FROM ADDING "OTHER" VARIABLES	
MANUAL LETTER	
POOLED	2.0%
FIXED EFFECTS	4.0%
MANUAL FLAT	
POOLED	4.2%
FIXED EFFECTS	13.3%
LSM	
POOLED	6.0%
FIXED EFFECTS	4.7%
FSM	
POOLED	2.0%
FIXED EFFECTS	-1.2%
OCR	
POOLED	9.0%
FIXED EFFECTS	6.6%
BCS	
POOLED	2.6%
FIXED EFFECTS	-1.3%

The requested variabilities are presented below:

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MANUAL LETTERS

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	106.9%	107.0%	107.9%
POOLED	YES	100.7%	104.3%	106.3%
FIXED EFFECTS	NO	62.9%	61.9%	58.9%
FIXED EFFECTS	YES	74.4%	75.7%	79.7%

MANUAL FLATS

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	110.4%	110.6%	111.7%
POOLED	YES	101.4%	106.3%	110.4%
FIXED EFFECTS	NO	67.8%	68.5%	62.4%
FIXED EFFECTS	YES	67.0%	73.5%	86.6%

LSM

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	98.2%	98.3%	104.8%
POOLED	YES	94.9%	97.0%	103.0%
FIXED EFFECTS	NO	80.3%	80.2%	90.9%
FIXED EFFECTS	YES	84.6%	85.8%	90.5%

FSM

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	102.9%	103.1%	103.2%
POOLED	YES	97.3%	100.3%	102.3%
FIXED EFFECTS	NO	115.1%	119.1%	99.7%
FIXED EFFECTS	YES	83.8%	93.0%	91.8%

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OCR

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	104.8%	105.0%	109.3%
POOLED	YES	82.1%	93.6%	102.6%
FIXED EFFECTS	NO	88.9%	90.6%	93.7%
FIXED EFFECTS	YES	56.3%	72.0%	78.6%

BCS

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	106.5%	106.8%	108.4%
POOLED	YES	98.0%	102.9%	105.5%
FIXED EFFECTS	NO	101.7%	102.0%	100.6%
FIXED EFFECTS	YES	87.0%	95.8%	94.5%

MANUAL PARCELS

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	91.7%	93.5%	89.8%
POOLED	YES	54.8%	71.8%	67.4%
FIXED EFFECTS	NO	55.1%	58.3%	55.5%
FIXED EFFECTS	YES	35.0%	46.0%	39.5%

MANUAL PRIORITY

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	90.9%	91.4%	90.8%
POOLED	YES	76.2%	84.5%	79.0%
FIXED EFFECTS	NO	54.8%	54.4%	43.5%
FIXED EFFECTS	YES	59.4%	63.2%	44.8%

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CANCELLATION & METER PREP

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	104.8%	105.0%	103.6%
POOLED	YES	87.2%	96.7%	96.9%
FIXED EFFECTS	NO	58.3%	58.5%	51.9%
FIXED EFFECTS	YES	59.2%	66.8%	65.4%

SPBS NONPRIORITY

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	86.8%	87.5%	89.1%
POOLED	YES	59.4%	71.2%	72.7%
FIXED EFFECTS	NO	68.4%	69.7%	74.3%
FIXED EFFECTS	YES	41.5%	51.3%	46.9%

SPBS PRIORITY

	Corrected for Serial Correlation?	TPH Alone	TPH & Lag TPH	All Variables
POOLED	NO	100.8%	103.5%	100.3%
POOLED	YES	81.2%	93.3%	90.4%
FIXED EFFECTS	NO	89.3%	92.8%	94.6%
FIXED EFFECTS	YES	68.9%	82.0%	80.1%

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b. I don't agree with the inference that the manual ratio and time variables do not demonstrate a substantial impact on the variability until they are used in the fixed effects model. These variables are generally statistically significant in Workpaper 1. It is impossible to infer the bias caused by omitting the manual ratio and time variables using only Workpaper 1, because that workpaper typically does not present models for which they have been omitted. What most likely causes this inference is the extreme bias in the pooled model results. This bias is so large in the pooled model that it tends to overwhelm the material effect of the manual ratio and time variables. For a demonstration of the effect of the manual ratio and time variables within the pooled model framework, please see part a. above.

To understand how the fixed effects estimator works, and how it controls for non-volume differences across facilities without confounding the effects of volume differences, let's suppose that there are two reasons that hours vary across facilities, variations in volume and variations in non-volume factors. Suppose that the true model is given by:

$$h_{it} = \alpha_i + \beta v_{it} + \mu_{it}$$

In this equation, the variations in hours across facilities are caused by variations in

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volume (βv_{it}) and variations in non-volume factors (α_i). As the question suggests, one might be concerned that if the non-volume variation was correlated with the volume variation, the fixed effects estimator may not be able to accurately disentangle the two. In fact, the fixed effects estimator is designed to do just that, and it is the pooled estimator that confounds the two effects. To see this, note that the estimation of a pooled model requires the β coefficient to capture both the volume and non-volume effects. The bias in the pooled estimator thus depends upon the correlation between the volume and non-volume effects across facilities. This can be demonstrated by the following relationship:

$$\beta_{Pooled} = \beta + \frac{C(v_{it}\alpha_i)}{V(v_{it})}$$

Note that the fixed effects estimator does not require independence between volume variation and non-volume variation across facilities. Whether or not those variations are correlated, the fixed effects estimator provides an unbiased estimator of the volume variation. The fixed effects estimator uses the α_i to control for non-volume variations in hours across facilities leaving the estimated β coefficient to directly estimate the volume variations.

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The last part of the question requests operational interpretations of the simple pooled model and the fixed effects model. The fixed effects model controls for the non-volume heterogeneity across postal facilities. As I state on page 39 of my testimony:

> The fixed effects model allows for site-specific effects that would cause two facilities to have different levels of hours for the same amount of piece-handlings. Reasons for these differences include things like the age of the facility, the quality of the local work force, and the quality of the mail that the facility must process. When there are facility-specific effects, the model must be modified to allow for these effects. (Footnote omitted).

Thus, from an operational perspective, the fixed effects model gives the hours response to volume changes controlling for non-volume difference across sites. The pooled model, on the other hand, gives a biased measure of the hours response to volume changes by confounding it with other non-volume bases for variations in hours across facilities.

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4. Please discuss the apparent contradiction in the response of witness Moden to TW/USPS-T4-7 regarding the Postal Service's ability to size staff precisely with witness Bradley's explanation presented at USPS-T-14, at pages 57-58, that certain mail processing operations have low variabilities because they perform "gateway" or "backstop" functions.

4.Response:

It is my understanding that witness Moden's response was describing the Postal Service reactions to unexpected changes in daily conditions, like a machine breakdowns, whereas my discussion was referring to impacts on these activities from a sustained increase in volume. In his discussion of this latter effect (on page 21 of his testimony) witness Moden states:

> Manual cases become the method-of-last-resort, especially late in the evening as rejects from automated operations appear in quantity. To meet service commitments, manual cases must be staffed to handle these late surges.

In my discussion (on page 58 of my testimony) I state:

> In an automated environment, manual activities will serve as the backstop technology and these activities will be staffed so that they are available to sort the mail that cannot be finalized on automated equipment. In this way, the manual sorting activities serve as a form of insurance against service failures, but at the cost of lower piece productivity.[9]

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[9] Be careful not to mistakenly interpret the low productivity in manual operation as implying an increase in total cost. The lower productivity in manual operations arises in the attempt to reduce total cost (through automation) while maintaining present service standards.

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5. Does witness Bradley's selection of TPH as the cost driver for mail processing labor costs assume that the TPH for each cost pool activity in each facility is proportional to the volume of mail processed by the activity? If so, how important is the assumption of proportionality? Please discuss whether the ratio of TPH to volume for the cost pools has changed over the nine-year period examined by witness Bradley (due to changes in such things as mail mix and processing technology), whether the ratio varies significantly across facilities for the cost pools, or whether it varies significantly for a cost pool within a facility. To what degree do such variations conflict with the assumption of proportionality, and what are the implications for witness Bradley's analysis? Does witness Bradley's selection of TPH as the cost driver for mail processing labor costs assume that system TPH is proportional to system volume?

5 Response:

No, my analysis does not depend upon any such assumptions. As explained on page 5 of my testimony, the Postal Service mail processing analysis is performed in two steps:

> In this method, the Postal Service calculates subclass-specific volume variable costs in two steps. In the first step, sometimes called the "attribution step," the Postal Service multiplies accrued cost times the elasticity of those costs with respect to a cost driver. This multiplication produces the pool of volume variable cost.[10] In the second step, sometimes called the "distribution step," the Postal Service distributes the pool of volume variable cost to individual subclasses.

My testimony deals with the former of these two steps, estimating the variability of cost with

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[10] In postal costing, this elasticity is often called the "volume variability" of cost although it is formally the variability of cost with respect to movements in the cost driver. To avoid confusion, I maintain that convention here and use the terms "volume variability" and "cost elasticity" interchangeably throughout my testimony.

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respect to the cost driver. Estimating this relationship does not require an assumption about the relationship between TPH and volume. For example, the overall volume variable costs for a class of mail can be expressed as:

$$VVC_i = C * \varepsilon_{C,V_i}$$

where VVC is volume variable cost and C is accrued cost. The required elasticity can be expressed as two parts, each reflecting one of the two steps described above:

$$\varepsilon_{C,V_i} = \varepsilon_{C,D} * \varepsilon_{D,V_i}$$

My analysis provides the first elasticity, the elasticity of cost with respect to the driver. This does not depend upon any assumptions about the second elasticity, the elasticity of the driver with respect to volume.

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UPS/USPS-T14-1. Please confirm that your workpapers and associated Library References include all data collected (prior to scrubs), whether it was ultimately used by you in your analyses or not, during the course of the analyses performed in your direct testimony. If not confirmed, please provide this data.

UPS/USPS-T14-1 Response:

Confirmed.

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UPS/USPS-T14-2. Please confirm that your workpapers and associated Library References provide, in electronic and in hard copy form, all computer programs, spreadsheets, etc., used to scrub the data as well as the programs that generated the analyses and results in your direct testimony. If not confirmed, please provide this information.

UPS/USPS-T14-2 Response:

Confirmed for the analyses and results that I relied upon in my testimony. Not confirmed for the alternative models that I did not use. For the alternative models that I did not use, I provided, in my testimony, a statement of the reasons for rejecting the alternative; an identification of any differences between the alternative and the preferred model with respect to variable definitions, equation forms, data, or estimation methods; and the computed econometric results for the alternative.

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UPS/USPS-T14-3. Please refer to page 7 of your direct testimony where you state that "non-MODS offices do not submit piece-handling data to the corporate data base."

a. Please explain in detail the differing characteristics, if any, between MODS offices and non-MODS offices and how those differences affect or bias the results of your costing analyses.

b. What specific criteria are used to determine whether a particular facility is designated as a MODS office or as a non-MODS office?

UPS/USPS-T14-3 Response:

a.& b. For a discussion of the process of designating offices as MODS facility, please see the Postal Service's response to UPS/USPS-T14-10.

In practice, I believe that most plants with automated equipment are part of the MOD system. Because I estimate variabilities for mail processing activities at MODS offices, omitting the non-MODS offices from the analysis cannot bias the results for the MODS office group. I recommend applying the estimated variabilities from selected MODS activities as proxy variabilities for the non-MODS office group because no data are available for econometric estimation of mail processing variabilities at non-MODS offices. The operational mix varies between MODS and non-MODS offices (and even within MODS offices), but I believe that there is not

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a substantial difference between MODS and non-MODS offices in the nature of the activities themselves.

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UPS/USPS-T14-5. Please refer to page 16 of your direct testimony, where 9213 is chosen as the "kink" in the technology time trend. Please explain how this time period was chosen.

UPS/USPS-T14-5 Response:

The break in the time trend was selected because 9301 was the first period under which mail processing operations were reorganized under the general Postal Service restructuring of that time.

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UPS/USPS-T14-6. Please confirm that the manual ratio and the technology variable contain much of the same information. If so confirmed, please list that information; if not so confirmed, explain.

UPS/USPS-T14-6 Response:

Not confirmed. Because of the panel nature of the data set, the manual ratio and the time trend variables do not contain the same information. The manual ratio reflects the site-specific changes in mail processing flows, which vary from site to site, and the time trend reflects the progress of the automation program and other changes in mail processing operations for the Postal Service as whole.

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UPS/USPS-T14-7. Please refer to page 16, lines 4-5, of your direct testimony, where you state that "it is the advent of automation that embodies the technological change."

a. In your opinion, does advancing technology lead to increased automation? Please explain your answer.

b. Are technology and automation correlated? Please explain how and by what degree the results of your costing analyses are affected by the existence or lack of a correlation.

UPS/USPS-T14-7 Response

a. In my opinion, automation is part of the application of advancing technology. I do not know to what degree technological change permits greater automation or to what degree the desire for automation leads to improvement in technology change. Both are possible.

b. As automation technology has improved, the degree of automation has increased. However, the schedule and pace of automation deployment varies significantly from site to site. Therefore, the two are not perfectly correlated and it is appropriate to include a variable that reflects the site-specific effects of automation (the manual ratio) as well as one that reflects the system-wide effects (the trend terms).

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UPS/USPS-T14-8. On page 12 of your direct testimony, you state that in estimating elasticity equations for direct activities, mail processing hours is the preferred dependent variable. Please confirm that hours worked is not the preferred dependent variable in estimating elasticity equations for indirect activities. Please explain your answer.

UPS/USPS-T14-8 Response:

Not confirmed. Hours would be the preferred dependent variable for allied activities for the same reasons it is preferred in the direct activities.

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UPS/USPS-T14-9. You state on page 22, lines 17-18, of your direct testimony that "[h]ours are available from the MOD system for the registry activity but no piece handling counts are recorded."

a. Why are piece handling counts for registry activities not available on MODS?

b. How does the RPW Registry mail volume differ from MODS in terms of accuracy and method of reporting?

c. Please explain how the difference between RPW data and MODS data affects the results of your costing analyses.

d. Please explain if equations estimated with MODS data are more or less accurate than equations estimated with RPW data. To what extent does your analysis account for the variation in accuracy?

UPS/USPS-T14-9 Response:

a. The registry activity involves a collection of functions that do not involve the sorting of mail. It is my understanding that MODS does not have a consistent method of establishing workload when this the case. Although piece handlings are occasionally reported by certain sites, they are considered to be unreliable and should not be used.

b. The RPW data are available only on a national basis (not by office) and are available only quarterly. Therefore, much less data are available than from MODS.

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I am not familiar with measures of accuracy for the RPW data, so I cannot make the desired comparison.

c. Because of the smaller amount of data available, I must estimate a much simpler specification. In addition, I must estimate a pure time series model, because RPW data are not available by site.

d. There are no reliable workload data available for the registry activity from MODS so it is impossible to compare the accuracy of a MODS-based equation with the equation estimated on RPW data. The RPW data are the best data available.

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UPS/USPS-T14-11.

a. Please provide descriptive statistics for all observations dropped from the data: for example, the number of observations (by activity) that are dropped; the number of sites dropped; the number of sites dropped for missing one or two data points versus the number of sites dropped for missing many data points; the number of sites (and observations) dropped due to the presence of outliers.

b. Please explain if the eliminated sites were in a specific geographic area or whether they were of similar size (in either hours worked or volume).

c. Please explain if a larger percentage of the data dropped was for direct activities, allied activities, or other activities.

UPS/USPS-T14-11 Response:

a. For the MODS direct activities, the number of observations dropped is given in Library Reference H-148 at Table H148-1 on page H148-7. This table provides the number of observations lost for periods in which there was no activity reported, the number of observations lost for periods in which there were missing data, and the number of observations lost as a result of the continuity and outlier scrubs. For example, for the manual letter observation there are 29,711 observations for which sites report activity. There were 1,063 observations dropped because of missing data, 57 observations dropped because of the threshold scrub and 3,501 observations dropped as a result of the outlier and continuity scrubs. This left a total of 25,090 observations for estimating the econometric equation.

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The numbers of observations lost for the MODS allied operations are available in individual programs in Workpaper WP-3, but I present them here in tabular form for convenience.

Data Progression For the Allied Activities at MODS Offices				
	PLATFORM	OPENING PREF	OPENING BBM	POUCHING
Starting Number	30,828	30,828	30,828	30,828
Periods in which there was no reported activity	4,472	4,470	10,011	9,399
Initial Data Frame	26,356	26,358	20,817	21,429
Observations with no piece handlings in one of the direct activities	6,672	6,524	3,257	4,307
Sub total	19,684	19,834	17,560	17,122
Observations lost in the outlier/continuity Scrubs	2,032	2,978	3,123	2,263
Analysis Data Set Size	17,652	16,856	14,437	14,859

Because of the smaller amount of data eliminations for BMCs, I did not keep track of the number of observations lost at each step. However, an enumeration of the total number of observations lost due to the scrubs is presented below. Please recall that, as described in Library Reference H148, there is no threshold scrub for the BMCs.

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Data Progression For the BMC Activities				
Operation	Starting Number	Observations Lost Because of No Reported Activity	Observations Eliminated By Scrubs	Size of Analysis Data Set
Primary Parcel Sorting	2094	0	196	1898
Secondary Parcel Sorting	2094	25	211	1858
Sack Sorting	2094	178	159	1757
Sack Opening	2094	0	511	1583
Irregular Parcel Post	2094	62	367	1665
NMO	2094	0	267	1827
Platform	2094	0	318	1776
Floor Labor	2094	0	435	1659

The scrub programs are structured to investigate and eliminate observations, not sites. It is therefore much more difficult to provide site-specific information. Nevertheless, to provide some insight, in response to your interrogatory, about how the presented information on elimination of observations relates to the elimination sites, a laborious manual investigation of one operation was pursued. I am presenting the progression of data sets for the manual letter activity. I chose that activity because it has the largest number of sites. Below is a table that provides the individual steps in the creation of the analysis data sets and the number of sites lost at each step.

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Data Progression for the Manual Letter Sorting Activity	
Sites reporting data in at least one operation for at least on AP	446
Sites eliminated because they have less than 39 observations.	110
Subtotal	336
Sites eliminated because of missing data.	21
Subtotal	315
Sites eliminated by the threshold scrub.	1
Subtotal	314
Sites eliminated by the continuity and outlier scrubs.	5
Sites in analysis.	309

b. The scrub programs do not have regional or size identifiers built into them. I cannot provide information on the geographical or size profile of the facilities eliminated

c. The percentages of data dropped from direct activities are provided in Table H148-1 in Library Reference H-148. The percentages dropped for allied activities can be calculated from the values presented in the table on allied activities provided in response to part a. of this interrogatory.

Response of United States Postal Service Witness Bradley
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UPS/USPS-T14-12. On page 31, lines 2-3, of your direct testimony you state that "[t]he first scrub requires that a site have at least thirty-nine continuous observations in any activity." Please explain how the criterion of 39 consecutive data points was chosen.

UPS/USPS-T14-12 Response:

The criterion of 39 observations was chosen to ensure that each site has at least three years of data. This criterion ensures that seasonal patterns can be accurately identified and provides more than enough time for measurement of the response in cost to a sustained increase or decrease in volume. Although this is a relatively strict standard, given the size of the data base, it ensures the production of a high quality data set without significantly limiting the amount of data. If the data set was not so large, a standard of only 26 observations (two complete years) would be a serious alternative.

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UPS/USPS-T14-13.

a. Please confirm that for a site with 78 consecutive data points, only the most recent 39 were chosen. If not confirmed, please explain how the 39 data points were chosen.

b. If confirmed, please confirm that the older data was eliminated for no other reason than that it was older. If reasons other than the age of the data are cited, please explain in full why the older data was eliminated.

UPS/USPS-T14-13:

a. Not confirmed. A site was required to have 39 observations but not limited to 39 observations. If a site had 78 consecutive observations, the full set of 78 consecutive observations was used.

b. Not applicable.

Response of United States Postal Service Witness Bradley
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UPS/USPS-T14-14. Was any consideration given to interpolating missing data for a site that was missing only a few observations? If such consideration was given, why was the interpolation of missing data not used?

UPS/USPS-T14-14 Response:

Yes, I considered interpolation, but two factors mitigate against doing so. First, even without interpolation, I typically end up with somewhere between 15,000 and 25,000 observations to estimate the econometric equation. Thus, eliminating discontinuous data does not cause a problem with the efficiency of the estimates. Second, there is no single "right" method of interpolation. Any attempt at interpolation would raise a host of questions, such as: Should the arithmetic average of the nearby observations be used or should the geometric average be used? What about seasonality? How should the seasonal patterns be used? Should the value for the same AP in the previous year be part of the interpolation? What should be done if there is a gap of two periods? How many times can a series be interpolated before it is no longer acceptable? If there was a shortage of data, it may be appropriate to address these questions, but given the data available here, it is not necessary to do so.

Response of United States Postal Service Witness Bradley
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Interrogatories of UPS

UPS/USPS-T14-15. For how many periods were start-up sites eliminated from the data? Please explain how this number was chosen and what evidence there is to support the choice.

UPS/USPS-T14-15 Response:

Iti is not that sites were eliminated for being in start up periods, but rather observations from start up sites were dropped. After discussions with operations experts, a threshold value of 100,000 piece handlings was used for letter and flat operations and a threshold value of 15,000 piece handlings was used for parcel and Priority operations. Observations from sites with fewer piece handlings than these thresholds were eliminated as startup observations.

The number of observations dropped as a result of the threshold scrub is provided in Library Reference H-148 in Table H148-1 on page H148-7. For example, 57 observations were dropped in the manual letter activity. No threshold scrubs were applied to the allied and BMC activities.

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UPS/USPS-T14-16. On page 34, lines 9-11, of your direct testimony, you state that "there were sufficient data remaining after the scrubs for the estimation of eight BMC activity equations."

a. Please explain how many BMC equations and what BMC equations could not be estimated because "some observations were lost when the data [was] scrubbed."

b. To what activities did the data apply?

c. Describe the data that were lost in the scrubs (please refer to the examples set forth in question 13, above).

UPS/USPS-T14-16 Response:

a. Equations for two BMC activities could not be estimated. There was not enough data to estimate equations for the Bulk Business Mail Letter Tray Activity and the Bulk Business Mail Flat Tray Activity.

b. The Bulk Business Mail Letter Tray Activity and the Bulk Business Mail Flat Tray Activity.

c. The BMC's did not report enough data for estimation of these equations. It is not just that they lost data during the scrubs, but that there were relatively few data from the beginning. In fact, the BMCs reported only reported only 753 observations

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for the Bulk Business Mail Letter Tray Activity and 569 observations for the Bulk Business Mail Flat Tray Activity. After the scrubs there were only 499 observations from approximately 8 sites for the Bulk Business Mail Letter Tray Activity and 321 observations from approximately 6 sites for the Bulk Business Mail Flat Tray Activity.

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UPS/USPS-T14-17.

a. Please explain why a second order translog equation was chosen for estimation as compared to other available flexible forms, such as the AIM, Box-Cox, and Minflex-Laurent.

b. Please discuss the inherent bias in the translog equation in its restrictions of elasticities of substitution. Include in your discussion the basis for the choice of a second order expansion.

c. Please explain to what degree the second order expansion leads to correlation of the regressors. Discuss the significance of this result.

d. Please explain any other functional forms estimated. If there are any, please provide and explain the results.

UPS/USPS-T14-17 Response:

a. The translog form was chosen because it has been successfully used to model costs in a wide variety of industries, it is suitable for the estimation task at hand, and it has been adopted by the Commission in the past.[1] For example, the translog has been used to model costs for banking (Pully & Braunstein, 1992), telephony (Charnes, Cooper and Sueyoshi, 1988), electricity (Koh, Berg and Kenny, 1996), universities (deGroot, McMahon and Volkwein, 1991), hospitals (Sinay and Campbell, 1995) and trucking (Ying 1990).

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[1] See, PRC OP., R87-1, at page 309.

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Also, the translog is well suited for the particular estimating task in this analysis. For example, there are no instances of zero output on the right-hand-side, so the Box Cox transformation is not required. The AIM (Aysmptotically Ideal Model) approximates abritrary cost functions by estimating the parameter of a kth order polynomial in the input prices. Because input prices are constant across sites, (a single national wage scale is followed), the attractiveness of using an AIM specification is limited.

Finally, the translog is well known and widely accepted. As explained by Greene[2]:

> The literature has produced something of a competition in the development of exotic functional forms. However, the translog function has remained the most popular, and by one account, Guilkey et. al. (1983) is the most reliable of several available alternatives.

b. There are two types of elasticity of substitution that are derived from the translog cost function, the elasticities of factor substitution and the own price elasticities of demand for inputs. Both of these quantities measure the responsiveness of factor demands to changes in input prices. However, because input prices (wages) are

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[2]See, William H. Greene, Econometric Analysis, 1993 Macmillan Publishing, New York, at page 504.

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constant across sites, such elasticities cannot and should not be estimated. Therefore any bias, or lack thereof, in their estimation is not relevant for specifying the functional form.

c. In estimation of a multi-product cost function, the presence of second order terms raises the possibility of correlation among the regressors. If large firms produce more of all of the outputs than do small firms, then it is possible that the various outputs are correlated. Second order terms would intensify this possible correlation. For the direct operations, this is not an issue, because there is only a single measure of output, the relevant piece handlings. It is a potential concern for the allied operations, because there are five output measures in those equations. In practice however, the problem is mitigated by the availability of thousands of data points across numerous sites.

d. Because of the reasons enumerated in part a, above, the translog function is appropriate and adequate for the current estimation task. Thus, I did not estimate any other functional forms.

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UPS/USPS-T14-18. Refer to pages 49 through 51 in your direct testimony, where the a correction for serial correlation is discussed and the Baltagi and Li method is chosen.

a. Was the Bhargava, Franzini and Narendranathan method attempted? Why or why not?

b. What are the advantages of the Bhargava, Franzini and Narendranathan method?

c. Does the use of the Baltagi and Li method as opposed to the use of the Bhargava, Franzini and Narendranathan method result in different conclusions? If so, what are the differences and how would they affect the conclusions of your analyses?

UPS/USPS-T14-18 Response:

a. The Bhargava, Franzini and Narendranathan formula for ρ does not have a closed form solution and the computational algorithm is thus iterative. Experiments with the computational algorithm showed that it would not always provide a solution for a data set with the dimensions of the present one. Therefore, I substituted the Baltagi-Li method of calculation.

b. The Bhargava, Franzini and Narendranathan value for ρ has no advantage asymptotically, and is harder to compute than the Baltagi-Li Method.

c. No. Both methods produce similar values for ρ and would thus produce similar parameter estimates.

Response of United States Postal Service Witness Bradley
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UPS/USPS-T14-19. Please refer to page 61, lines 10-12, of your direct testimony, where you state that "[a]n autonomous decline in hours, in each of these activities, for the 1988-1992 period is replaced with an autonomous increase in hours for the 1993-1996 [period]."

a. Please describe the basis for this result.

b. Was there a structural change that leads to this result? In your opinion, what was the cause of this result?

c. In your opinion, how can this be better modeled in the estimated equations?

UPS/USPS-T14-19 Response:

a. The basis for this results is the negative coefficients on Time Trend 1 and the positive coefficient on Time Trend 2 in Table 7 on page 54 of my testimony.

b. The econometric results indicate that there was a structural change. I think that the structural change resulted from the reorganization of the workroom floor that occurred in FY 1993.

c. Because of the nature of the structural change I think it would be hard to model it better in an econometric equation. In this ideal, if a variable could be constructed that somehow measured the way in which an activity was managed, then that variable could be used to measure the degree of structural change.

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UPS/USPS-T14-20. To what extent have MODS facilities experienced a trend toward automation compared to BMCs? Please include in your answer percentages of automated volume over time.

UPS/USPS-T14-20 Response:

Until very recently, with the advent of placing barcode readers on parcel sorting machines, BMCs have had not automation. Thus, BMCs have not had the historical experience with growing automation that has taken place at the MODS facilities.

I do not have and could not find specific data on automated volumes. To calculate percentages of automated piece handlings, compute the following ratio on the data provided in Library Reference H-148:

$$\textit{Automated Ratio} = \frac{\textit{OCR PH} + \textit{BCS PH}}{\textit{OCR PH} + \textit{BCS PH} + \textit{LSM PH} + \textit{Manual Letter PH}},$$

where PH stands for piece handlings.

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UPS/USPS-T14-21. Please refer to page 13 of your direct testimony, where you discuss the adjustment lag to new processing technologies.

a. Please state the length of one "period" of adjustment.
b. Please explain why only one lag was chosen to allow for adjustment.
c. Is there empirical evidence to support the choice of a one period lag? If so, please provide all such evidence and explain.
d. Is there any anecdotal evidence to suggest that adjustments take only one period? If so, please provide all such evidence and explain.
e. Was the possibility of using a two period adjustment investigated? If so, please explain why it was not selected.
f. Please explain how the result of your costing analysis differs between MODS and PIRS.

UPS/USPS-T14-21 Response:

I am not discussing the adjustment lag to new processing technologies on page 13. On page 13, lines 12-16, I am discussing the adjustment of hours to changes in volume. I discuss the adjustment to technological change on page 14, lines 21-23 where I state:

> Although the Postal Service may introduce a new machine in a particular period, it takes many accounting periods before the full adjustment to that new technology has occurred.

a. As stated in the above quotation, the adjustment does not take one period, but many periods. That is why I state on page 14 of my testimony, "A trend approach is particularly well suited for looking a mail processing labor costs because changes in technology generate smooth changes in mail processing productivity."

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b. As stated in my testimony, I allow for many periods of adjustment, not one.

c. Not applicable.

d. Not applicable.

e. Not applicable.

f. I am not sure what comparison is requested. The detailed results for the MODS and PIRS costing analyses are provided in my testimony.

Response of United States Postal Service Witness Bradley
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UPS/USPS-T14-22. Please refer to page 27 of your direct testimony, where you discuss the three digit MODS codes that can be included in one particular activity.

a. Please confirm that you captured all three digit codes for all activities you analyze. If so confirmed, please explain how you can be certain that you did so? If not confirmed, please explain.

b. Please explain any ambiguities in assigning three digit MODS codes to an activity.

UPS/USPS-T14-22 Response:

a. Confirmed. I followed the following procedure to ensure that I captured all relevant three digit MODS codes for a particular activity:

Step 1: Worked with experts on MODS to identify the relevant MODS codes for any activity. MODS codes are specifically defined in the Update to Handbook M-32, presented in Exhibit USPS-14A, in my testimony.

Step 2: Select the relevant codes for each activity. Review the relevant codes for consistency with the identifications made in Step 1.

Step 3: Provide the selected codes to Postal Service personnel for audit and review.

b. There are two factors that must be kept in mind in assigning three digit MODS codes to activities. First, multiple three digit codes may be used for the same activity and, second, the Postal Service provides the multiple-code option to local

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facilities. I explain this first potential ambiguity on page 26 of my testimony:

> In fact, multiple three digit codes may be used for the same mail processing activity. This may occur because different three digit codes reflect different sortation schemes being run. For example, consider the flat sorting machine (FSM) activity. MODS codes 141 through 148 are all FSM operations, but, as Table 2 shows, each is a different sort scheme.

I explain the second potential ambiguity on page 27 of my testimony:

> In other cases, the Postal Service provides the multiple-code option to local facilities to allow them to collect even more detailed data on a local basis. For example, MODS codes 110 through 114 are all for Opening Unit Outgoing - Pref.

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UPS/USPS-T14-23. Please refer to Workpaper WP-1, and to the program SPBSP.TXT in LR-H-149. At the bottom of page 1 of SPBSP, the data set OPSTAGE is read in and a variable is set: "HRS=HSPPRIO." In Workpaper WP-1, the output (LOG file) of program SPBSP is listed on page WP1-2. However, line 66 of the LOG file references the same data step and sets: "HRS=HSPBPRIO." Thus, these two lines, one from the SAS file and one from the LOG file, are inconsistent. The SAS program contained in the library reference thus does not appear to be the program that created the LOG file in the workpaper. Please explain the discrepancy and identify which program created the results contained in Bradley T-14.

UPS/USPS-T14-23 Response:

The programs that estimate the equations for the MODS direct activites are identical save for the two lines that define hours (HRS) and piece handlings (TPH). On the Postal Service mainframe computer, the individual equations are estimated by simply changing these lines of code to the appropriate definitions and running the program. I thus could have downloaded a single set of SAS code and instructed the potential user how to make this basic change. However, to facilitate access for potential users, I created multiple versions of the program, one for each of the MODS direct activities. Please note that the expression "HSPPRIO" is quite similar to the expression "HSPBPRIO." In fact, they differ only by a missing "B" in the former expression. Apparently, I made a typographical error by inadvertently omitting the "B" in creating the ASCII version on floppy disk. If you insert the missing "B" between the two "P"s and run the program, the SAS code in Library Reference H-149 generates the listing in Workpaper WP-1 to accompany USPS-T-14.

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UPS/USPS-T14-24. Please confirm that the LOG files and related documents in all other workpapers are consistent with the SAS files contained in LR-H-148 and LR-H-149. If this is not the case, please provide the consistent pairs of SAS and LOG files that were used in the results contained in Bradley T-14.

UPS/USPS-T14-24:

I confirm that the SAS logs and listing in my Workpapers to accompany USPS-T-14 are consistent with the SAS programs contained in Library Reference H-149. I cannot speak for any other witnesses' workpapers.

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UPS/USPS-T14-25. Please provide the SAS LOG for programs VVMALLSC.TXT, VVMBMCSC.TXT, VVMDIRSC.TXT and VVMREGSC.TXT, and confirm the following:

a. VVMDIRSC.TXT is the SAS program that "scrubs" the MODS direct activities data.
b. Data set VVDA1.DAT is read in to VVMDIRSC.TXT.
c. VVMALLSC.TXT is the SAS program that "scrubs" the MODS allied activities data.
d. Data sets VVDA2.DAT and VVDA1.DAT are read in to VVMALLSC.TXT.
e. VVBMCSC.TXT is the SAS program that "scrubs" the BMC allied and direct data.
f. Data set BMC.DAT is read in to VVBMCSC.TXT.
g. VVMREGSC.TXT is the SAS program that "scrubs" the registry (and remote encoding) data.
h. Data set RGDATA.DAT is read in to program VVMREGSC.TXT.

If you cannot confirm, please provide explicit references to the SAS programs and the particular data scrubbed as well as the data sets that are read in by each of the above referenced programs.

UPS/USPS-T14-25 Response:

The requested SAS logs are being filed in Library Reference H-259, "SAS Logs Provided in Response to UPS/USPS-T14-25."

a. Confirmed. Please see page H148-2 of Library Reference H148 where it states:

> A "scrub" program, described and documented below, was run on these input data sets to prepare the analysis data sets. They are called VVMPO.DATA for the direct operations and VVMPN.DATA for the allied operations.

Also, please see page H148-9 of Library Reference H-148 where it states:

> The program which create[s] VVMPO.DATA is called VVMDIRSC.CNTL. A hardcopy is included in this Library Reference and an electronic version is include[d] on diskette as VVMDIRSC.TXT.

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b. *Confirmed.*

c. Confirmed. Please see page H148-2 of Library Reference H148 where it states:

> A "scrub" program, described and documented below, was run on these input data sets to prepare the analysis data sets. They are called VVMPO.DATA for the direct operations and VVMPN.DATA for the allied operations.

Also, please see page H148-11 of Library Reference H-148 where it states:

> The program which creates VVMPN.DATA is called VVMALLSC.CNTL. A hardcopy is included in this Library Reference and an electronic version is included on diskette as VVMALLSC.TXT.

d. Confirmed.

e. Confirmed. Please see page H148-12 in Library Reference H148 where it states:

> A "scrub" program, described and documented below, was run on these input data sets to prepare the analysis data set. It is called SCRUBMCB.DATA.

Also, please see page H148-15 of Library Reference H148 where it states:

> The program that creates SCRUBMCB.DATA is called VVMBMCSC.CNTL. A hardcopy is included in this Library Reference and an electronic version is included on diskette as VVMBMCSC.TXT.

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f. Confirmed.

g. Not confirmed. The program VVMREGSC.CNTL "scrubs" the registry data. It does not "scrub" the remote encoding data.

h. Confirmed.

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UPS/USPS-T14-26. Please refer to page 3 of VVMDIRSC.TXT. In the comment section, threshold levels of TPH per site are set. Please confirm that TPH thresholds vary by activity only, not by site or time period. If confirmed, please discuss:

a. how the particular thresholds were chosen;

b. any consideration given to thresholds that varied across sites (i.e., was site size considered in establishing thresholds, or was percentage of site capacity considered as a threshold measure?).

UPS/USPS-T14-26 Response:

Confirmed.

a. The thresholds were set through discussion with operations experts to determine the minimum level of piece-handlings that represent a normal level of activity.

b. No. The thresholds were defined relative to the activity. The econometric analysis is done at the activity level, not the site level. Consequently, the key issue was whether volume in the activity reached a threshold to be consider regular, whether that activity was in a large facility or a small facility.

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UPS/USPS-T14-27. Please refer to VVMDIRSC.TXT, and to the data scrub process in general.

a. Beginning with Part III on page 4 of VVMDIRSC.TXT, please confirm that a continuity scrub is performed first, followed by the one percent tails scrub, and then another continuity scrub.

b. If confirmed, discuss to what extent the data are affected by performing the first continuity scrub prior to the one percent tail scrub (i.e., consider, for example, an "outlier" that is eliminated from the data due to the continuity scrub; the distribution of the remaining data may be affected. When the subsequent one percent scrub is performed, data points that were not outliers prior to the continuity scrub might become outliers due to the change in data distribution and could be eliminated, thereby leaving gaps in previously continuous strings of data such that a site could be completely eliminated due to the order of scrubbing.).

UPS/USPS-T14-27 Response:

a. Confirmed. Please see page 32 of my testimony where it states:

> For the direct operations, this scrub works through the following steps:
>
> Step 1. For each activity, the procedure calculates the ratio of hours to piece handlings for each site/accounting period observation. Note that this calculation is made on the data after they have been scrubbed for missing data or start-up periods.
>
> Step 2: Next, the procedure forms the distribution of productivities, on an activity basis, from lowest to highest. It then finds the observations that constitute the one percent tails of the density on both ends of the distribution.

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Step 3: The procedure then eliminates those observations that fall in the one percent tails by replacing the value of the observation with a missing data indicator.

Step 4: This elimination may, in some cases, cause a previously continuous series to become discontinuous. The procedure must then rerun the continuity scrub on the data after it has been put through the productivity scrub.

It may seem unusual that the data are scrubbed twice for continuity. However, the definition of "high" and "low" observations is influenced by the data set on which the standards are imposed. By first running an initial continuity scrub, the procedure establishes the right context for identifying productivity outliers. In addition, despite imposition of these relatively severe data scrubs, a large amount of "clean" data is left for estimating the econometric equations.

The effect of the multistage scrubbing routine is a large but clean data set. As your question indicates, this three step process is more rigorous than a simpler two-step process that scrubs for outliers and then continuity. However, given the operational nature of MODS data, I thought it prudent to perform first continuity scrub to define the frame of reference for outlier investigation.

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UPS/USPS-T14-28. Please refer to pages 3 and 7 of VVMREGSC.TXT.

a. Please confirm that the continuity scrub checks for 104 consecutive observations.

b. Please confirm that LR-H-148, REGVOL.DAT, the registry activity data, contains just 32 observations, and if so, confirm that all 32 observations are used in estimation of volume variability and explain the use of the SAS program VVMREGSC.TXT.

UPS/USPS-T14-28 Response:

a. Confirmed

b. Confirmed. REGVOL.DAT contains the registry volume data which is a single national value with a quarterly frequency. 32 observations thus represents 8 years. (8 x 4 = 32). The registry hours data are from MODS. Because the hours are summed to a single national hours (to match the volume), consistency required the hours data set to contain data from each site in each period. For data that are at the AP frequency, 104 observations represents 8 years (8 x 13 = 104). As stated on page H148-16 of Library Reference H148:

> The MODS registry hours were extracted from the MODS file on the corporate data base. They are scrubbed for missing data and continuity and are cumulated to a single national quarterly value.

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UPS/USPS-T14-29. Please confirm that VVMBMCSC.TXT indicates that BMC activities are checked for continuity of 26 consecutive observations per site, and similarly for VVMALLSC.TXT. Please indicate the section of T-14 that discusses the choice of 26, instead of 39, consecutive data points for each of these activities. If you cannot indicate a section in your testimony, please explain the inconsistency between your testimony and back-up (SAS code).

UPS/USPS-T14-29 Response:

There is no inconsistency between my testimony and the SAS code. On page 33 of my testimony I state:

> Like the MOD system the PIR system is an operational data system. I therefore "scrubbed" the PIRS data in a manner similar to the scrub of the MODS data described above. The details of the scrubbing procedure are given in Library Reference H-148.

Page H148-12 of Library Reference H148 starts a section entitled, "Creation of the Analysis Data Set for Mail Processing Activities at Bulk Mail Centers." On that page, it states:

> The analysis data set for the BMC activities is created by the same methods used for creating an analysis data set for the MODS activities. Those methods are slightly modified to account for the differences in BMC data.
>
> The continuity scrub is set at 26 observations rather than 39 observations. A lower scrub level was set because of the smaller amount of BMC data.

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UPS/USPS-T14-30. Please refer to VVMALLSC.TXT.

a. Please discuss the omission of a scrub for the one percent tails that is performed in each of the other data scrub programs.

b. Please indicate the section of T-14 that discusses why scrubs for outliers are not necessary or not performed for these activities. If you cannot indicate a section in your testimony, please explain the inconsistency or provide a corrected version of VVMALLSC.TXT.

UPS/USPS-T14-30 Response:

a. Section I.C., entitled, "Constructing the Analysis Data Set for MODS Allied Activities" appears on page H148-9 of Library Reference H-148. On that page it states:

> The productivity outlier scrub is not run during the creation of the allied data, however. As explained in USPS-T-14, the allied activities do not have a direct measure of workload. Instead, the cost drivers are the piece handlings in the various direct operations. Consequently the outlier scrubs are done separately, in the subsequent econometric programs for each activity. The outlier scrub is thus documented in those programs. (Emphasis added.)

b. Not applicable. As explained in my testimony, scrubs are performed for these activities.

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UPS/USPS-T14-31. Please refer to Table 7, at page 54 of your testimony, and confirm:

a. Line 15, SPBS Priority, should read 0.2009 (T-14, WP-1, VVMPL.SPBSP.LISTING, page 9), rather than 0.2001. If not confirmed, please explain in full.

b. Line 17, SPBS Non-Priority, should read 4,659 (T-14, WP-1 VVML.SPBSNP.LISTING, page 9), rather than 4,569. If not confirmed, please explain in full.

UPS/USPS-T14-31 Response:

a. Confirmed.

b. Confirmed.

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UPS/USPS-T14-32. Please confirm that the Errata you filed concerning Table 10, at page 67 of your testimony, is intended to correct the Line 10 result from -0.0154 to -0.0138, rather than from -0.1054 to -0.1038 as indicated in the Errata. If not confirmed, please explain in full.

UPS/USPS-T14-32 Response:

Confirmed. Please note the correct value appears in the revised page 67.

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to
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UPS/USPS-T14-33. Please refer to Table 8, at page 63 of your testimony, and confirm:

a. Lines 29 and 30, Pouching, should read 14,691, and 168, respectively (T-14, WP-2, VVML.POUCH.LISTING, page 13) . If not confirmed, please explain in full.

b. Line 28, Platform, should read 0.9792 (T-14, WP-2, VVMPL.PLAT.LISTING, page 10). If not confirmed, please explain in full.

UPS/USPS-T14-33 Response:

a. Confirmed.

b. Confirmed. The R^2 for the platform equation is 0.9791595 which rounds up to 0.9792 as you suggest rather than the 0.9791 that appears in Table 8.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-34. Please refer to page 6, lines 14-15, and page 12, line 14 through page 13, line 4, of your testimony, where labor cost is alluded to as a possible left hand side variable and rejected in favor of hours recorded by MODS or PIRS. Please provide the data on labor cost by site ID number, accounting period, and activity, for all activities and for all years in the panel (1988-1996), as if it had been used as the dependent variable.

UPS/USPS-T14-34 Response:

Such data do not exist. As I explain on page 13 of my testimony, the wage paid to the workers in each activity at each site in each accounting period is not known or recorded. This precludes construction of the cost data that you request.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-35. Please refer to LR-H-148. Explain the use of the data sets VVMPN and VVMPO, and explain how they are used in producing the results in your testimony.

UPS/USPS-T14-35 Response:

Please see page H148-2 of LR-H-148 where it states:

> A "scrub" program, described and documented below, was run on these input data sets to prepare the analysis data sets. They are called VVMPO.DATA for the direct operations and VVMPN.DATA for the allied operations

Please see page WP1-4 of Workpaper WP-1 where it indicates that VVMPO is read into the econometric programs that estimate the variabilities for the MODS direct operations. Also, please see page WP2-4 of Workpaper WP-2 where it indicates that VVMPN is read into the econometric programs that estimate the MODS allied operations.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-36. Please refer to LR-H-149, BCS.TXT, page 2. Please confirm that the data step approximately one third of the way down the page, "DATA OPER; SET OPER;" does not perform any operation in this program. If confirmed, please explain the inclusion of this data step and address whether this data step was used for an analysis not provided in your testimony, or if it is simply extraneous. If not confirmed, please explain what operation the data step performs.

UPS/USPS-T14-36 Response:

Not confirmed. As I explain on page WP1-3 of Workpaper WP-1, the SAS data step can be used for a variety of purposes. For example, It can be used to combine data sets, create new variables, eliminate variables that are not longer needed (to save memory), or to define what data set should be used in subsequent operations. The use of the same name for the "DATA" part of the statement and the "SET" part of the statement (in this case "OPER") is simply a convenience that saves work space.

In the program BCS.TXT, the first use of the statements "DATA OPER; SET OPER;" is to define the data set on which the subsequent "KEEP" statement is applied and the second use of the statement "DATA OPER; SET OPER" is to define the data set on which the subsequent "PROC MEANS" statement is applied.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-37. Please refer to LR-H-149, BCS.TXT, page 4. Please confirm that the fifth line from the bottom, "DATA OPER; SET OPER;" does not perform any operation in this program. If confirmed, please explain the inclusion of this data step and address whether this data step was used for an analysis not provided in your testimony, or if it is simply extraneous. If not confirmed, please explain what operation the data step performs.

UPS/USPS-T14-37 Response:

Not confirmed. I believe that you mean to refer to the statement "DATA OPER1; SET OPER1" because the data set "OPER" has been eliminated by that part of the program. In any event, please see my response to UPS/USPS-T14-36 for an explanation of how this code is used in the program.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-38. Please confirm that there are additional programs in LR-H-148 and LR-H-149 that include code that may be specific to mainframe processing or are left over from data analyses that were performed but not included in your testimony. If confirmed, please indicate the sections in each program in LR-H-148 and LR-H-149 that are left over from previous programming runs that were discarded, and explain why the results of these runs were not included in your testimony.

UPS/USPS-T14-38 Response:

Not confirmed.

Attached are printouts of the floppy discs provided in Library Reference LR-H-148 and LR-H-149. This printouts reveal what programs are contained on each disk. A review of the printout for LR-H149 demonstrates that each program on that disc matches a program used to estimate an econometric equation and described on page H149-1 of LR-H149. Disc 1 of LR-H-148 contains the BMC scrub program and data sets. Disc 2 of LR-H-148 contains the remote encoding data, the Registry data and scrub programs, and the scrub programs for the MODS allied and direct activities.

If there are any other programs on these discs, they were not placed there by me.

Attachment to [illegible]

My Computer \ 3½ Floppy (A:)

Name	Size	Type	Modified
Bcs.txt	24KB	Text Document	7/1/97 7:07 PM
Bmcalld.txt	30KB	Text Document	7/1/97 7:28 PM
Bmcplat.txt	30KB	Text Document	7/1/97 7:27 PM
Cncl.txt	24KB	Text Document	7/1/97 7:17 PM
Fsm.txt	24KB	Text Document	7/1/97 7:10 PM
Ipp.txt	30KB	Text Document	7/1/97 7:24 PM
Lsm.txt	24KB	Text Document	7/1/97 7:09 PM
Manf.txt	24KB	Text Document	7/1/97 7:06 PM
Manl.txt	24KB	Text Document	7/1/97 7:04 PM
Manpar.txt	24KB	Text Document	7/1/97 7:15 PM
Manpri.txt	24KB	Text Document	7/1/97 7:14 PM
Nmo.txt	30KB	Text Document	7/1/97 7:25 PM
Ocr.txt	24KB	Text Document	7/1/97 7:10 PM
Opnbbm.txt	35KB	Text Document	7/1/97 7:18 PM
Opnpref.txt	35KB	Text Document	7/1/97 7:19 PM
Plat.txt	35KB	Text Document	7/1/97 7:21 PM
Pouch.txt	35KB	Text Document	7/1/97 7:20 PM
Pps.txt	30KB	Text Document	7/1/97 7:21 PM
Rbcs.txt	1,223	Text Document	7/1/97 7:31 PM
Regis.txt	4,296	Text Document	7/1/97 7:30 PM
Sou.txt	30KB	Text Document	7/1/97 7:24 PM
Spbsnp.txt	24KB	Text Document	7/1/97 7:12 PM
Spbsp.txt	24KB	Text Document	7/1/97 7:13 PM
Sps.txt	30KB	Text Document	7/1/97 7:22 PM
Ssm.txt	30KB	Text Document	7/1/97 7:23 PM

Printout of the files contained on disk in Library Refrence H-149

My Computer \ 3½ Floppy (A:)

5486

Name	Size	Type	Modified
bmc.dat	282KB	WordPerfect 7 Document	6/30/97 8:15 AM
scrubmcb.dat	296KB	WordPerfect 7 Document	6/30/97 8:18 AM
vvmbmcsc.txt	83KB	Text Document	7/1/97 10:34 AM

Printout of the files contained on Disk 1 in Library Reference H-148

My Computer \ 3½ Floppy (A:)

Name	Size	Type	Modified
rbcs.dat	128KB	WordPerfect 7 Document	6/30/97 8:17 AM
reghrs.dat	458	WordPerfect 7 Document	6/30/97 8:16 AM
regvol.dat	576	WordPerfect 7 Document	6/30/97 8:16 AM
rgdata.dat	429KB	WordPerfect 7 Document	7/1/97 9:22 AM
vvmailsc.txt	44KB	Text Document	7/1/97 10:22 AM
vvmdirsc.txt	86KB	Text Document	7/1/97 10:30 AM
vvmregsc.txt	24KB	Text Document	7/1/97 10:34 AM

Printout of files contained on Disk 2 in Library Reference H-148.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-39. Please refer to LR-H-148, VVMALLSC.TXT. Please confirm that the numbers in the right-hand column, beginning with 00006310, are extraneous and used only for mainframe runs, and that the JCL that would indicate precisely which data set is read has not been provided.

UPS/USPS-T14-39 Response:

Confirmed. Please see Library Reference H-148 at page H148-11 for a presentation of precisely which data sets (including the variable names and file formats) are read into VVMALLSC.TXT.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-40. Please refer to page 76 of your testimony. Please provide the SAS, LIS, and LOG files that produced the results in your testimony. Also, please provide the results and SAS, LIS, and LOG files for other MODS activities not provided in your testimony, including manual parcel sorting, manual priority mail sorting, SPBS priority mail sorting, SPBS non-priority mail sorting, cancellation and mail prep, opening-pref mail, opening bulk business mail, pouching, platform, remote encoding, registry, and all BMC activities.

UPS/USPS-T14-40 Response:

The results on page 76 are part of my description of alternative econometric analyses that I performed in choosing the models that provide the variabilities that I am recommending to the Commission. For each alternative analysis, I identified differences between the alternative and the preferred model with respect to variable definitions, equation forms, or estimation results; I provided the econometric results for the alternative; and I discussed why the alternative is not preferred to the recommended model.

Because these results are simply part of my choice trail and I do not use them in producing my recommended variabilities, I did not document and retain the computer code like I did for the variabilites presented in Table 8, Table 9, Table 10, Table 11, and Table 12. I thus cannot provide it to you. I did however retain the printout of the econometric results that I presented on page 76 and I am attaching it to this interrogatory response. Please note that this printout also contains results for annual data without the autocorrelation correction.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

Finally, based upon the results provided in Table 14 on page 76, I determined that using annual data was not the preferred method. I thus did not estimate equations for the other operations you list and therefore cannot provide the requested results as they do not exist.

Attachment to UP-1021 2

ESTIMATION ON ANNUAL DATA

	MANUAL LETTER		MANUAL FLATS		LSM		FSM		OCR		BCS	
BOLGETI-LI	0.3137		0.4055		0.3367		0.4639		0.3928		0.3299	
TPH	0.7317	33.3833	0.7988	32.5197	0.9471	124.1525	1.0402	47.8992	1.0031	36.1770	0.9749	39.7134
TPH2	0.0104	1.3342	-0.0595	-6.2655	-0.0042	-1.2079	0.0760	7.8295	0.0578	4.3650	0.0095	1.2997
MANR	-0.2428	-10.6756	-0.1881	-5.3417	-0.0510	-5.4159	-0.0688	-3.0026	-0.0824	-2.2454	-0.0060	-0.1817
MANR2	0.0082	0.9377	-0.0767	-3.1735	0.0049	0.6457	-0.0256	-1.8371	-0.0142	-0.4534	0.0248	1.1158
MANRTPH	-0.0500	-3.8498	0.1222	4.4997	0.0200	2.8224	0.0122	0.7788	0.0245	0.7531	-0.0231	-1.0997
T89	-0.1305	-7.7731	-0.0696	-4.3464	0.0087	0.9186	0.0295	2.5766	0.1281	4.1834	0.0382	1.8408
T90	-0.2352	-11.0461	-0.0877	-4.5492	0.0271	2.1829	0.0483	3.4612	0.1358	3.6092	0.0282	1.0802
T91	-0.2949	-13.8519	-0.1278	-6.5147	0.0337	2.5533	0.0964	6.6398	0.1357	3.6211	0.0374	1.4102
T92	-0.2924	-12.0252	-0.1243	-5.6146	0.0694	4.5146	0.1396	8.4681	0.2876	7.1515	0.0906	2.8160
T93	-0.2269	-8.8913	-0.1043	-4.4825	0.1275	7.7586	0.1565	9.0137	0.4155	9.8243	0.1430	3.9962
T94	-0.2247	-8.4428	-0.1174	-4.8822	0.1626	9.5705	0.1853	10.2085	0.4525	10.3334	0.1232	3.0957
T95	-0.2304	-8.3341	-0.1182	-4.7963	0.1828	10.2944	0.2000	10.6894	0.4787	10.6920	0.1030	2.3980
T96	-0.2059	-7.3656	-0.1385	-5.5092	0.1921	9.9959	0.2049	10.6664	0.5268	11.7334	0.0678	1.4802
R2	0.9413	0.9828	0.9478	0.9833	0.9812	0.9952	0.9670	0.9872	0.8777	0.9403	0.9502	0.9787
# OF OBS	1972		1918		1598		1461		1550		1842	
# OF SITES	309		300		239		219		234		287	
NO CORRECTION												
TPH	0.5954	26.5832	0.6068	22.2609	0.9213	115.5708	0.9992	41.7838	0.8820	29.0357	0.9794	37.9680
TPH2	0.0068	0.8807	-0.0577	-5.8124	-0.0076	-2.2626	0.0986	9.7832	0.0349	2.6672	0.0123	1.9549
MANR	-0.0963	-4.1941	0.1002	2.7084	-0.0375	-3.6109	-0.0680	-2.9239	-0.0801	-2.1631	-0.0279	-0.8661
MANR2	-0.0021	-0.2767	-0.0174	-0.8116	0.0243	3.0458	-0.0286	-1.9432	0.0202	0.6329	0.0266	1.1305
MANRTPH	-0.0298	-2.5389	0.0946	3.7438	0.0096	1.3049	0.0355	2.1959	-0.0322	-1.0294	-0.0319	-1.4904
T89	-0.0503	-2.9009	-0.0072	-0.4567	0.0069	0.7077	0.0170	1.4030	0.2200	6.0530	0.0110	0.4713
T90	-0.1109	-5.5693	0.0016	0.0945	0.0296	2.5567	0.0352	2.7590	0.2454	5.9883	-0.0079	-0.2855
T91	-0.1384	-6.8957	-0.0240	-1.4924	0.0394	3.2145	0.0880	6.9980	0.2617	6.2560	0.0183	0.6186
T92	-0.1543	-7.1038	-0.0412	-2.4093	0.0631	4.6413	0.1233	9.0088	0.3843	9.0390	0.0487	1.4110
T93	-0.0914	-4.0625	-0.0237	-1.3463	0.1116	7.8907	0.1391	9.7997	0.4841	11.4885	0.0891	2.3560
T94	-0.0857	-3.6944	-0.0289	-1.6044	0.1389	9.7597	0.1634	11.1411	0.4975	11.9659	0.0589	1.4558
T95	-0.0857	-3.5499	-0.0270	-1.4574	0.1541	10.3957	0.1771	11.6654	0.5099	12.2326	0.0351	0.8062
T96	-0.0566	-2.3042	-0.0470	-2.4823	0.1549	9.5850	0.1812	11.5980	0.5540	13.3787	-0.0042	-0.0900
R2	0.9469	0.9900	0.9539	0.9902	0.9827	0.9967	0.9698	0.9914	0.8882	0.9579	0.9531	0.9849
# OF OBS	1972		1918		1598		1461		1550		1842	
# OF SITES	309		300		239		219		234		287	

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-41. Please refer to page 2 of 3 of your response to DMA/USPS-T-14-22. You there state: "When volume changes, however, Postal Service wage rates do not respond to those changes in volume. Because wages do not change in response to variations in volume, they are not part of the variation in cost associated with variations in volume."

a. Please reconcile this statement with the fact that during peak volume periods, Postal Service employees are paid overtime wages to accommodate increases in volume.

b. Please confirm that your model does not account for overtime wages. If confirmed, please discuss any investigation performed into the bias this omission introduces into your results. If not confirmed, explain.

UPS/USPS-T14-41 Response:

a. My statement was in the context of a discussion of volume variability. Volume variability measures the response in cost to a sustained increase in volume. Your statement, on the other hand, refers to daily or temporary variations in volume. Volume variability holds things like the seasonal pattern of mail volume and the daily peaks and troughs constant. Because the pattern of peaks and troughs is not a function of small sustained increases in volume, Postal Service wage rates are not a function of small sustained increases in volume.

b. Not confirmed. By using hours instead of total cost, the model controls for short-term variations in overtime wages not associated with the response to a sustained increase in volume. Therefore, the results are not biased. Just the opposite. If variations in

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

wages not caused by sustained increase in volume were included in the model, they would bias the variability estimate. A measurement of volume variability should thus control for daily or monthly variations in wage rates that are not caused by sustained increases or decreases in volume.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-42. Please refer to page 1 of 1 of your response to DMA/USPS-T14-29. You there state:

> It is true, of course, that separate slope coefficients could be estimated for each site, but those many estimated coefficients would have to be combined in some way. There is no single correct way to combine these coefficients and the estimation of a single slope coefficient directly brings all of the data to bear on the estimation of the system-wide response to changes in volume.

a. Given the possibility that site specific slopes may vary, please explain why you chose the model you did as opposed to other possible models.
b. If slopes vary across facilities, is a less aggregated model preferable to one that combines the slopes of different facilities into a system-wide response? Please explain.
c. If slopes vary across facilities, is it valid to combine the slopes of different facilities into a system-wide response? Please explain.
d. Please discuss your rational for a model that allows for only one system-wide response (per activity) to volume variability.

UPS/USPS-T14-42 Response:

a. There are several reasons for directly estimating the variability with a single equation:

1. There is no behavioral or technological basis for grouping offices into subsets of the data with which individual equations could be estimated. Given that there is no justification for differences in estimated variabilities across offices, any differences in estimated variabilities could be the result of statistical variation, not genuine differences.

2. Estimation of equations for individual offices would be based upon equations derived from relatively small pools of data. By combining the data into a panel,

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

controlling for site-specific characteristics through a fixed-effects model and directly estimating a variability, the efficiency of the estimation is increased. In this way, the estimated variability is based upon data which both varies across sites and through time.

3. In an econometric analysis of this complexity, there is a practical difficulty associated with estimating site-specific variabilites. To be done accurately, each of the site-specific equations would have to be reviewed for validity and a determination would have to be made if it should be kept in the analysis. I have already presented 25 different econometric equations. Estimating site-specific variabilities would require review of hundreds of equations for each the MODS activities and about 20 equations for each of the BMC equations. In addition, there is the issue of the right level of aggregation. Should a single equation be estimated for each facility? Or, should facilities be grouped into groups of, say, five, and then an equation estimated on the group? Without a behavioral or technological basis, there is no adequate guideline for grouping sites.

4. In the final analysis, a single variability for each cost pool is required. What is ultimately required is the response in national Postal Service cost to changes in

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

national Postal Service volume. If an equation is estimated for each site, calculation of Postal Service volume variability requires specifying how an increase in national volume will be spread to the individual facilities. This is sure to be a controversial calculation. Direct estimation of the variability from a single system-wide equation obviates the need for this calculation.

b. It depends. Even if slopes vary across individual sites, they must still be combined into a single system-wide response. If there is a solid technological or behavioral basis for different individual facility variabilities, then the additional complexity of combining the site-specific variabilities into a single overall variability may be justified. However, the existence of statistically different slopes in and of itself does not justify a disaggregated approach. Please see my answer to part a. above for further discussion.

c. Yes. In fact, the facility-specific variabilities would have to be combined in some way.

d. I think that your question is asking for a rationale for a model of system-wide response to volume (not volume variability). For that rationale please see my answer to part a. above.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-43. Please refer to pages 1 and 2 of your response to OCA/USPS-T4-8, redirected from witness Moden. You there state: "The factors determining volume variability may well be the same across facilities of different sizes, although the exact values for those factors will not. In fact, the exact values for the factors will not be identical in facilities of similar sizes." Please confirm that your model does not account for variations in volume variability based on facility size. If confirmed, please discuss why facility size was not taken into account and what consideration, if any, was given to its inclusion. If not confirmed, please identify the portions of testimony and programming that allow elasticities to vary by facility size.

UPS/USPS-T14-43 Response:

Not confirmed. From my experience, the size of a facility can be defined by the volume that it handles or by some physical measure like square feet or number of floors. Let's consider the volume measure first. Please recall that my analysis is at the level of the mail processing activity. Consequently, the volume measure of facility size relevant for my analysis is the volume in the activity. As shown on page 36 of my testimony, my econometric equations include piece handlings as a measure of volume and thus size.

The second approach to measuring facility size would be to use an indicator like square feet or number of floors. If one thought that this type of facility size affects hours, one would have to control for it in the econometric equation. One approach to controlling for facility size measured in this way would be to estimate a pooled model and include a variable, like square feet, for facility size. However, this approach would require being

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

sure that square footage was the correct "size" variable (at the activity level) and would require collecting accurate data on facility size for hundreds of facilities through time. A preferred approach is to use a panel data estimator, as explained on page 40 of my testimony. As explained there, this approach controls for a variety of facility-specific non-volume effects like facility size.

The programming methods and code for the panel data estimator are included in my workpapers WP-1 through WP-4.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-44.

a. Please discuss the use of overtime wages to accommodate peak volume periods in MODS, non-MODS, and PIRS facilities versus the use of part time or casual workers.

b. Please provide: (1) mail processing overtime wages paid, (2) total mail volume, and (3) volume by shape and/or class of mail, by accounting period for FY 1988-1996 (accounting periods 1 though 13).

c. Please explain how your model of volume variability captures an increase in the average wage rate.

UPS/USPS-T14-44 Response:

a. This part of the interrogatory has been redirected.

b. This part of the interrogatory has been redirected.

c. Because small sustained changes in volume do not affect the average wage rate, accurate measurement of volume variability requires controlling for variations in the average wage. With time series data, this could be done by "deflating" each period's labor cost for changes in the wage rates. If this deflation was not done, the increases in wages caused by collective bargaining might mistakenly be ascribed to increases (or decreases) in volume. Another method for controlling variations in average wage is to use hours. I followed this latter course. By using the "real" variable, I can control for variations in the average wage rate. Please note that changes in wages do show up in the volume variable costs. Wage rate effects are embodied in the cost pools formed by witness Degen.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-45. Please discuss the direction of the bias in your results due to the impact of the difference between hours and labor cost during peak volume periods resulting from the use of overtime wages as compared to the use of part time or casual workers.

UPS/USPS-T14-45 Response:

As explained in my response to UPS/USPS-T-41b, there is no bias in my estimation of volume variability due to the existence of overtime wages. I would, however, draw your attention to the fact that I use accounting period data for my analysis. This means that the peak periods are defined by the peak accounting periods, which occur before Christmas (e.g. Accounting Periods 3 and 4). It is my understanding that during these accounting periods, the Postal Service makes more use of casual employees who earn a lower wage. Thus, it is quite possible that the average wage is lower during the peak periods. If so, the "wage" variability would be less than my volume variability based upon hours.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-46.

a. Did you perform any sensitivity analyses that used total labor cost instead of hours as the dependent variable in your elasticity regressions? If so, please provide the results. If not, please provide the evidence that demonstrates that overtime wages are sufficiently insignificant as to not alter the results.

b. If no sensitivity analyses were performed on the question of the use of total labor cost as a dependent variable, please explain the basis for your claim that hours is a good proxy for total labor cost.

c. If it were shown that overtime is a significant contribution to costs and hours is not a good proxy for labor costs, please discuss the impact these factors would have on your results.

UPS/USPS-T14-46 Response:

a. No. Such a "sensitivity analysis" would require actual labor cost and wage data by activity, by accounting period, by site. Such data do not exist. However, please see my responses to UPS/USPS-T14-41 and UPS/USPS-T14-45 for an explanation of why any results that do not control for seasonal variations in wages would be biased.

b. Please see my responses to UPS/USPS-T14-41 and UPS/USPS-T14-45. Please keep in mind that my analysis measures the volume variability of labor cost, it does not measure total labor cost. Total labor costs would be measured by Witness Degen and it is my understanding that his cost pools include costs from overtime

Response of United States Postal Service Witness Bradley
to
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wages.

c. In some sense, it would provide a stronger justification for the use of hours. To the extent there are seasonal variations in wages due to peaks and troughs in overtime, that would have to be controlled for in an econometric model that used total labor cost in an activity as the dependent variable. By using hours, I do not have to control for this external effect.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-47. Please provide, separately by site ID and MODS activity as use in your testimony for each accounting period from Accounting Period 1 of Fiscal Year 1988 through Accounting Period 13 of fiscal year 1996 (or, if not available for that entire period, for the longest period of time available during that span of time) the following information:

(a) Total piece volumes for all classes of mail combined.
(b) Piece volumes for each of the following separately -- First Class Mail (excluding Priority Mail); Priority Mail; Express Mail; Second Class Mail; Third Class Mail; Parcel Post; all Fourth Class Mail excluding Parcel Post.
(c) Overtime labor costs for clerks and mailhandlers (Cost Segment 3).
(d) Clerk and mailhandler labor costs for casual employees.
(e) Clerk and mailhandler labor costs for temporary employees.
(f) Clerk and mailhandler labor costs for parttime employees.
(g) Clerk and mailhandler labor costs for fulltime employees.
(h) Any clerk and mailhandler labor costs not included in subparagraphs (c)-(h), with an indication of the nature of the costs.

If you do not have this data, please redirect this interrogatory to the Postal Service.

UPS/USPS-T14-47 Response:

a. The total piece volumes, as measured by total piece handlings for all classes combined in a MODS activity, at an individual site, are provided in Library Reference H-148. I have no other measures of piece volumes and, in response to my inquiries, the Postal Service informs me that no other such piece volume data exist.

b. I have no piece volume data by class of mail and, in response to my inquiries, the Postal Service informs me that the requested class-specific piece volume data do not exist.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

c.-h. The MODS system records hours not dollar costs. Consequently, my MODS data set does not have the requested data. Moreover, in response to my inquiries, the Postal Service informs me that the data you request do not exist.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-48. Consider the case of a one-variable linear regression model with independently and identically distributed error terms. For a given sample size, what would be the effect of the standard errors of its estimated coefficient of an increase in the range of values taken by the independent variable?

UPS/USPS-T14-48 Response:

It depends upon the manner in which the increase in the range of the independent variable occurs. The standard error of the estimated coefficient is the square root of the ratio of two terms, the variance of the regression and the variance of the independent variable, X:

$$\sigma_\beta = [\sigma^2 / S_{xx}]^{1/2}$$

The key question then is what happens to the values for the dependent variable when the variance (range) of the independent variable increases. If the values of the dependent variable also increase in range along the regression line with the increase in range for the independent variable, then the variance of the regression should not increase and the standard error for the β coefficient will fall. If, on the other hand, the values for the dependent variable do not move in relationship with increased range of the indepedent variable, the size of the residuals from the regression line will increase, the variance of the regression will increase, and the standard error of β could increase even though the variance of the independent variable increases.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-49. From an econometric point of view, do you believe that it is ever appropriate to eliminate from an analysis observations containing numerical values that have been transcribed or keypunched incorrectly? Please explain your answer.

UPS/USPS-T14-49 Response:

Yes. For example, if it is known with certainty that an observation contains transcription or keypunching errors that cannot be corrected, it may be appropriately removed from the analysis.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-50. From an econometric point of view, do you believe that it is always appropriate to eliminate from an analysis observations containing numerical values that have been transcribed or keypunched incorrectly? Please explain your answer. If your answer is not an unqualified "yes" or "no," please describe the circumstances under which it would be appropriate to exclude such data, and the circumstances under which it would be inappropriate to exclude such data.

UPS/USPS-T14-50 Response:

No. For example, suppose that the researcher is aware of the possibility of a small amount of keypunch or transcription errors in a large data set, but does not know which observations contain the keypunch or transcription errors. If a review of the data revealed no anomalous or outlying data points, then the researcher could use all of the data while reporting the possibility of such errors in the data.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-51. From an econometric point of view, do you believe that it is ever appropriate to eliminate from an analysis observations that have numerical values which have been transcribed or keypunched correctly? Please explain your answer. Please describe the circumstances under which it would be appropriate to exclude such observations.

UPS/USPS-T14-51 Response:

Yes. For example, suppose the observation is correctly transcribed or keypunched but is generated from a different data generating process than the regression is trying to estimate. Then it would be appropriate to exclude it from the observation.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-52. From an econometric point of view, do you believe that it is appropriate to eliminate from an analysis observations that have numerical values which have been transcribed or keypunched correctly simply because one of those values falls in the tails of the distribution of such values across all observations? Please explain your answer.

UPS/USPS-T14-52 Response:

It can be appropriate. The data for an observation may be correctly keypuched and transcribed and still be considered erroneous. For example, data from a survey on annual household income may be correctly keypunched and transcribed, but reflect erroneous reporting of income by the household. Identification of the extreme values in the tails of the distribution may be a way of identifying such errors. Alternatively, there may be uncertainty about which observations contain keypunch errors. Again, identification of extreme values is a reasonable tool for investigating such possible errors.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-53. Do you believe the observations you eliminated from your analysis using the productivity (one percent tails) scrub contain transcription or key punching errors? If you do not believe these observations contain such errors, why were they dropped from your analysis? If you believe that the observations in the tails of the distribution eliminated by your productivity scrub may contain transcription or key punching errors, how can you be certain that the observations in the center of the distribution are correct and not subject to transcription or key punching errors?

UPS/USPS-T14-53 Response:

I believe that they probably contain some form of data reporting errors, although I do not know the exact source. Please note, however, that data were not eliminated because they were in the extreme value of their own distribution, as the question seems to suggest. A very large value for piece handlings was not dropped if it was accompanied by a appropriately large value for hours. Similarly, a very small value for hours was not dropped if it was accompanied by an appropriately small value for piece handlings.

Extreme values were identified by examining the distribution of productivity. Observations in which there was a severe mismatch between hours and piece handlings would fall in the extreme ranges of productivity and thus were identified as reflecting possible data errors. There is no way of being certain that none of the observations near the center of the productivity distribution contain keypunch errors. However, given that the data set typically contains tens of thousands of observations, there are sufficient data to establish an

Response of United States Postal Service Witness Bradley
to
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appropriate base line. By using the productivity distribution, I can be confident that any remaining transcription or keypunch errors are not creating observations that would inappropriately influence the regression analysis because of their apparent great disparity between piece handlings and hours.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-54. In a postal facility, is it possible for productivity to surge to a level that is unsustainable over the long term in response to a sudden increase in volume? Please discuss the difference between the short and long run responses of productivity to a change in volume. Include in your answer a discussion of an increase in volume that is sudden and temporary, as well as a discussion of a permanent increase in volume.

UPS/USPS-T14-54 Response:

I believe so. In the short run, it is possible that an increase in volume could be handled by a temporary but unsustainable increase in productivity. For example, it is my understanding that during the UPS strike, the Postal Service experienced a temporary surge in volume of certain classes of mail.[1] It is quite possible that, in the short run, the Postal Service could have handled this additional volume simply by asking its workers to provide an unsustainably high level of effort over the week or ten day period. Because such levels of effort are not sustainable, productivity would return to its regular value, and a sustained increase in volume would require the Postal Service to add more labor.

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[1] I'm am not suggesting that I am an expert on what happened within the Postal Service during the UPS strike or that I have any data for that period of time. My comments are based upon what I read in newspaper accounts.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-55. Please refer to your discussion of technological progress on pages 13 through 15 of your testimony.

a. Is it your belief that technological change increases productivity monotonically over time? Please explain your answer.
b. If you do not believe that technological change increases productivity monotonically over time, please provide an example, relevant to the types of operations carried out in postal facilities, of a situation in which technological change would lead to decreases in productivity.
c. Do you expect there to be a discontinuity at the break point in technological trends of FYAP 9301 that you assume in the estimation? Please explain your answer.
d. To what extent did the "fundamental restructuring of Postal Service operations in FY 1993," *which you refer to on page 15 of your testimony, result in a restructuring or* rearrangement of mail flows at MODS and BMC facilities?
e. What were the specific changes in processing that occurred as of FYAP 9301? Was there a slow change-over to newer/different equipment? Was the change sudden or did it occur over several days or months? What were the changes in mail flows? Was mail processed more quickly after the change?

UPS/USPS-T14-55 Response:

a. If the question relates to an economy-wide notion of technological change that reflects the aggregate stock of knowledge, I generally think of improved technology as being only productivity-enhancing. In contrast, for an individual firm, technological change will not necessarily encourage productivity and could possibly reduce it.

b. Suppose the technological change is the development of automated letter sorting machines. If that technological change diverts clean mail to automated operations

Response of United States Postal Service Witness Bradley
to
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leaving only difficult-to-sort mail in manual operations, the productivity in those operations could fall.

c. I expected the time trends to be segmented. That is to say, I would expect the time trends to have one slope before 1993 and to have another slope after 1992.

d. The existence of the restructuring in 1993 lead me to construct a more flexible time trend specification to allow for the possibility that the time trend changed. Apart from that, I have not studied the restructuring and have no basis for answering the question. For a discussion of the operational changes that took place at that time, please see witness Moden's response to Presiding Officers Information Request No. 3, Question 30.

e. Please see my answer to part d. above.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-56. What factors do you believe affect the "manual ratio" you refer to on page 16, line 15, of your testimony? Is it affected by volume? Does it change over time? Does it differ across facilities? Could the manual ratio be affected by different forces in a small facility as compared to a large facility, or a facility with newer equipment as compared to a facility with older equipment? Please explain your answer.

UPS/USPS-T14-56 Response:

The manual ratio is affected by changes in the degree of mail sorted on automated and mechanized equipment. For example, as a site sorts more mail on automated equipment, the percentage of its total mail which is sorted manually will decline. Consequently, the manual ratio will decline.

Because the manual ratio is the percentage of volume sorted manually, it is not affected by volume, but by the way that the volume is sorted. The manual ratio has changed over time and it is different across facilties. I think that the forces that affect the manual ratio would be the same at small and large facilities. The key issue is the relative size of manual and automated activities within the facility. This is not to say that the historical values for the manual ratio will necessarily be the same for small and large facilities. If, for example, larger facilities got automated equipment before smaller facilities, then I would expect the manual ratio to be lower for larger facilities during that time period.

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

In response to the final part of the question, if the newer equipment at a facility means that more mail can be sorted on automated machinery in place of manual sorting, than the manual ratio would be lower at those places with newer equipment.

CHAIRMAN GLEIMAN: Does any other participant have additional written cross-examination for the witness?

MR. McKEEVER: Mr. Chairman, John McKeever for United Parcel Service.

CHAIRMAN GLEIMAN: Yes, sir.

MR. McKEEVER: May I approach the witness?

CHAIRMAN GLEIMAN: Certainly.

MR. McKEEVER: Professor Bradley, I've handed you a copy of your response to Interrogatory UPS, USPS T-14 61 which was filed late last week. Professor Bradley, could you review that answer and tell me if that question were asked of you today, would your answer be the same?

THE WITNESS: It would.

MR. McKEEVER: Mr. Chairman, I have two copies of the response which I would propose to give to the reporter. I'd move that they be admitted into evidence as additional written cross-examination of United States Postal Service witness Bradley.

CHAIRMAN GLEIMAN: If you'll provide those copies to the reporter, and I'll direct that they be accepted into evidence and transcribed into the record at this point.

[Additional Designation of Written Cross-Examination of Michael D. Bradley was received into evidence and

transcribed into the record.]

Response of United States Postal Service Witness Bradley
to
Interrogatories of UPS

UPS/USPS-T14-61. Please refer to UPS/USPS-T14-27 and your response. In part (b) of the original interrogatory, the question asks you to address how the distribution of the productivity variable used in the outlier scrub is affected by performing a continuity scrub prior to the outlier scrub. This issue is not addressed in your answer. Please address it.

UPS/USPS-T14-61 Response:

The distribution of the productivity variable depends upon the observations included in the data. The continuity scrub eliminates observations from the data set. Thus, the distribution of the productivity variable is affected to the extent that the productivity variable is calculated only for the included observations. That is to say, the shape of the distribution reflects only the productivities of the included observations. In this way the outliers are defined relative to the appropriate analysis data, the one including continuous data.

CHAIRMAN GLEIMAN: Does any other participant have additional cross-examination? If not, we'll move on.

[No response.]

MS. DUCHEK: Mr. Chairman, just for the parties' information there are additional copies of the interrogatory which Mr. McKeever just designated on the table behind us in case parties didn't receive them, and there are also additional copies of Dr. Bradley's errata which was filed October 16th on the table behind us in the event the parties didn't receive that as well.

CHAIRMAN GLEIMAN: Thank you.

Five parties have requested oral cross-examination of witness Bradley: Florida Gift Fruit Shippers, the Newspaper Association of America, Office of the Consumer Advocate, Time Warner, and United Parcel Service.

Does anyone else wish to cross-examine this witness?

[No response.]

CHAIRMAN GLEIMAN: I don't believe anyone is here from Florida Gift Fruit Shippers.

Newspaper Association of America?

MR. YOURSHAW: Michael Yourshaw, Mr. Chairman. I'm here for Mr. Baker.

CHAIRMAN GLEIMAN: When you get settled in, sir, if you could identify yourself again for the record.

MR. YOURSHAW: Michael Yourshaw with Wiley ~~Wright~~ Rein and Fielding and I'm representing the National ~~Newspaper~~ Association of America.

CROSS EXAMINATION

BY MR. YOURSHAW:

Q Dr. Bradley, the first -- the first question I'd like to ask you relates to the explanation you gave for the wide variation in elasticities. I think you summarized that in DMA/UPS-T-14-37. Do you have that in your packet?

A Yes. I'm sorry. Would you give me the number again, please?

Q It's -- it's the -- the DMA one, number 37.

A Thirty-seven. Yes, I have it.

Q Okay. And in there, you said that the -- the factors that explain the variation in elasticities include the degree of economies of scale in the activity, the technology of production in the activity, and the way the activity is used in the mail processing flow. Is that correct?

A That's correct.

Q Now, with particular reference to manual mail processing activities, could you explain what economies of scale are to be found there?

A By economies of scale, I was referring to the idea that, as an activity grows in size, it's possible that the

unit cost, in this case, of sorting a piece of mail would fall.

With specific reference to manual sorting activities, I think the idea here has several possibilities for why there would be economies of scale.

One would relate to the -- the nature of the work. It's a -- it's a human manual effort, and to the extent that a manual operation gets larger, individuals would be, in my belief, more familiar with the sorting scheme they are undertaking, they'd be able to specialize, they'd know what they were doing, and that could lead to increased efficiency in their work and a lower unit cost.

Secondly, another characteristic is, when we're talking about a manual activity, we're really talking about the whole activity, bringing the mail to the activity, taking the mail out of the cases, preparing it on its containers to be wheeled to the -- the next activity, and certain activities, such as bringing the mail or organizing the mail or preparing it to move on to its next stage are the natural types of things that we tend to think of in terms of economies of scale.

That is, some -- one person can bring a whole wheeled container of mail for several clerks who are sorting in an operation, and it's lower on a unit basis to bring that mail for -- for more clerks than less, one person has

to bring it anyhow, so that type of thing.

Q And so, you would refer to those -- those processes as economies of scale?

A Well, the economies of scale is the characteristic of those processes to lead to lower unit costs of sorting --

Q So --

A -- cost per sort.

Q So, you would expect that the marginal cost of these activities would decline as -- as additional mail volume and workers are added to the system?

A As additional mail volume was added, that's correct.

Q As additional -- over what period of time do you think these effects would be observed? Would it be over the short run or over the long run?

A Well, I want to be a little careful, because economists have their own definition of short-run and long-run.

Q I'd be happy to go with your definition.

A Okay. Not too unusually we have a definition a little bit different than most people's in the general public. We think of the long-run and the short-run in terms of the flexibility of inputs and outputs, and we define the long-run as a situation in which, in this case, the Postal Service, or any company, has the ability to adjust all of

its inputs, and anything short of that would be defined as the short run.

So, technically speaking, in economists' language, these necessarily, because they're the actual costs involved, would be short-run in the sense that the Postal Service does not have complete flexibility to adjust all its inputs in the time horizon I'm thinking of.

That economist's preamble notwithstanding, I would suggest to you that I'm thinking about these responses in hours to sustained increases in volume. I'm not really thinking of them on the day-to-day basis or, you know, hour-to-hour basis, but more on a sustained basis, where the volume increases or decreases and stays up or down.

And so, in that sense, in terms of calendar time, I would think of them in a longer run.

Q Could -- could you explain more specifically in terms of calendar time what you would call a sustained effect? Are we talking weeks, months, or what?

A Well, in actuality, the measurement of volume variability and -- and, therefore, marginal cost really is not over a period of time. What we're really talking about, in essence, is one sustained level of volume and another sustained level of volume without reference to particular amounts of time.

So, it's -- it's impossible to say this is a

increase that would be for three months or six months. It's a permanent increase in the sense that volume went up and stayed up for the foreseeable future.

Q But are you suggesting that, if volume goes up and stays up for the foreseeable future, that there will be a -- a distinct, you know, economy or lower cost per unit volume in labor -- in manual labor?

A Yes, sir.

Q So -- so, it is your testimony that the marginal cost of these activities over -- over any period of time, whether a short period of time or a long period of time, does decline --

A Well --

Q -- when volume increases.

A I'm always a little uneasy when you say "any period of time." It's -- it is certainly my testimony that the -- for the Postal Service, the increase -- small sustained increases in volume would lead to declines in the marginal cost or the unit cost of sorting these over a material or a long piece of time, yes.

Q But you -- well, you talked about small increases of volume.

A Yes, sir.

Q You're talking about small increases of volume?

A Yes, sir. The marginal cost and, for that matter,

volume variability are defined specifically to be -- a marginal cost is technically defined as the cost of the very last increment of volume, but we tend to relax that a little bit and talk about the last small increments of volume.

Q Okay. So, speaking mathematically, you'd say, for one more letter sorted, there would be, you know, one more fraction of a cent -- or whatever -- whatever the numbers turn out to be -- of additional labor cost, or maybe there wouldn't be if that guy had the -- if that postal worker, you know, had the ability to sort that letter in the same amount of time because of --

A The mathematical definition, ~~as~~ is -- as you suggest --

Q Uh-huh.

A -- although I think we tend to interpret it not exactly that precisely in our discussions.

Q So, are -- would -- would you suggest that, over the long run, over a period of months or years, that postal worker productivity increases when volume increases?

A I want to be a little careful, because there's really two parts to your question -- one, what happens through time apart from volume increases, and then what happens through time after the volume increases?

Q I'm -- I'm -- excuse me. I'm specifically --

A Second.

Q -- referring just to the manual component.

A Right. Right. Agreed.

Q I'm not talking about improving their productivity.

A No. Agreed.

Q Okay.

A In terms of the manual component, what my analysis looks at is what would happen to the productivity or the unit cost in manual operations if volume went up and stayed up over a longer period of time, and yes, my testimony is that that would lead to a reduction in the marginal cost or the unit cost of sorting manual mail.

Q And what -- what, again, explains that strictly in terms of manual labor?

A Okay. I think there's a couple characteristics, as I suggested before, of manual operations which -- which lend themselves to economies of scale.

First of all, let me suggest to you, as a general matter, manual activities, whether they're in a factory or in the Postal Service, are known to lend themselves to economies of scale, but in this instance, I believe it has to do with the ability to organize the operation, to take advantage of the ancillary services. It -- it has to do with things like the fact that, when the clerk is done sorting for the time period, they have to pull the mail out

and put it on its container to send it on to the next operation.

Well, pulling mail out of slots has to be done for each one of the slots in the case, but of course, if I've got another piece in five or six of those slots, a small increase in the volume, it may not take me much more time to pull it out, because pulling one out is very similar to pulling two out.

So, that's the type of physical part of the manual activity that would lend itself to economies of scale.

Q Okay. But that -- that, to me, seems to me what -- what I at least would call, in non-technical terms, a short-run economy of scale, one letter, two letters, three letters, but if you're talking 10,000 letters, would you say that there are overall economies if -- if the change in volume is quite large, or don't you have to add more workers to handle that volume, and do those workers individually work faster when they're doing the best they can?

A Okay. There's two issues going on here. One would be how an individual worker improves their productivity as there's a small increase in volume, but then there's also the issue which you raise, and that is, if volume rises and continues to rise, would the Postal Service be able to add additional workers and do so in a way which sustains the productivity they already have or perhaps even

increase it, and I think it's at that level where the organization of the manual operation comes into play, the fact that, as the operation gets better -- excuse me -- as the operation gets bigger, the ability to bring mail to it in an organized way, to improve the sort scheme, to improve specialization -- those are the characteristics associated with the operation itself getting bigger in the larger sense.

I want to be clear that, when I was talking about a small increase in volume, I didn't necessarily mean it was only that physical addition of work that I talked about. In the analysis that I've done, it allows for both those kinds of ~~games~~ gains.

Q Now do you, I think as I understood at least part of that answer you were saying that there are some relatively fixed activities that workers perform and those can be spread over, you know, more pieces of mail within the same amount of time up to some limit?

A I think that's fair.

Q Yes. Do you have a sense of what proportion of a worker's time is devoted to the relatively fixed activities in general in the Postal Service?

A I do not.

Q You do not. Do you have a sense of what degree of improvements in organization, division of labor, and

specialization are available to the Postal Service between the beginning of the test year and the end of the test year that we're speaking about now? I mean within a, you know -- I would question, because it's counterintuitive to me, whether the Postal Service has more improvements in organizing manual work flow available to it right now, or haven't those been fully exploited?

A I'm not sure I understand the question, but first of all --

Q Would you like me to try to rephrase it?

A Yes, please, would you? I'm --

Q The question is, and one of the things you seem to suggest is that there is at least at the margin the possibility of increasing productivity of workers by increasing the management of their work flow just speaking generally, you know, making them more specialized or, you know, changing the processing and so forth. And I was asking you with, you know, within the next year that, you know, these rates are going to be based on, what degree of improvements in worker productivity do you believe are available through these improvements in the management of manual work?

A Well, my understanding is that in the period of the test year we're talking about relatively moderate changes in volume between the base year and the test year,

and in terms of my analysis, those moderate changes would be well within the realm of operating experience say particularly for manual operations historically. So I don't imagine that there would be any substantially different economic effects between the base year and the test year than there already has been in the historical data.

Q So you wouldn't expect there to be noteworthy changes in manual labor productivity over that period of time?

A Certainly not in response to changes in volumes. I'm not talking about any other management --

Q Right. I realize that's basically what your testimony is about. Yes.

I hope I will quote some other answers of Witness Moden correctly. Through a clerical oversight I don't have his actual piece of testimony here, so bear with me. What I believe are accurate quotes. If someone has a Time Warner USPS T4-7, maybe just check me to see if these quotations are right.

MR. McKEEVER: I think I have it.

MR. YOURSHAW: I appreciate it. Thanks.

MR. McKEEVER: At least I think I have it.

MR. YOURSHAW: It wasn't in mine this morning.

MS. DUCHEK. Could I suggest that if you see that your quote is correct that if Mr. McKeever would be willing

to show Dr. Bradley the response so that he can follow along? Thank you.

MR. YOURSHAW: Okay.

MS. DUCHEK: Thank you.

MR. YOURSHAW: I apologize for the confusion.

BY MR. YOURSHAW:

Q Now as I understand, your original testimony you said that certain processing operations would be expected to have low variabilities because they perform gateway or backstop functions?

A Yes, sir.

Q Could you briefly explain to us what you meant by that?

A Yes, sir. In terms of the term "gateway function" here I was thinking of an activity which reflects the service nature of the Postal Service, and that is to say facilities have to be prepared to handle the mail as it comes to them, and it's partly predictable and partly not. Certain operations are at the beginning of the process of sorting, and so therefore they play a preeminent role in making sure the work gets done within the required time.

So what I meant by a gateway operation was an operation which is at the beginning of the process which the Postal Service must staff because breakdowns in that operation would have ripple effects throughout the rest of

the night in terms of not getting the mail where it has to be to accomplish the sorting. So that was the idea I had in describing a gateway operation. Like the platform I think is a visual operation of something that might serve that purpose.

On the other hand, you mentioned backstop operations, and here, this is my understanding of this notion is that at the other end of the process as the Postal Service is getting ready to close out the day and dispatch the mail, they need to have capacity in place to deal with whatever the eventuality is. In particular manual operations -- manual letter operations in particular serve as the -- I think I use the word "reserve capacity" to sort mail that is not sorted in other technologies.

Q Okay. Thanks for clearing that up in some simple terms. Now before we take a look at the Time Warner responses, I would refer you to your response to the Presiding Officer's Information Request No. 4.

A Um-hum.

Q And it's Question No. 4.

A Um-hum.

Q In which you say please discuss the apparent contradiction in the response to Witness Modem to Time Warner No. 7 regarding the Postal Service's ability to size staff precisely with your own explanation presented in

T-14 --

A Right.

Q Pages 57 to 58 that certain mail processing operations have low variabilities because they perform gateway or backstop functions. And your response there was that you believe Witness Moden was describing the Postal Service reactions to unexpected changes in daily conditions like machine breakdowns, whereas you were referring to impacts of these activities from a sustained increase in volume.

A Yes, sir.

Q Now, I would ask you to take -- take a look at the Time-Warner 7(c).

A I have it.

Q Okay. And there witness Moden was asked, you know, is it not true that, in staffing manual sorting operations, a postal facility needs to prepare for eventualities, and then, I believe three eventualities are mentioned -- breakdowns, insufficient capacity to meet service standards, and insufficient capacity to meet service standards when the automated -- with the automated equipment due to heavier-than-usual mail volume and due to later-than-usual mail arrivals, basically three conditions -- and in response to that question, Moden stated no, we do not staff in anticipation of these events, we staff to

workload.

So -- so, given Moden's answer there, is it still your understanding and testimony that witness Moden's response was describing the Postal Service reactions to unexpected changes in daily conditions, like machine breakdowns?

A That -- that would be my understanding. I was referring to things in the question where it talked about traffic, bad weather, that sort of thing, which I would anticipate as being a day-to-day variation in the characteristics of the mail sorting.

Q So, you believe that -- you believe that his items number two and three in -- in that question, the insufficient capacity to meet service standards due to later-than-usual mail arrivals and due to heavier-than-usual mail volume, is a day-to-day-type thing?

A Yes. That's my understanding of --

Q Yes. Okay.

A -- of the question.

Q Now, if you look at the Time-Warner 7(d) --

A Yes, sir.

Q -- witness Moden was asked, does your comment imply that, in periods between the surges you describe, manual sorting operations are often over-staffed relative to the volume that is available for manual processing, and in

response, witness Moden answered no.

Now, in light of that response, is it still your testimony that backstop activities are likely to have lower variabilities?

A Yes. I -- I don't mean to imply that backstop technologies are over-staffed. I think the idea is that they're staffed appropriately for the -- the activity they're intended to accomplish.

Q But would -- would the variabilities, then, be, again, associated with these, you know, day-by-day or -- changes in the volume and flux?

A I think my variabilities are associated with sustained increases or decreases in volume, not day--by-day changes in weather or traffic.

Q Okay.

Now, in the Time-Warner 7(f), Moden was asked if he was aware of any national or regional guidelines regarding how much an automated facility needs to over-staff its manual sort operations in order to be prepared for the types of surges he describes, and he answered no.

Now, in light of this response, is it still your testimony that backstop activities are likely to have lower variabilities?

A Yes. Again, I -- I -- my interpretation -- of course, you have to ask him, but my interpretation of this

and discussions with operational people is they don't feel that the use of manual technologies as a backstop is over-staffing. It's the natural staffing that has to be done to sort the mail.

Q And so, you would still say that backstop activities are likely to have lower variabilities?

A I would say that the characteristic of an activity to serve as a backstop technology would be a good explanation of its lower variability, yes.

Q Okay.

Now, in MPA question T -- T-4-13 --

COMMISSIONER LeBLANC: T-14-4 or -- excuse me. T-4. That's why I'm not finding in my own folder.

MR. YOURSHAW: T-4.

THE WITNESS: T-4. Are you done with that?

MR. YOURSHAW: Yes. I'm done -- I'm done with the Time-Warner things now. Thank you very much.

Again, I'll -- I'll let you borrow my copy to read from.

THE WITNESS: Okay.

MR. YOURSHAW: It's not your testimony.

THE WITNESS: Thank you.

BY MR. YOURSHAW:

Q Now, you'll see in -- in MPA-T-4-13 that witness Moden was asked to describe what employees assigned to

manual cases do while awaiting late surges of reject volume.

A Excuse me. I'm sorry. But what I have is NAA/USPS-T-4-13. That's what you gave me.

Q Oh, I'm sorry. You should have MPA.

MR. KEEGAN: Mr. Chairman, I have a copy I can provide to the witness.

MR. YOURSHAW: I would appreciate that. I am very sorry for the confusion.

CHAIRMAN GLEIMAN: Thank you.

MR. YOURSHAW: As I indicated, I am substituting for another lawyer today. I just didn't quite get the files right.

CHAIRMAN GLEIMAN: Even if you weren't, there's enough paper in this case that I think all of us have had our moments.

BY MR. YOURSHAW:

Q Now according to my notes, it says he was asked to describe what employees assigned to manual cases do while awaiting late surges of reject volume.

A Yes, sir.

Q Yes -- and in response he said "We staff to work load. Supervisors plan to move employees onto the cases when the volume is there, not before."

A Yes, sir.

Q Now in light of that response, is it still your

testimony that backstop activities are likely to have lower variabilities?

A Absolutely. I think this is entirely consistent with the notion that people can move in and out of manual activities as the work load is required.

One characteristic of backstop technology is that people would be moved there later in the day, and those people would maybe not be the regular workers, and so the characteristic of having to put them there would allow them as volume rises to go there more regularly and improve the productivities we discussed earlier.

Q Okay. Thank you. I think you have earlier referred to technology of production as one of the reasons you gave for explaining the volume variability of mail processing activities.

A Yes, sir.

Q And in your testimony you gave the following illustration, and this is at page 57 of your testimony:

"If mail in machine-paced activities is always sorted at the same speed, then adding more volume would just mean running the activity longer at the same speed. This type of production process would tend to have a high variability as any additional volume would always be sorted as the same rate as any preceding volume."

Now doesn't this statement imply that for manual

operations additional volume is not necessarily sorted at the same rate as any preceding volume?

A Yes.

Q And would you agree with the statement that people generally work faster when there is a steady inventory of mail waiting to be processed?

A That is what I have been told, and it seems reasonable to me.

Q You would agree with that.

Now another statement that you have made is that --I am getting off of the volume variability issue now and I would like to talk just a little bit about the scrubs that you performed.

A Oh, yes.

Q And quite frankly, I am hoping to clarify something rather than just to hammer away at deeper understanding on that because I believe I understand the concept, but you had assumed the normal operating range is reached when newly-installed equipment reaches a 100,000 piece handling per accounting period threshold.

That was given in response to our Interrogatory 18(C).

The question here is does that refer to the entire activity or is that a per machine number or what does that 100,000 refer to?

A That would refer to the activity overall.

Q Okay. Then you had also, elsewhere in your testimony -- I think it's in that table that was revised, Table 7 -- you mentioned approximately 15 million pieces for OCR and approximately 37 million for BCS.

A That's correct.

Q And again are those total activity numbers?

A Those would be total activity averages.

Q Okay. Thanks. You clarified that for me.

Do you agree -- I believe you also gave this answer, that with a 100,000 piece handling per accounting period threshold, that amounts to 4,167 pieces per day?

A 4,166.67 --

Q Okay.

A -- great rounding down --

Q Yes, sir. Very good. Now intuitively to me that seems low compared to these 15 million, 37 million numbers.

A Yes, it is.

Q So I have basically two questions.

One is if your data scrub had used a significantly higher number than 4,000 pieces per day, in other words if you assume that it took more pieces before the learning curve and other effects are fully established, how do you think that would affect your volume variabilities?

A First of all, there is a difference between the

threshold scrub and the learning curve effect. I think it is important to draw a distinction between the two, because I didn't imply by this threshold scrub that all learning was occurring the first AP or first one or two APs.

The learning curve effect would be captured by the time trend variables in the analysis.

What the threshold scrub is associated with is trying just to make sure that the activity is up and running at what is at least a normal operating rate and, you know, 4,000 piece handlings a day means the OCR is up and running for an hour or two hours, so that's the sort of throughput you think at the beginning of an OCR operation where it is running for an hour or two.

I quite agree with you that that is small compared to the way an OCR is used years later when there's many OCRs in place and they are running them for quite a few hours, so it is small in that sense but the idea was solely to be sure that we were starting with a period where at least basic, normal operating procedures would be in place.

My understanding is that the Postal Service actually goes through a process of so-called accepting the machine before it is put online and run on real data and this would be a check that that acceptance has been completed.

Q And given all that background, --

A Yes.

Q Do you have a sense or -- of how it would affect your variability calculations if you had used a higher threshold than 100,000?

A I don't think it would have much effect unless a ridiculously high number was -- was used. Essentially what the threshold would have done would be to start the data for each activity at a later point instead of an earlier point.

I other words, what -- for -- for OCR -- this example -- essentially what the higher threshold would say is, instead of cutting off, say, the first AP or two, cut off the first five or six, but given that, in most instances, I have 80, 90, 100 APs for each office, I don't believe that a slightly higher or a reasonably higher threshold would have made a difference.

Q Would your answer be the same, then, if you had had no cutoff based on number of pieces and it included all of the data points, or would that affect the variability significantly?

A It's hard to say. I haven't ever done the analysis without doing it. But my intuition is that probably it wouldn't have as -- that big of an effect. This was probably over-caution on my part for automated activities in particular.

MR. YOURSHAW: Okay. That's all I have. Thank

you very much.

CHAIRMAN GLEIMAN: The Office of the Consumer Advocate?

THE WITNESS: You forgot your paper.

MR. YOURSHAW: Thank you.

THE WITNESS: You're welcome.

CROSS EXAMINATION

BY MR. RICHARDSON:

Q Good morning, Mr. Bradley.

A Good morning.

Q Would you please turn to page 36 of your testimony? In line 14, or at the bottom of the page, that has the specification of your econometric model set out there.

A Yes, sir.

Q Would you tell me whether the cost function here is derived from a production function which relates the output of the process to the inputs used?

A Formally speaking, this is not a cost function. This is ~~was~~ what economists refer to as a cost equation. A cost function is derived through an optimization process by which, using envelope theorem, there is an assumption that cost minimization is taking place.

That's not always the case in production, and so, an alternative approach to measuring actual costs is to use

what's known as a cost equation. In a cost equation, we're simply relating the cost, here labor hours, to the drivers that determine that cost, TPH and so forth.

THE REPORTER: TPH?

THE WITNESS: Oh, I'm sorry. TPH for total piece handlings.

BY MR. RICHARDSON:

Q Do you have an underlying production function?

A I think that there is an underlying production function in the sense described by witness Panzer in terms of regular operating procedures and regular operating plan. I have not identified or investigated the nature of that production process.

Q So, you wouldn't necessarily know what the -- all the inputs and outputs would be for that production function.

A Well, the -- the outputs of the production function would be piece handlings, the sorting of mail. The inputs here would be primarily labor.

Q Well, doesn't the economic theory indicate that the -- the inputs to a production function are both capital and labor?

A Generally speaking, yes.

Q And have you -- you have not made a provision, then, for capital in your -- in your function here on this

testimony on page 36.

A The -- the cost equation on page 36 is more attuned to what's known as a variable cost equation, where it's looking at one of the components, that one being labor, and to be precise, this equation does not model or include capital.

Q And a production function does include tradeoffs between labor and capital. Is that correct?

A A production function?

Q Yes.

A Yes, it does.

Q I'd like you now to turn to the UPS interrogatory T-14-17.

A I have it.

Q And in that you refer to the trans-log function used to model such industries as telephony, electricity, hospitals, and trucking, and could you tell me what -- the major variables used and how do they relate to the variables you use in your study?

A The major variables used in the study, these cited studies?

Q Yes, in these industries, in models used in these industries.

A Generally -- generally speaking, the -- I would have to go through each paper to see what the inputs and

outputs are for each one.

Generally speaking, they would be, on one hand, costs for each of the industries; on the other hand, would be the output associated, whether -- in banking, it may be the number of checks cleared, or electricity could be the number of kilowatts produced, something to that degree.

Q Would capital be one of the relevant inputs?

A It could be.

Q I guess I'd like you to refer to the -- your response to Presiding Officer's Request No. 4, question one. In your response, you discuss short-run and long-run. Would you define short- and long-run in your response to that question?

A My -- my definition of short-run and long-run, as I had mentioned earlier this morning, is related to the economist's definition, and specifically, economists define the long-run as a situation in which all inputs are flexible and can be adjusted. The short-run would exist when any of those inputs would not be perfectly adjusted.

Q On page 36, getting back to page 36 of your testimony --

A I have it.

Q -- your analysis there relates hours worked to pieces processed, as you testified.

Do you maintain that the relationship of labor to

pieces handled as mail volume changes is unaffected by the equipment age, the quality of management, the size of the facility, either within a facility or between facilities?

A Could you go a little slower?

Q Okay. Do you maintain that the relationship of labor to pieces handled as the volume of mail changes is unaffected by things like the equipment age or the quality of management or the size of facility?

A No. I think one needs to control for that in the econometric equation, and I've attempted to do so both, as you mentioned, the quality of machinery and facilities for an automated operation, for example, by using what I called the fixed effects model.

In addition, the use of that machinery through time I tried to control for with the time trends and the --what I call the manual ratio variable.

Q And what about the size of facility?

A The size of the facility could be defined in -- in two ways. I'm never quite sure what people mean by that question. Do you mean by the square footage or the absolute volume?

From a square footage perspective, from the former, the~~re~~ size of the facility, to the extent it would affect, say, a manual letter equation like equation two, would again be a fixed effect, is something that would be

repeated for that facility through time and be captured through that process.

In terms of the absolute volume, well that's what the variable TPH, or total pieces handling, is trying to capture in the equation.

Q Okay. If we rephrase the question in terms of economics and referred to your testimony on page 40, line 9, just below the equation, where you refer to the alpha vector --

A Uh-huh.

Q Now, my question is, could any of the components of that alpha vector have been modeled on an X of IT variable which would permit deviation of an appropriate -- derivation of an appropriate beta coefficient?

A I didn't get it. Sorry.

Q Do you want me to just repeat it?

A Yes.

Q Okay. Could any of the components of the alpha vector from your equation have been modeled as an X of IT variable permitting derivation of an appropriate beta coefficient?

A Got it. Specifically, the ~~XIT~~ X(it) in this -- in this equation relates to volume. So, very technically, the answer is no.

More generally, if one would have a variable which

was a facility-specific characteristic that was non-volume -- let's say age of the facility -- one could, if one had that data, enter a variable such as age -- as age of the facility as another -- let's call it Z variable -- and estimate its own coefficient in place of the alpha (1), yes.

Q Now I'd like to refer to your response to OCA-T14-3(B), if you could get that in front of you -- just a brief question.

A Sure. I have it.

Q And in that response you make reference to capacity in your answer, but as I understand it your model has no measure of capacity or capacity utilization in the various tables, so could you explain why.

A Why I use the term "unused capacity"?

Q No, why your model has no measure of capacity or capacity utilization.

A Oh. Okay. The notion of capacity here, and I did put it in quotation marks, to relate to the fact that in the question the premise of the question is that there are some management inefficiencies which leads to hours or workers in an operation who are not ~~activity~~ actively working.

That was how I interpreted the question -- this notion of inefficiency.

My term "excess capacity" here was meant to relate to that characteristic of the possibility of additional

labor in the operation that wasn't being actively involved in the sorting process, so I say that by way of answering your question that my model -- yes, my model and the data do include all the labor hours, those that would be used, productively, and if there were any of those that weren't, so I don't think it is fair to say that the model doesn't include this, quote/unquote, "excess capacity".

Q And I'd like to move back to your testimony to page 13, line 18 where you discuss technological change.

I just wanted to ask you if you would define "technological change" as you are using it in your testimony on page 13.

A Here I'm talking about technological change that is changes in the manner or processes for sorting mail -- the technology of sorting mail.

This could be adding remote video encoders to an OCR or other physical characteristics that change the way the mail is processed.

Q Would that involve a reference to changes in the production function or movement along the production function?

A I wasn't really referring to a production function here per se.

As I said in my earlier answer, I didn't take a production function approach to this analysis. I took a

cost equation approach to the analysis.

But nevertheless, what I was thinking about here in terms of the cost equations were shifts in those cost equations, so the analog would be a shift to a production function.

Q Then on page 16 of your testimony, if I might quote you, where you state on line 3, "The Postal Service has worked to automate the mailstream and it is the advent of automation that embodies technological change."

You say, "As automation expands in the workroom floor, the Postal Service diverts mail from manual activities, and this diversion could have an impact on the nature of manual activities."

Now are you basing these statements on the time trend term variables?

A No. I am basing those statements on my discussions with operations people and Postal Service people of what has happened in response to automation.

Q Now I'd like to jump around again if we could -- I'm sorry to move you around in your testimony so much, but on page 54 you have a Table 7. I believe that was actually revised, but I don't think that's significant to my question.

On lines 10 and 11 for some of the activities you show Time Trend 1, and for activities such as manual letters

and OCR the coefficient you show has a negative -- is negative. And other activities where you show a shading as I understand it is ~~significantly~~ insignificant; is that correct?

A That's correct.

Q And others are positive coefficients.

A That's correct.

Q Now am I correct that you indicate the time variable is a measure of technological change?

A Well, I don't think that's quite correct. As I say right after the section in my testimony we were discussing before, the time variable includes the effects of technological change, but it also includes any other changes in the nature of the operation through time.

For example, I say something to the effect that it accounts for different ways that the Postal Service could use that operation through time. So I wouldn't limit its interpretation solely to technological change, and in response to someone's interrogatory I tried to make clear it's really capturing any effects that are persistent through time in that operation.

Q Well, could you tell me what the business implication is of your positive, negative, or insignificant coefficient sign on that table?

A I haven't really thought about these equations in

terms of business implications; no.

Q And could you tell me why there is a difference in these coefficient signs between positive, negative, and insignificant?

A The differentials in the signs would reflect different autonomous trends in time, and what I mean by that is in any activity there's going to be nonvolume effects which are causing that activity's productivity or hours to go up and down through time, and what the time trends capture and attempt to control for are those external or autonomous effects on the cost equation, as we were saying before, the shifting in the cost equation. So the reason that these would be different would be that different individual operations are subject to different external events through time.

Q And if we also look on that same table on lines 12 to 13 you have Time Trend 2 listed, and there you have positive coefficients or four insignificant coefficients, but you don't have any negative coefficients.

A That's correct.

Q Could you tell me why they would vary as between Time Trend 1 and Time Trend 2 as to the coefficients?

A My interpretation of that change would be that the external characteristics in use of that operation were different in the '88 to '92 period than they were the '93 to

'96 period, and specifically, although I haven't investigated the nature of those differences, the interpretations of these results would suggest that there was a change in the external factors in the opposite direction. That is, whatever it was that was causing, for example, hours to have -- or Time 1 to have the negative coefficient in the hours equation in the earlier period, it shifted, and so it's now moving in the opposite direction.

Q Well, would the difference suggest that there might be a need for an additional explanatory variable?

A I don't think so. I think the difference more reflects the importance of recognizing that there is a difference between the two periods. It doesn't -- a time trend changing its sign in no way indicates that we need a different explanatory variable; it just suggests that you need to have a sophisticated time trend variable.

Q Can you tell when for any given activity the coefficients would be the same -- the same sign?

A Could one tell?

Q Can you -- yes.

A Sure. You could do a statistical test or, if it were just a sign change, we could just look at rows 10, 11, and 12 and 13.

Q Now I would like you to refer to DMA/USPS-T-14-24A and B, those interrogatories, or that interrogatory.

A 24A and B?

Q DMA, yes.

A I have it.

Q Now, that discusses your method of handling technological change; is that correct?

A Again, technological change generally defined is including the other things mentioned in that answer.

Q There could be a wide variety of other changes as well--

A Correct.

Q --as technology?

A Correct.

Q Thank you. I'm sorry to put you through all that just the respond to that one question.

Now, on your testimony on page 8, lines 2 through 11, you discuss the availability of MODs piece handling data from MODs offices. And you indicate that piece handling data are not available at some MODs offices such as sorting at stations and branches. And you say there are similar activities in MODs offices or BCMs offices.

A BMC.

Q BMCs. So it's enabled you to provide proxy variabilities; is that correct?

A Almost. The only slight correction I would make is I think I'm saying that even within MODs offices there

are some activities for which there aren't piece handling data available like sorting in stations and branches.

Q Now, I wanted to focus on your use of the word "similar activities" in MODs offices. Do you know of your own personal knowledge about these similar activities?

A I'm not sure what you mean by "personal knowledge".

Q Have you visited these offices to determine what activities are involved and whether or not they are similar?

A No, I haven't done a survey of the non-MODS offices, although I have seen a similar^ operation like manual sorting activities in stations and branches, not in non-MODS offices.

What I relied upon here is the fact that there are manual letter sorting activities, mechanized letter sorting activities which to my understanding are the same activity that takes place in the MODs office.

Q Have you correlated all the activities that you're cosidering in your study as to whether or not they occur in both offices, MODs offices and non-MODs offices?

A I think that in terms of non-MODs offices, I think that in response to OCA-T-14-1, I did indicate the general~~ly~~ pattern of activities in non-MODs offices, and using that from the--Witness Degen gave me an IOCS breakdown. And from that breakdown I came up with a weighted average of variability across the different

activities of the non-MODs offices of 77.9. The average across MODs offices was about 78, 78.1. So I think it's not unreasonable to suggest that to the extent that there are correspondences and I need variabilities between non-MODs and MODs offices, this approach is a reasonable one.

I would agree, or I would say I didn't have piecehandling data for non-MODS offices to statistically estimate the correlation.

Q And you have no equations for non-MODS offices?

A That's correct.

Q Did you consider other alternatives for calculating volume variability? For instance, did you just consider using 100-percent variability for the non-MODS offices?

A Yes. That I considered, but given my -- what I believe to be very strong results across many ~~difference~~ different offices, many time periods for MODS offices of variability substantially less than one, I didn't feel I had a basis for putting that forward, and so, my first inclination was to simply use the system variabilities I've suggested. In response to OCA's interrogatory, then I -- I pursued that alternative analysis I just discussed.

MR. RICHARDSON: I have no more questions, Mr. Chairman.

CHAIRMAN GLEIMAN: Mr. Keegan. Every once in a

while I have to look at the script and then look up and make sure I've got the right name and the right party in place.

MR. KEEGAN: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MR. KEEGAN:

Q Good morning, Professor Bradley. I'd like --

A Good morning.

Q -- to begin by returning to a subject that counsel for NNA and OCA dealt with, and that is the question of technologies used as a backstop or as a gateway.

Is your methodology capable of determining whether lower variabilities for certain operations are due to their being a backstop rather than due to their being over-staffed?

A I'm actually glad you asked the question, because I didn't want to leave the impression that the variabilities were caused solely by it being a backstop technology. That discussion was part of a general discussion of trying to interpret the variabilities.

The variabilities are caused by the actual response in cost to changes in volume, and -- and I have attempted to provide interpretations of those results, but as your question asked and to specifically answer it, the methodology does not allow one to partition, divide, or discern what's the role of these various interpretations.

Q Thank you. And just to tie it up, is it also the case that your methodology itself cannot distinguish between lower variabilities being due to a gateway operation as opposed to being due to, quote, "excess capacity"?

A That's correct.

MR. KEEGAN: Thank you.

Mr. Chairman, if I may, I'd like to hand the witness two pages captioned Time-Warner Cross Examination Exhibits 1 and 2.

CHAIRMAN GLEIMAN: Please.

MR. KEEGAN: And I also have copies for the bench, and I'd like to hand the reporter two copies at this point just for reference purposes. And I have extra copies at the table for other counsel if they want them.

BY MR. KEEGAN:

Q Professor Bradley, would you please refer to your response to DMA/USPS-T-14-16?

A I have it.

Q In your response to part C of that interrogatory, you confirmed, did you not, that the general process of summing total piece handlings for a given year in operation and dividing this figure by the sum of work hours for that operation and year can be used to calculate labor productivity for any direct MODS operation for any given year?

A That's correct.

Q And in your answer to parts A and B of that same interrogatory, you recommended that this calculation of productivities for MODS direct operations be performed on the scrubbed data set called VVMPO.data that you provide in library reference H-148. Is that correct?

A That's correct.

Q Would you please refer to the document that is captioned Time-Warner Cross Examination Exhibit No. 1?

Can you confirm that the -- the method for calculating labor productivity by MODS operation and year that is set out in that exhibit is consistent with the method you recommend in your response to DMA-T-14-16?

A I would, although I'm -- I'm a little uneasy with the word "recommend." In your question to me earlier, you mentioned that I was recommending using the scrubbed data as opposed to the non-scrubbed data. In that sense, it was a recommendation.

I don't know the purpose to which DMA wanted to use the variability, so I'm not generally recommending this, but subject to that qualification, I agree.

Q All right.

Would you refer to the -- the next page, Time-Warner Cross Examination Exhibit 2?

A I have it.

Q What we've attempted to do in that exhibit is to calculate productivities for various MODS direct operations for every year from 1988 through 1996 using the method that you -- I'll use the term "recommend" again if you'll accept it -- using the method that you recommend in your answer to DMA/USPS-T-14-16 and the data set VVMPO.data that you provide in library reference H-148.

Can you confirm or, if not, can you accept -- will you accept subject to check that the productivities shown are those generated by that data set and by your recommended methodology?

A Yes.

MR. KEEGAN: And Mr. Chairman, at this point, I'd like to move that Time-Warner Cross Examination Exhibits No. 1 and 2 be accepted into evidence and transcribed at this point in the transcript.

CHAIRMAN GLEIMAN: Is there any objection?

[No response.]

CHAIRMAN GLEIMAN: Hearing none, cross examination exhibit is accepted into evidence and shall be transcribed into the record at this point.

[Cross Examination Exhibit Nos. Time Warner-XE-1 and Time Warner-XE-2 were received into evidence and transcribed into

the record.]

METHOD FOR CALCULATING LABOR PRODUCTIVITY BY MODS OPERATION AND YEAR

1. Using VVMPO.DAT, sum total piece handlings for an operation (e.g., TOCR) for a given year (e.g., FY=88).

2. Using VVMPO.DAT, sum hours for the same operation (e.g., HOCR) for the same year (e.g., FY=88).

3. Divide the result of Step 1 by the result of step 2.

4. Repeat for all MODS operations and years

This process is consistent with the process for calculating labor productivity recommeded by Witness Bradley in his response to DMA/USPS-T14-16.

MODS Direct Operations - Annual Productivity by Operation
(000s of Pieces Handled per Hour)

Operation	1988	1989	1990	1991	1992	1993	1994	1995	1996
OCR	7.219	6.486	6.332	6.160	5.537	5.030	4.968	4.782	4.503
BCS	7.143	7.167	7.384	7.476	7.336	6.894	6.946	7.093	7.289
LSM	1.562	1.548	1.505	1.475	1.415	1.321	1.284	1.263	1.238
MANL	.610	.583	.567	.592	.593	.553	.565	.560	.547
MANF	.503	.489	.460	.485	.493	.469	.480	.473	.473
FSB	.893	.865	.846	.804	.770	.757	.743	.739	.734
MANP	.191	.192	.202	.222	.249	.255	.259	.258	.277
MECALLP	.112	.095	.120	.111	.121	.123	.125	.158	.179
SPBALLP	N/A	.198	.217	.234	.248	.251	.238	.257	.272
MANPRIO	.241	.238	.233	.208	.216	.204	.200	.210	.225
SPBPRIO	N/A	.259	.289	.325	.322	.307	.273	.270	.272
CANP	3.110	3.111	3.145	3.036	3.164	3.080	3.261	3.352	3.393

Source of methodology: Bradley response to DMA/USPS-T14-16.

Source of data: LR-H-148: Bradley/USPS-T-14 Electronic Data Input. Data Set VVMPO.DATA (MODS Direct Activities).

BY MR. KEEGAN:

Q Referring still to Cross Examination Exhibit No. 2, Professor Bradley, do you agree that, as that exhibit shows, productivity in terms of pieces handled per hour was lower at MODS facilities in 1996 than in 1988 for optical character readers, letter sorting machines, and flat sorting machines?

A I agree.

Q And was productivity in terms of pieces handled per hour also lower at MODS facilities in 1996 than in 1988 for manual letter sorting, manual flat sorting, and manual priority sorting?

A Yes, it was.

Q And in fact, was not productivity lower in 1996 than in 1988 for every direct manual operation at MODS facilities except sorting parcels?

A I think cancelling was higher in '96.

Q Is that a manual --

A Oh, I'm sorry.

Q -- operation? I said for every manual operation.

A Say it again.

Q Was not productivity lower in 1996 than in 1988 for every manual operation at -- every direct manual operation at MODS facilities except for parcel sorting?

A Yes, it is.

MR. KEEGAN: Thank you, Professor Bradley.

That's all I have, Mr. Chairman.

CHAIRMAN GLEIMAN: Mr. McKeever.

CROSS EXAMINATION

BY MR. McKEEVER:

Q Professor Bradley, do you have library reference 148 with you?

A I do.

Q Could you please turn to table 148-1 on page 7 of that library reference, please?

MR. McKEEVER: Mr. Chairman, I have extra copies of that page if the bench would like some.

CHAIRMAN GLEIMAN: Certainly.

BY MR. McKEEVER:

Q Am I correct that one of the rows in table 148-1 lists by activity the number of MODS observations or data points that you could have used in your analysis if you had used all of the data you actually had for both of the variables you regress?

Let me direct your attention to the row entitled "Observations With Complete Data." That's the row I'm focusing on.

A Okay. That -- that row represents the total amount of raw data collected. In some sense, it could be used; in some sense, ~~may~~ maybe not. I mean there's a lot of

issues in terms of whether or not that could actually all be used in the regression analysis, but under some circumstances perhaps it could, yes.

Q Well, that's all the data points that you had --

A Right.

Q -- where the data was complete for both variables.

A That's correct.

Q Okay. And --

A That's correct.

Q Okay. So that in the case of the OCR activity, for example, you had 21,345 observations where the data for both of the variables was complete.

A That's correct.

Q Okay. But then you performed some data scrubs to remove from your analysis some of the data you thought should not be used.

A That's correct.

Q Okay. And table 148-1 shows for each activity listed there the number of observations you actually used in your analysis after you finished scrubbing the data?

A That's correct.

Q That's the last line, "Analysis Data Set Observations"?

A That's correct.

Q Taking the manual parcel activity as an example --

that's about halfway over.

A Got it.

Q You did not use, then, 7,235 observations out of a total of 24,814 you had.

A That's correct.

Q That's the subtraction of 24,814 minus 17,579.

A And it should be the addition of 1,148 plus 6,087.

Q Okay. Fine. That's actually the way I did it, too. I added those two. Okay.

So, you didn't use about 29 percent of the manual parcel data that you had. Is that correct?

A That is correct.

Q Okay. And for SPBS non-priority, that's a parcel operation, right? Small parcel, bundle sorter?

A Small parcels and bundles.

Q And bundles.

A It --

Q Okay.

A It certainly includes parcels but can include other things.

Q Right. And for SPBS non-priority, you did not use 2,053 observations -- that's 15 plus ~~2,308~~ 2,038 -- out of 6,775 observations where you had complete data.

A That's correct.

Q That's about 30 percent of the data that you

didn't use.

A That's correct.

Q For manual priority, you didn't use about 27 percent of the data you had; 5,977 were not used out of 21,914 observations?

A Correct.

Q Okay. And finally, for the SPBS priority activity, you threw out about 49 percent of the data?

A Throwing out seems a bit harsh to me, but I did not use that amount of data, agreed.

Q Okay.

Now, on page 30 of your testimony, you state that one of your data scrubs is to eliminate data for start-up periods. Is that correct?

A That's correct.

Q Could you turn to your answer to interrogatory NAA/USPS-T-14-18(d), please?

A 18(b)?

Q (d) as in David.

A I have it.

Q Okay. There you indicate that the threshold scrub, I think you call it, was meant to -- and I am quoting here -- "control for the initial startup of an activity."

Do you see that?

A I do see it.

Q Was your intent there to eliminate data from your analysis data for the initial time period when a new site was coming online and was just ramping up? Was that the idea?

A For automated activities -- which I think is the reference of this question -- that was the intent.

Moreover, my general intent was to eliminate from the data any period in which the level of activity fell below this minimum, normal operating activity, so in reference to this question I was referring specifically to the startup period, because that is how I understood the question, but the threshold scrub generally is designed to make sure that every observation is above this minimum level of activity.

Q And why is that?

A Because it's my understanding that if the level of activity falls below the minimum then the sort of normal operating procedures or the normal processes that generate costs may not be accurately represented.

Q Did you intend to eliminate data for low volume sites, sites that just didn't have a lot of volume?

A There was no intention to go after specific sites. This threshold was intended specifically to go after activities.

Q Go ahead, I'm sorry.

A To the extent that a site never would achieve threshold level, then its data would be eliminated.

Q So let me restate it. Did you intend to eliminate data for low volume activities?

A Actually, my intention was to eliminate data for low volume periods for those activities, not low volume activities in general.

Q Okay, and why was that?

A Again, it's my understanding that if the level of activity in a particular accounting period went below these minimum thresholds that the nature of the activity was not representative of the true costs generating process.

Q For that activity?

A For that activity.

Q In that operation?

A For that activity, yes, and operation.

Q Professor Bradley, could you please turn to your response to Interrogatory ABA -- American Bankers Association/USPS T-14-1(C).

A I have it.

Q Okay. The question there asks you to confirm that your very use of regression analysis per se virtually assured the result, that volume variabilities will be less than 100 percent.

A Correct.

Q And in your response you state in part, "There is nothing in the regression methodology that precludes the estimated variability from being 100 percent or greater than 100 percent, is that correct?

A That's correct.

Q How can that be?

How can you have a variability greater than 100 percent?

A From the regression methodology it would simply come about from an estimated coefficient being greater than one zero zero.

Q I understand that, but what does that signify? Under what circumstances can that be the case? That is what I mean?

A I'm sorry.

Q That's okay.

A A regression coefficient over 100 and that's a variability over 100 percent would mean decreasing returns to scale.

Q Diseconomies of scale?

A Diseconomies of scale.

Q More volume than optimally be handled?

A I wouldn't say that so much as an increase in unit cost as volume rises.

Q Okay. Professor Bradley, could you turn to page 8

of your testimony?

A Certainly. I have it.

Q Now, starting there you discuss how you accounted for measurement error in developing the final equation that you use to estimate your variabilities; is that correct?

A I discussed the analysis I did of measurement error in considering that final equation, yes.

Q You, I think, first differenced the data, is the term you use?

A That's one of the processes of accounting for measurement errors, the first differencing.

Q And I think the variability in the equations you use there is the Greek term Beta, that's the "B" with the little tail on it?

A That's correct.

Q Did you use the first differenced beta in arriving at your variability estimates?

A The first differenced beta was used in arriving at variability estimates provided on page -- or on page 82, equation 22 which is the errors in variables estimated beta. That's where I used the first differenced beta.

Q Right. Did you use that in arriving at your elasticities on page 9?

A No, sir. The recommended elasticities are based upon the results for manual operations in table 7 that do

not use the first differenced beta.

Q Table 7?

A I believe so, sir. Let me just double check that to be sure.

Q Sure.

A That's correct.

Q Professor Bradley, could you please turn to page 82 of your testimony?

A I have it.

Q You show an equation there, equation 21, that I guess you used to first difference the data; is that right?

A That shows what the estimator would be if one first differenced the data; yes.

Q Now, the left-hand side of that equation, is that the probability limit beta subscript "d" is that the first differenced beta on that side, on the left side?

A The beta "d" is the first differenced beta. The whole expression is actually what's known as the probability limit of that beta.

Q So the real term is the "beta d"?

A Correct.

Q And on the right-hand side of the equation, the term outside the brackets, that beta, is that the errors and variables beta?

A Well, that's actually the quote/unquote true

beta. The errors ~~and~~ in variables beta would be given by equation 22 where see there's a beta with a little hat on the top.

Q And the beta in 21 is different from the beta in 22?

A Yeah, the beta in 21 refers to the true beta without measurement error.

Q And is that sometimes called the errors and variables beta?

A No, the errors ~~and~~ in variables beta is the one down below.

Q And 21 and 22 are different betas?

A That's correct.

Q I would like you to turn to page 84 of your testimony.

A I have it.

Q There you have in table 17 an errors and variables beta row, do you see that?

A I do.

Q Now, turning back the page 82.

A I have it.

Q Would the numbers there be the same beta as the beta on the right side of the equation in equation 21?

A No.

Q Okay.

A Those would be the ones from equation 22.

MR. McKEEVER: That's all I have, Mr. Chairman.

CHAIRMAN GLEIMAN: Is there any follow up?

[No response.]

CHAIRMAN GLEIMAN: There's no follow up. We're going to take a 15-minute break now and we'll come back and do questions from the bench.

[Recess.]

CHAIRMAN GLEIMAN: We have a bunch of questions from the bench, and I guess I will start off, and some of my colleagues will help me out somewhere along the line when my voice runs out.

Labor costs associated with mail processing are very large, over $10 billion in the test year. For more than two decades the Postal Service and the Commission attributed all of them on the assumption that they are 100-percent volume variable. Your cost models yield substantially lower variables, particular for manual operations.

Since such a large pool of cost is involved, would you agree that it is important to verify that these variability estimates are valid and not artifacts of a particular modeling technique applied?

THE WITNESS: I think that the size of the cost pool suggests that the analysis should be done carefully and

completely and reviewed; yes.

CHAIRMAN GLEIMAN: Well, I'd like to ask you if the following nontechnical approach would be of any value in verifying your results. My intuition tells me that if costs vary 100 percent with volume, the graph of those costs and the volume data points should resemble a straight line with a 1-to-1 slope. Is that what you would expect?

THE WITNESS: The graph of cost against volume should be a straight line going through the origin.

CHAIRMAN GLEIMAN: With a 1-to-1 slope.

THE WITNESS: Okay. Yes.

CHAIRMAN GLEIMAN: Did you plot the panel data that you used to see what the cost-volume relationship looks like for the various operations that you modeled?

THE WITNESS: The cost-volume relationship you talk about is what's known as a bivariant analysis, and it doesn't account for the variety of other factors which are changing as those two things change. So I did not plot a two-dimensional graph.

CHAIRMAN GLEIMAN: I asked our staff to plot the panel data that you use for the manual letter operation. I have copies here at the bench for you, your counsel, and anyone else that is interested. And at this point I'm going to make sure that you get a copy, and if -- my able assistant here is going to make sure that everybody gets

copies.

COMMISSIONER LeBLANC: You forgot good-looking.

CHAIRMAN GLEIMAN: My good-looking able assistant.

Now I just want to warn you ahead of time, we have the Staff psychologist listening.

This is a plot of the scrubbed panel data that you use on a log scale that you use in your modeling. Will you accept this plot as accurate subject to check?

THE WITNESS: Yes, sir.

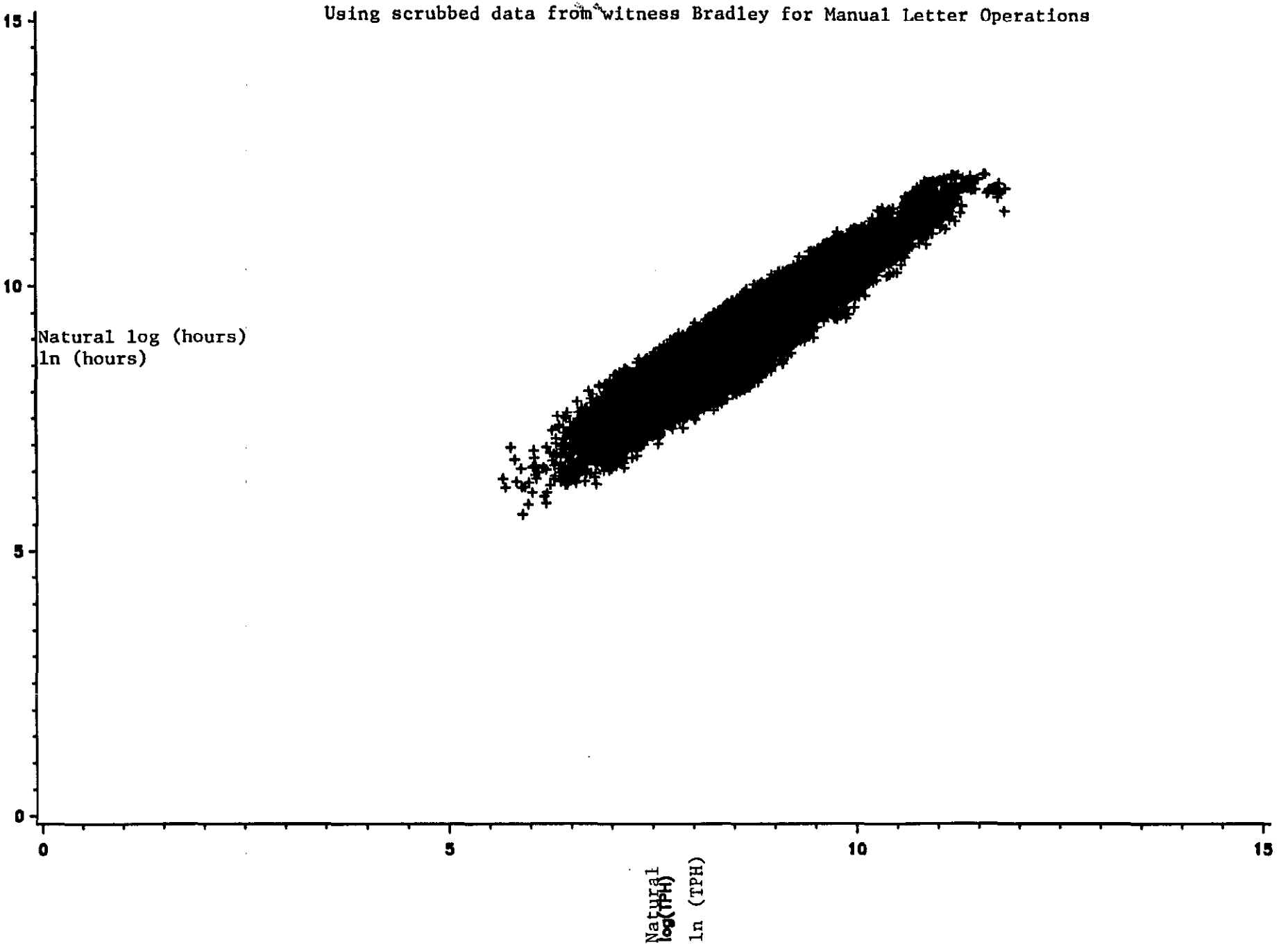
CHAIRMAN GLEIMAN: Would anyone object to our including copies of this graph, this plotting in the record as a Bench Cross-Examination Exhibit No. 1?

There don't appear to be any objections. Mr. Reporter, I'll make sure that you get two copies if you don't already have them.

[Cross-Examination Exhibit No. Bench-XE-1 was received into evidence and transcribed into the record.]

Over all sites and accounting periods

Using scrubbed data from witness Bradley for Manual Letter Operations



5580

Branch Exh 1

CHAIRMAN GLEIMAN: Now if you would please examine this in order to offer an opinion as to whether it resembles a straight line with a roughly 1-to-1 slope.

THE WITNESS: It looks to me like a blob of data with many, many data points, and one's eye would be tempted to draw a straight line through it, but I think that would be a mistaken inference, because the actual straight line should come from an econometric regression. My experience has been that when looking at simple plots they can be misleading. So I'd be hesitant to say so.

CHAIRMAN GLEIMAN: Does that mean it resembles or does not resemble a straight line with a roughly one-to-one slope?

THE WITNESS: No, I don't think it does resemble a straight line. To me that resembles an amoeba or a blob -- many different data points.

CHAIRMAN GLEIMAN: You can't draw a straight line through a number of data points?

THE WITNESS: One certainly could.

CHAIRMAN GLEIMAN: Can you tell me why your models of operations yield variabilities that are so far below the roughly hundred percent variabilities that these data plots seem to imply?

THE WITNESS: Yes. What these data plots would seem to imply are results which are similar to my response

to POIR-4 -- I believe it is Question 4, it's Question 3 or 4, where I produced econometric results for what is known as a pooled model.

Econometric results for the pooled model give you a variability of one, or in most cases a little bit greater than one, which could be consistent with this plot.

This plot, if it is consistent with those, and those results are the reflection of a bias in the analysis, because what is going on in this plot is two things.

One, we see variations across volume, and two, we see variations across sites.

What I would like to see ~~to~~ for my analysis would be a plot like this for each of the individual sites to see how volume and hours are related once other factors are controlled for.

It is not unusual -- it is well-known, in fact -- that when one estimates a pooled data, economies of scale are ~~mapped~~ swamped by what are known as exogenous factors, and I think that this plot would be a good example of that problem.

CHAIRMAN GLEIMAN: Well, we can put that one away now. I won't ask any more questions about that.

Did you investigate plausible alternative specifications of your models of mail processing labor costs?

THE WITNESS: Yes.

CHAIRMAN GLEIMAN: You investigated pooled models, fixed effects models, both of which are used in panel data.

Your pooled model of the manual letter operations implies the changes in volume calls roughly one-to-one changes in cost consistent, at least in my view, with the relationship implied by eyeballing the plotted data.

Your response to Presiding Officer Information Request Number 4, Question 3 at page 6, indicates -- and I will wait if you want to dig that out --

THE WITNESS: I have it.

CHAIRMAN GLEIMAN: -- indicates that adding a term reflecting facility-specific fixed effects and correcting for autocorrelation causes most of the reduction in the manual letter operation variability from roughly 100 percent for the pooled model to less than 80 percent for the fixed effects model, is that correct?

THE WITNESS: It is correct that the variabilities for the fixed effects model are lower than they are for the pooled model, but I don't think it is correct to say that the fixed effects caused them to decline.

I think it is correct to say that the pooled model overstates them.

CHAIRMAN GLEIMAN: I am not sure that that is what I asked you.

THE WITNESS: Oh, I'm sorry.

CHAIRMAN GLEIMAN: I asked you whether your Presiding Officer Information Request response indicates that adding a term reflecting facility-specific fixed effect and autocorrelation causes most of the reduction.

THE WITNESS: Okay, yes.

CHAIRMAN GLEIMAN: For your fixed effect models of manual operations, do you examine the range of variabilities that they yield across facilities?

THE WITNESS: By that, I understand your question to say have I investigated variabilities, plugging in values for individual facilities?

CHAIRMAN GLEIMAN: Yes.

THE WITNESS: I have not.

CHAIRMAN GLEIMAN: Would you accept, subject to check, that for manual letter operations variabilities for individual facilities range from negative 73 percent to positive 143 percent?

THE WITNESS: I would have to see how they were calculated.

CHAIRMAN GLEIMAN: Would you accept it subject to check?

THE WITNESS: I don't know how they were calculated so I can't accept it.

Were they calculated on individual equations?

Were they calculated with this equation?

CHAIRMAN GLEIMAN: Would you accept subject to check that for manual flat operations, variabilities for individual facilities range from negative 38 percent to positive 233 percent?

THE WITNESS: Again, without knowing how they are calculated, I couldn't accept them.

CHAIRMAN GLEIMAN: Would you accept subject to check that when facilities are divided into quartiles based on total facility total piece handlings that the variability of manual letter operations for the smallest facilities, that is, the bottom quartile, averages about 90 percent, while the variability of manual letter operations for the largest facilities, the top quartile, averages 40 percent?

THE WITNESS: Again, without knowing how this calculation was done, I can't accept it.

CHAIRMAN GLEIMAN: Given this wide range of variabilities that you are reluctant to accept, is it difficult to say that the variability of any given facility is representative of the variabilities of the facilities generally?

THE WITNESS: That the variability of a given facility -- yes. Yes.

CHAIRMAN GLEIMAN: It's difficult?

THE WITNESS: It is difficult to say that the

variability from any one facility to represent the system or overall, I believe you said or --

CHAIRMAN GLEIMAN: Generally.

THE WITNESS: Yes.

CHAIRMAN GLEIMAN: Can this be tested statistically with a procedure similar to the Chow test that you used to establish that there were statistically significant differences in the levels of productivity across facilities?

THE WITNESS: One could use the Chow test to estimate whether or not individual betas estimated for facilities are significantly different from one another.

CHAIRMAN GLEIMAN: Would it be worthwhile to investigate other models to see if they yield variability results that are more homogeneous, less sensitive to the inclusion of dummy variables and do not require correction for autocorrelation?

THE WITNESS: No. I think the inclusion of dummy variables is the appropriate technique and what one should do and the right approach to using panel data -- and serial correlation I think is a characteristic of time series economic data, not a function of the model, so I think one needs to address those issues, as I have, but I don't think alternative specifications would be the way to address those issues.

CHAIRMAN GLEIMAN: Did you investigate the properties of pure cross sectional models of manual operations including the variabilities that might result?

THE WITNESS: Yes.

CHAIRMAN GLEIMAN: Did you provide those to us?

THE WITNESS: If you look in my work papers, there is a section where I'm calculating some intermediate statistics, and one of those is the Hausman statistic, and there's --

CHAIRMAN GLEIMAN: I'm sorry. The --

THE WITNESS: One of those is a Hausman statistic, H-A-U-S-M-A-N, and in the process of doing that intermediate statistic, I estimated essentially what's a cross-sectional model.

CHAIRMAN GLEIMAN: Let me ask the question again.

THE WITNESS: Sure.

CHAIRMAN GLEIMAN: I understood what you just said. Do I understand, then, that to the extent that you did investigate purely cross-sectional models of manual operations, that the place -- the only place we would find that is in the work papers that deal with Hausman?

THE WITNESS: In the work papers for each manual operation would be the cross-sectional results -- manual labor in the manual labor work paper, manual flats in the manual flat work paper.

CHAIRMAN GLEIMAN: It would be the result --

THE WITNESS: The results would be there, that's right.

CHAIRMAN GLEIMAN: Okay.

Did you search the literature to see if there have been other relevant studies of mail processing variability?

THE WITNESS: I attempted to, yes.

CHAIRMAN GLEIMAN: What relevant studies did you find?

THE WITNESS: I believe that there was a study --I think it was a dissertation sometime ago of not mail processing variabilities, per se, but of mail processing costs.

I did not come across any -- and I had done my own -- my own self, I had published a study looking at mail processing cost and relationship between costs and volume. I didn't come across any studies of variabilities per se.

CHAIRMAN GLEIMAN: Are you aware of any studies of variability or of economies of scale and mail processing that have been done for the Postal Service other than your own?

THE WITNESS: I think there was a study done by -- at the aggregate level done by one or two of the Christensens and two people from the Postal Service that I saw once, and I once saw a study of productivity done by

Norsworthy et. al, those two.

CHAIRMAN GLEIMAN: Okay.

Now, back to your studies --

THE WITNESS: Uh-huh.

CHAIRMAN GLEIMAN: -- what were the variability results for manual operations?

THE WITNESS: In this -- in my study today?

CHAIRMAN GLEIMAN: Yes.

THE WITNESS: It was 80 percent for manual letter.

CHAIRMAN GLEIMAN: I'm talking about the cross-sectional model that you used --

THE WITNESS: Oh, I'm sorry.

CHAIRMAN GLEIMAN: -- the one that you --

THE WITNESS: The cross-section?

CHAIRMAN GLEIMAN: Uh-huh.

THE WITNESS: They -- my recollection is that they were one or above, like -- very much like the pooled results in my response to POIR-4.

CHAIRMAN GLEIMAN: Okay. Were they stable across accounting periods?

THE WITNESS: Cross-sectional data, by its definition, doesn't have a time dimension, so there ~~is~~ are no accounting periods to be stable across.

CHAIRMAN GLEIMAN: Okay. Did they require the use of dummy variables?

THE WITNESS: What they require is the use of facility-specific variables that were not available, and the results were biased as a result.

CHAIRMAN GLEIMAN: Did they exhibit auto-correlation?

THE WITNESS: Auto-correlation is a characteristic of time not a cross-section, so it's not in a cross-section.

CHAIRMAN GLEIMAN: Was there any technical or theoretical reason for rejecting the results?

THE WITNESS: Absolutely. The --

CHAIRMAN GLEIMAN: What -- what are they?

THE WITNESS: Cross-sectional data are well-known to be subject to what's known as heterogeneity bias. It's very well-known in the literature, and because of the size and importance of that bias in these analyses, the cross-sectional results should be rejected.

CHAIRMAN GLEIMAN: Okay.

I think I'm going to let one of my colleagues take over.

Commissioner LeBlanc?

COMMISSIONER LeBLANC: I think I'm going to lose my voice.

Dr. Bradley, would you agree that one of the critical tasks you faced in models your mail processing costs was to separate the effect of changes in volume from a

myriad of other factors that can also affect costs?

THE WITNESS: From a myriad of other factors, sir? Yes.

COMMISSIONER LeBLANC: Did you use the total piece handlings as a proxy for volume?

THE WITNESS: Total piece handling was my cost driver, and so --

COMMISSIONER LeBLANC: So, the answer would be yes in that case.

THE WITNESS: Yes.

COMMISSIONER LeBLANC: Okay. Did you use hours as a proxy for costs?

THE WITNESS: No.

COMMISSIONER LeBLANC: Well, let me ask it another way. Would you agree that the number of handlings that a piece of the same subclass requires can depend on a number of things such as whether it has local or distant destination, whether it is pre-sorted or drop-shipped, and what technology the Postal Service uses to sort it, then?

THE WITNESS: Yes.

COMMISSIONER LeBLANC: Do you agree that these factors could very significantly over time and across facilities

THE WITNESS: Yes.

COMMISSIONER LeBLANC: Let's go back to what you

talked about with the Chairman just a minute. In the presiding officer's request No. 4, question 5 at page 2. And the question I've got -- I'll give you a minute to get there.

THE WITNESS: Yeah. Okay.

COMMISSIONER LeBLANC: Am I to understood that you said, in effect, that any disproportionate portionality between piece handlings and piece volume is irrelevant because the attributable mail processing costs are distributed to subclasses according to their relative piece handlings and not according to volume?

THE WITNESS: No, sir. I don't believe that's what I was saying.

COMMISSIONER LeBLANC: What would you be saying there?

THE WITNESS: What I think I was saying is that for my analysis, mail processing analysis has two parts, my part and Witness Degen's part. For my analysis the relationships that we just discussed don't affect the relationship between hours and piece handling. What they affect would be the relationship between piece handlings and volumes. And that's per Witness Degen's analysis.

COMMISSIONER LeBLANC: So let me try it another way with you. Maybe we're saying the same thing here. Won't any disproportionality of pieces handling to volume

lead to a distortion of rates where rates are based on pieces rather than on piece handlings?

THE WITNESS: If I could stick to costs because I don't know about the rates, but in terms of the marginal costs, if there is a changing relationship between piece handlings and volume, and if that --

COMMISSIONER LeBLANC: Volume being pieces?

THE WITNESS: Absolute pieces, RPW pieces.

COMMISSIONER LeBLANC: Okay. That's what I want to clarify that. Okay.

THE WITNESS: If there is a changing relationship between piece handlings and volume, it would be important that the marginal costs for a case would be based upon the most recent relationship between piece handling and volume.

COMMISSIONER LeBLANC: Okay.

Did you want to make a comment, Mr. McKeever? I'm sorry, you started to grab the mic. I'm sorry.

MR. McKEEVER: I was helping the reporter.

COMMISSIONER LeBLANC: Oh, okay.

Let me change up just a little bit on you, Dr. Bradley. With respect to your fixed effects model, if correcting for autocorrelation substantially alters the variabilities estimated could that imply that a variable correlated with total piece handlings is missing from the model?

THE WITNESS: It could. I don't believe it does in this case. But, theoretically it could.

COMMISSIONER LeBLANC: Is it possible that the relationship of volume the TPH has been changing in an uneven way among facilities over time and this relationship is influencing that TPH coefficients in your fixed effects model?

THE WITNESS: It is possible that the relationship between TPH and volume has been changing either across the facilities or through time. But that would not affect my estimated coefficients because my estimated coefficients are hours to TPH.

COMMISSIONER LeBLANC: But you did say you could agree with that though?

THE WITNESS: That they could change?

COMMISSIONER LeBLANC: Yes.

THE WITNESS: I'm agreeing with the part that they could change --

COMMISSIONER LeBLANC: Good.

THE WITNESS: -- I'm not agreeing with the fact that it influences my regression coefficients.

COMMISSIONER LeBLANC: I understand.

Could this be tested by -- I'm trying to come up and maybe clarify this. Could this be tested by including a variable in your fixed effects model similar to your model

ratio variable, but defined as the ratio of total piece handlings to first handling pieces for a facility?

THE WITNESS: I don't think so.

COMMISSIONER LeBLANC: So you wouldn't agree with that one?

THE WITNESS: No.

COMMISSIONER LeBLANC: Why not?

THE WITNESS: I don't see how the ratio of TPH to FHP, First Handling Pieces, would get at the volume class -- excuse me, the volume TPH relationship that you suggested. What I would think would get after that would be to have volumes and TPH and regress those two.

COMMISSIONER LeBLANC: Okay.

Well, then, to help clarify it for me, could your counsel agree to provide the first handling piece of data from MODS facilities for the record so the parties wishing to investigate the relationship of piece handlings to volume may do so? Counsel? It would help it for me for sure. Maybe some of the other people.

MS. DUCHEK: Commissioner LeBlanc, first of all, I don't even know that we have that. I'd have to check. It may be in something we've already supplied. I'm not sure at this point. If it's not, we may have some problems getting it.

I understand that some data which is derived from

the corporate data base only exists for certain -- on the corporate data base for a certain number of years. I don't know what years you're asking for. I have no idea the time and effort that would be involved in obtaining this information.

I mean, I will check on the availability, what's available --

COMMISSIONER LeBLANC: Why don't you --

MS. DUCHEK: And what the effort would be in obtaining that information, and I can get back to you with that.

CHAIRMAN GLEIMAN: And you can check at the same time about how long that information is retained.

COMMISSIONER LeBLANC: Retained.

MS. DUCHEK: Yes, I will.

COMMISSIONER LeBLANC: Okay. Thank you.

CHAIRMAN GLEIMAN: Appreciate that.

COMMISSIONER LeBLANC: Dr. Bradley, just a few more questions. At pages 14 and 15 of your testimony -- I'll give you a moment to get there. Are you there yet?

THE WITNESS: I have it, sir.

COMMISSIONER LeBLANC: Good. You state that an autonomous time trend will capture changes in processing technology because such changes occur smoothly over time. Does the effect of technological change on mail processing

also occur smoothly across facilities over time?

THE WITNESS: I was really thinking here about what happens in one facility's technology changes. I'm not really that familiar with the patterns of deployment in terms of the technologies as it goes to facilities across time.

COMMISSIONER LeBLANC: So let's maybe look at it another way. If technological change occurs unevenly across facilities over time, would this violate then the assumption that measurement errors in the relationship of TPH to hours are independent from one period to another?

THE WITNESS: Would you say it one more time, please?

COMMISSIONER LeBLANC: Sure. I had to write it down too.

If technological change occurs unevenly across facilities over time --

THE WITNESS: Um-hum.

COMMISSIONER LeBLANC: Would this violate the assumption that measurement errors in the relationship of TPH to hours are independent from one period to another?

THE WITNESS: No, sir, I don't think it would violate that assumption.

COMMISSIONER LeBLANC: Okay. I hope this is my last question, but we'll see.

If technological change over time occurs unevenly across facilities, then would it imply that a cross-section model of the relationship of TPH to hours would be more appropriate?

THE WITNESS: In fact just the opposite. I think it would suggest that a cross-sectional analysis would be misleading because you wouldn't be able to capture the effect of different technologies through time.

You know, one advantage of having a panel is as technology changes, that's in the data, but in a cross-section all you would have is a snapshot of all different facilities at different levels of technology, and the fact that there are different levels of technology precludes the ability to estimate a good volume ~~variable.~~ variability.

COMMISSIONER LeBLANC: Thank you, Dr. Bradley.

Thank you, Mr. Chairman.

CHAIRMAN GLEIMAN: Does any participant have follow as a consequence of questions from the bench?

If not, that brings us to redirect. Counsel, would you like some time with your witness?

MS. DUCHEK: Yes, if we could have 5 or 10 minutes.

CHAIRMAN GLEIMAN: You've got 10.

MS. DUCHEK: Thank you.

[Recess.]

CHAIRMAN GLEIMAN: Ms. Duchek.

MS. DUCHEK: The Postal Service has no redirect, Mr. Chairman.

CHAIRMAN GLEIMAN: Well, in that case, we can all go to lunch.

Dr. Bradley, I want to thank you once again for your contributions to our record and your appearance here today, and if there is nothing further that you would like to add at this point in time, you are excused.

THE WITNESS: Thank you.

CHAIRMAN GLEIMAN: And we will indeed go to lunch.

Let's come back at a quarter to 2:00, and we will pick up there with our next witness, Witness Moden.

[Whereupon, at 12:23 p.m., the hearing was recessed, to reconvene at 1:45 p.m., this same day.]

AFTERNOON SESSION

[1:45 p.m.]

CHAIRMAN GLEIMAN: Mr. Reiter, do you want to call your witness?

MR. REITER: Yes, Mr. Chairman. Our next witness is Ralph Moden.

Whereupon,

RALPH J. MODEN,

a witness, was called for examination by counsel for the United States Postal Service and, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. REITER:

Q Mr. Moden, I am handing you two copies of a document entitled "Direct Testimony of Ralph J. Moden on behalf of United States Postal Service," USPS-T-4.

Was this testimony prepared by you or under your direction?

A It was.

Q And if you were to testify here orally today, would this be your testimony?

A It would.

MR. REITER: Mr. Chairman, I will hand these two copies to the Reporter and ask that they be entered into evidence as the testimony of Ralph Moden.

CHAIRMAN GLEIMAN: Are there any objections?

[No response.]

CHAIRMAN GLEIMAN: Hearing none, Mr. Moden's testimony and exhibits are received into evidence and I direct that they be accepted into evidence. As is our practice, they will not be transcribed into the record.

[Direct Testimony and Exhibits of Ralph J. Moden, Exhibit No. USPS-T-4 was marked for identification and received into evidence.]

CHAIRMAN GLEIMAN: Mr. Moden, have you had an opportunity to review the rather voluminous packet of designated written cross examination that was made available earlier today?

THE WITNESS: I have.

CHAIRMAN GLEIMAN: If these questions were asked of you today, would your answers be the same as those you previously provided in writing?

THE WITNESS: Yes, although I think there is one that was submitted --

CHAIRMAN GLEIMAN: Could you pull the mike a little bit closer to you.

THE WITNESS: There was -- was it OCA or DMA?

CHAIRMAN GLEIMAN: And I have that. I can

describe it.

THE WITNESS: Oh, I'm sorry.

CHAIRMAN GLEIMAN: Mr. Reiter --

MR. REITER: Did you get the answer you needed?

CHAIRMAN GLEIMAN: The answer is that the answers would be the same.

MR. REITER: I believe that is correct.

I will describe what we did to the packet this morning, however.

In DFC, that's Carlson USPS-T-4-16, page 1 to the attachment was missing. We have added that to both copies.

There were duplicates of several. I don't know if you need to know which ones they were, but we made sure there was just one copy of each.

CHAIRMAN GLEIMAN: That will be fine.

MR. REITER: There were a few that were in the packet but were not on the list and we have removed those.

Those were NAA-USPS-T-4-20 and 24 through 27; and the one that Mr. Moden was referring to is DMA-USPS-T-4-85. We filed a revised version of that on October 15th and we replaced that with the original version that was in the packet.

CHAIRMAN GLEIMAN: Thank you, Mr. Reiter, for your assistance.

If you would provide the two copies of the

corrected designated written cross examination to the Reporter.

MR. REITER: I will do that.

CHAIRMAN GLEIMAN: I'll direct that they be accepted into evidence and transcribed into the record at this point.

[Designation of Written Cross-Examination of Ralph J. Moden was received into evidence and transcribed into the record.]

BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, DC 20268-0001

Postal Rate and Fee Changes, 1997 Docket No. R97-1

DESIGNATION OF WRITTEN CROSS-EXAMINATION
OF UNITED STATES POSTAL SERVICE
WITNESS RALPH J. MODEN
(USPS-4)

The parties listed below have designated answers to interrogatories directed to witness Moden as written cross-examination.

Party	Answer To Interrogatories
Advo, Inc.	ADVO\USPS: Interrogatories T41-7-8 (redirected from witness Takis). ABA, et al.\USPS: Interrogatories T25-28 (redirected from witness Hatfield). DMA\USPS: Interrogatories T4-11-12c-h, 18, 21, 30-31, 42, 46, 54. DMA\USPS: Interrogatories T14-1 (redirected from witness Bradley) NDMA\USPS: Interrogatories T28-20(a) redirected from witness Crum) NAA\USPS: Interrogatories T4-4-5, 12, 15, 18, 19, and 21.
American Business Press	DMA\USPS: Interrogatories T4-89. MPA\USPS: Interrogatories T4-5, 10. MH\USPS: Interrogatories T4-3.
Direct Marketing Association	DMA\USPS: Interrogatories T4-1-4, 7-19, 21, 22 23(a)(c), 24(a-b & f-h), 25-26, 28(b-f), 30(a-d & f-I, 31, 34, 39-42, 44, 46, 48, 51-52, 54-56, 60-62, 85(a)(c)(e), & (f), 86-87, 89-94 and 96. DMA\USPS: Interrogatories T14-1, 7 and 23c. ADVO\USPS: Interrogatory T41-7, redirected from witness Takis. ABA, et al.\USPS: Interrogatories T25-28, redirected from witness Hatfield. ABP\USPS: Interrogatories T4-8-9 and 14. DFC\USPS: Interrogatories T4-4-5 and 11. MPA\USPS: Interrogatories T4-3-5 and 10-13. NDMS\USPS: Interrogatories T4-4 and 13.

	NDMS\USPS:	Interrogatories T28-15-16, redirected from witness Crum
	NDMS\USPS:	Interrogatories T32-21 and 23, redirected from witness Fronk.
	NAA\USPS:	Interrogatories T4-1-5, 7, 11, 13-15, 19 and 21-22.
	OCA\USPS:	Interrogatories T4-1, 5, 7-8(a-b), 9-10(a) & (c-f), 12, 14-15 and 27.
	OCA\USPS:	Interrogatories T32-56(c), redirected from witness Fronk.
	TW\USPS:	Interrogatories T4, 3(a-c) & (e), 5, 7, 9, 11, 14, 16, and 26-31.
	UPS\USPS:	Interrogatories T4-1.
	UPS\USPS:	Interrogatories T14-44 and 58, redirected from witness Bradley.
Florida Gift Fruit Shippers Association	FGFSA\USPS:	Interrogatories T4-1-5.
	UPS\USPS:	Interrogatories T4-1.
Magazine Publishers of America	MPA\USPS:	Interrogatories T4-3-6 and 10.
	ABP\USPS:	Interrogatories T4-6, 8, 12 and 14.
Mail Order Association of America	ADVO\USPS:	Interrogatories T41-7-8, redirected from witness Takis.
	DMAUSPS:	Interrogatories T4-21.
	NDMS\USPS:	Interrogatories T28-29(a), redirected from witness Crum.
	NAA\USPS:	Interrogatories T4-9.
Nashua Photo Inc., District Photo Inc. Mystic Color Lab and Seattle Filmworks, Inc.	NDMS\USPS:	Interrogatories T28-15-16 and 20(a), redirected from witness Crum.
	NDMS\USPS:	Interrogatories T32-18, 21 and 23(a), redirected from witness Fronk.
	NDMS\USPS:	Interrogatories T4-1-8 and 10-21.
	NDMS\USPS:	Interrogatories T33-31, redirected from witness Sharkey.
	APMU\USPS:	Interrogatories T33-9 and 13, redirected from witness Sharkey.
National Association of Presort Mailers	NAPM\USPS:	Interrogatories T4-2.
	DMA\USPS:	Interrogatories T4-1.
	MPA\USPS:	Interrogatories T4-5.
National Newspaper Association	NNA\USPS:	Interrogatories T4-1, 3 and 5-6
	NNA\USPS:	Interrogatories T1-1, redirected from witness Pafford.
	NAA\USPS:	Interrogatories T4-1.
Newspaper Association of America	NAA\USPS:	Interrogatories T4-1-17.
	ADVO\USPS:	Interrogatories T41-7-8, redirected from witness Takis.

	DMA\USPS:	Interrogatories T4-3, 6, 9, 11-12, 14, 18, 25, 30, 40-42, 48 and 54.
	DMA\USPS:	Interrogatories T14-1 and 23(c), redirected from witness Michael D. Bradley.
	FGFSA\USPS:	Interrogatory T4-5.
	MPA\USPS:	Interrogatory T4-13.
—	MPA\USPS:	Interrogatories T13-12-13, redirected from witness Bradley.
	NDMS\USPS:	Interrogatory T28-20(a), redirected from witness Crum.
	TW\USPS:	Interrogatories T4-7, 11 and 14-15.
	UPS\USPS:	Interrogatory T14-58, redirected from witness Bradley.
Office of the Consumer Advocate	OCA\USPS	Interrogatories T4-1-8(a-b), 9-10(a), (c, part), 11-13(a), 14-16(a-b &d),17-18, 20(a), 24-28, T32-38-40, 51, 56(c) redirected from witness Fronk.
	ADVO\USPS:	Interrogatories T41-7-8, redirected from witness Takis.
	ABP\USPS:	Interrogatories T4-1-2, 4, 6-10, 12-20, T26-6, 9(a)(c), 10(a-b) and 13 redirected from witness Seckar.
	APMU\USPS:	Interrogatories T33-9-13, redirected from witness Sharkey.
	DMA\USPS:	Interrogatories T4-1-12(c-h), 13-14(a), 15-23(a), 23(c)-24(b), 24(f)-26, 28(b-f), 30(a-d), (f-I), 31-32, 34, 36, 38-46, 48-49, 51-56, 60-62, 85(a), (c), (e), (f), 86-96, T14-1, 7(a-c), 23(c), 51 and 60 redirected from witness Bradley.
	DFC\USPS:	Interrogatories T4-1-17.
	FGFSA\USPS:	Interrogatories T4-1-5.
	MPA\USPS:	Interrogatories T4-3-13.
—	MMA\USPS:	Interrogatories T25-6, redirected from witness Hatfield, T36-37, redirected from witness Moeller.
	MH\USPS:	Interrogatories T4-1-4.
	NDMS\USPS:	Interrogatories T4-1-8, 10-21, T28-15-16, 20(a) redirected from witness Crum, T32-18, 21and 23, redirected from witness Fronk, T33-31, redirected from witness Sharkey.
	NAPM\USPS:	Interrogatories T4-1-2.
	NNA\USPS:	Interrogatories T4-1-6, T1-2, redirected from witness Pafford.
	TW\USPS:	Interrogatories T4-1-3(c), 3(e)-10-17, 21, 25-31, T26-3(f), redirected from witness Seckar.

	UPS\USPS:	Interrogatories T4-1-9, T14-44(a) and 58 redirected from witness Bradley.
	POIR:	POIR No. 3, Questions 29-30.
Time Warner Inc.	TW\USPS:	Interrogatories -T4-1-17, 21-22(f), 25-27 and 29-31.
	TW\USPS:	Interrogatories T26-3(f), redirected from witness Seckar.
	ABP\USPS:	Interrogatories T26-9(a), (c), 10(a-b), 13,redirected from witness Seckar.
	DMA\USPS:	Interrogatories T4-4, 6, 8-11, 28(b), 34, 38, 55-56, 61-62, 89-91 and 93-95.
	DMA\USPS:	Interrogatories T14-1, 7(a-c), 23(c), and 60, redirected from witness Bradley.
	MPA\USPS:	Interrogatories T4-8 and 13.
	NDMA\USPS:	Interrogatories T4-7, 14 and 19.
	NAA\USPS:	Interrogatories T4-9-10 and 13-16.
	NNA\USPS:	Interrogatories T1-2, redirected from witness Pafford.
	OCA\USPS:	Interrogatories T4-1-4, 7-8(a-b)., 9, 14, 16(a-b & d), 17 and 24.
	POIR:	POIR No. 3, item 30.
United Parcel Service	DMA\USPS:	Interrogatories T4-62.
	OCA\USPS:	Interrogatories T4-9 and 10(a and c-part).

Respectfully submitted,

Cyril J. Pittack
Acting Secretary

ADVO/USPS-T41-7. At page 59 of his testimony (USPS-T-14), witness Bradley states that "[s]imilarly, the variability for the canceling activity reflects its pivotal role and [sic] the primary gateway activity for each night's sorting." At page 57, Bradley states that "[m]uch mail processing must be done within strict time limits set by dispatch times."

(a) Do you agree that the canceling activity plays a "pivotal role" as "the primary gateway activity for each night's sorting"? If not, please explain why you disagree with witness Bradley and what relative role you believe the canceling operation plays in preparing for each night's sorting activities.

(b) Is the staffing of personnel in the facer/canceler operation affected in any way by the fact that nearly all of the volume processed in this operation is First Class Mail? Explain your answer.

(c) Do First Class delivery standards, or efforts by management to achieve high delivery performance or meet performance targets for First Class Mail, play any part in staffing decisions for this operation? Explain your answer.

(d) Is the staffing of personnel in the facer/canceler operation affected in any way by the need to process First Class mail within strict time limits to meet critical dispatch times? Explain your answer.

Response:

a. Yes.

b. Yes. First Class mail is not deferrable and must meet tight service requirements. For example, mail destined for local delivery must be completely sorted overnight and dispatched to local delivery units for delivery the next day. As I discussed on page 22 of my testimony, "the first evidence of the night's volumes and arrival times are seen in these operations [cancellation / mail preparation] and they are critical to the success of the night's processing." Thus it is difficult to forecast mail arrivals for this

operation, but critical to have staff processing that mail as soon as it is available.

As a result , the staffing plan for the operation may accept a greater risk that workers will briefly run out of mail to process.

c. See part b.

d. See part b.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF ADVO REDIRECTED FROM WITNESS TAKIS

ADVO/USPS-T41-8. Witness Bradley also cites volume peaking patterns as a factor that may affect volume variability (see, e.g., his statement on volume peaking characteristics in platform activities, USPS-T-14 at 62). With respect to the facer/canceler operation:

(a) Do volumes entering the facer/canceler operation exhibit any peaking characteristics? Please generally describe the peaking patterns by tour and, within tours, by time of day.

(b) Does the fact that originating First Class Mail comprises nearly all of the volume entering the facer/canceler operation have any effect on peaking patterns in this operation? In your response, please generally describe the peaking patterns of originating First Class Mail, and describe the extent to which First Class volumes cause or contribute to peaking patterns in this operation.

Response:

a. Yes. Facer/canceller processing peaks early in tour 3, typically between 5 and 7 p.m. depending on local collection schedules and transportation times.

b. Yes. Current peaking patterns were described in a. Since virtually all mail that has to be faced and canceled is First Class, that class is the key contributor to the peaking pattern described in a.

RESPONSE OF POSTAL SERVICE WITNESS MODEN TO INTERROGATORIES OF ABA, EEI, AND NAPM REDIRECTED FROM WITNESS HATFIELD

ABA&EEI&NAPM/USPS-T-25-28. By presort level, see interrogatory 27, above,:

(a) identify the first mail processing operation that First-Class letter mail could be processed together with mail from another class.

(b) identify each mail processing operation in which First-Class letter mail will be processed together with mail from another class. In responding to each subpart, please state all assumptions, if any, and identify by class, subclass, and rate category the mail commingled.

RESPONSE:

(a) Generally, First Class letter mail is segregated from all other classes of letter mail until it reaches the delivery point sequencing operations. Once First Class mail reaches the delivery point sequencing operations, it will be processed together with mail of all other classes in the interest of providing as much delivery point sequenced mail to the carriers as possible. However, your question asks what is the first operation where First Class letter mail "could" be processed together with mail from another class. With that in mind, the first operation "could" be the facer/canceller operation. For instance, single piece Standard (A) dropped in a collection box with First Class mail would be collected by a carrier, dispatched to the plant, and processed through the facer/canceller operation.

(b) See response to 28 (a). Any other instances of First Class letter mail being processed with letter volumes of other classes are incidental. For instance, it is possible that machine rejects from an earlier tour could inadvertently be intermingled with other mail on a later tour.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-1
On p. 1 of your testimony, you state that your office, among other things, evaluates "the impact of programs and plans outside of Operations."

Please clarify what you mean by evaluation of "programs and plans outside of Operations" when you are the Manager, Operational Requirements within the office of Operations Support. [emphasis added]

Response:

In my current position, I am responsible for identifying and evaluating the potential operational impacts of programs and plans developed by other functional areas within the Postal Service and to pass that information along to the field operating units to help prepare for those impacts.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-2

Please produce for inspection a copy of the "Corporate Automation Plan", referred to in paragraph one, p. 1 of your testimony.

Response:

The Corporate Automation Plan is being filed as Library Reference H-246.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-4

[a] Please confirm (1) that prior to January 1, 1997, periodical mailers that qualified for bar-code (ZIP +4) discounts were allowed to mail both automation-qualified and non-automation pieces together in packages otherwise properly prepared, as long as the number of pieces that did not qualify for the bar-code discount did not exceed 15% of the pieces of the total mailing and (2) that the pieces in such mailings that did have ZIP +4 Codes qualified for bar-code discounts in effect prior to January 1, 1997.

[b] Please confirm that the Classification Reform Implementation Standards published as a "Final Rule" in the March 12, 1995 Federal Register mandated that, effective July 1, 1996, all pieces that a periodical publisher claimed for automation (bar-code discount) rates must show 100% valid delivery point or ZIP +4 bar-codes, or all of the pieces in the mailing would be denied automation discounts.

[c] Please confirm that USPS received comments from publishers about the rule described in part [b] above that this 100% standard could eliminate large volumes of more finely presorted periodical pieces, that there could be a decrease in the volume of bar-coded periodical pieces and that USPS cannot supply correct bar-codes for all addresses to which periodicals are mailed.

[d] Please confirm that the implementation date of July 1, 1996 for 100% ZIP +4 addressing for a mailing of periodicals to qualify for bar-code discounts was deferred by USPS to January 1, 1997, while between July 1 and December 31, 1996 up to 10% of the pieces in an automation periodicals mailing of flat-size pieces could bear a five-digit ZIP Code, such five-digit pieces being allowed to be combined and presorted with the balance of the mailing, paying nonautomation periodical rates.

[e] Please explain the reason USPS delayed the effective date of the 100% ZIP Plus 4 rule for periodical automation pieces from July 1, 1996 to January 1, 1997.

[f] Did you, other USPS managers that report to you, and/or senior USPS management continue to receive information, by meeting, correspondence and phone calls from publishers and their associations prior to and after the January 1, 1997 effective date for 100% ZIP Plus 4 bar-coding, that the standard was impossible to comply with, would adversely affect service, degrade levels of presort, and impede efforts to bar-code as many periodicals as possible. If your answer is affirmative, describe what actions USPS has since taken, including actions you have taken, to correct these difficulties.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

[g] Do problems raised by publishers about their ability to attain 100% ZIP Plus 4 codes continue at present?

[h] Will the 100% ZIP Plus 4 mandate for periodical mailings will be achieved in the test year? Please explain affirmative or negative answer.

[i] If your answer to part [h] is negative, will five-digit pieces segregated from properly bar-coded pieces in the same mailing be manually distributed if the five-digit pieces are machinable?

Response:

a. Not confirmed. This response is limited to the requirements for flats barcoded or automation rates since your question referred to barcode ZIP+4 discounts and letter mail requires delivery point barcodes.

   From July 1, 1996 through December 31, 1996, 90% of the pieces in an automation rate Regular Periodicals mailing were required to bear a ZIP+4 or delivery point barcode. From October 6, 1996 through December 31, 1996, at least 90% of the pieces in an Preferred Periodicals automation rate mailing were required to bear a ZIP+4 or delivery point barcode.

b. Not confirmed. The implementation rules in the March 12, 1995, Federal Register stated that all flat-size Regular Periodicals automation rate mailings must consist of 100% ZIP+4 or delivery point barcoded pieces, that had been matched to a current Postal Service ZIP+4 code database using CASS-certified address matching software within 6 months prior to the date of the mailing. Although not stated in the Federal Register final rule, normal acceptance procedures were in effect at the time the 100% ZIP+4 or delivery

point barcoded pieces rule was placed in effect. These acceptance procedures allow some tolerance for all types of errors, including absence of a ZIP+4 or delivery point barcode in a flat-size automation rate mailing, before assessing postage at higher rates.

c. Confirmed.

d. Confirmed for Regular Periodicals. See my response to (a) above for Preferred Periodicals.

e. The Postal Service was aware that Periodicals mailers did not have the same period of advance notice of the 100% barcoding rule as First-Class and Standard mailers, and desired to provide Periodicals mailers a comparable period of time in which to prepare to meet that requirement.

f. Yes. The Postal Service does not agree that the requirement is impossible to comply with. The 100% ZIP+4 or delivery point barcoding standard for flat-size mailings (100% delivery point barcoded for letter-size mailings) requires that mailers separate pieces that bear qualifying barcodes from pieces that do not, and prepare these two groups of mail as two separate mailings. Accordingly, pieces for which mailers are unable to obtain a ZIP+4 or delivery point barcode are not excluded from the mail, but are sorted separately from pieces qualifying for automation rates. In fact mailers have been complying with this requirement since January 1 of this year. Also, since implementation of the 100% barcoding requirement, the number of barcoded rate pieces has increased. The Postal Service agrees that separate

automation and nonautomation mailstreams may cause a loss of presort level, and therefore some loss of discounts for mailers. However, it believes that the added efficiencies of a 100% ZIP+4 or delivery point barcoded mailstream for flats, and a 100% delivery point barcoded mailstream for letters offsets any loss of presort density.

In terms of service issues, the Postal Service does not know with any certainty the exact causes of the service problems some mailers are experiencing. The July 1, 1996, Classification Reform presort requirements were vastly different from previous presort requirements. Some of the changes follow. There was a change in distribution networks from state distribution centers (SDCs) to area distribution centers (ADCs). Optional city package and sack preparation levels were eliminated as were SCF packages and sacks. Except for automation letters, the minimum number of pieces in a package was 6 pieces, and each sack was required to contain at least one 6-piece package. Automation preparation for letters required a minimum of 150 pieces to a required tray sortation level. Pallet sortation requirements were also revised.

In response to service issues, the Postal Service, effective October 1, 1996, revised packaging and sacking requirements for Periodicals non-letter size pieces to allow preparation of packages of fewer than 6 addressed pieces when packaged to the carrier route, 5-digit, or 3-digit level, and properly placed in carrier route, 5-digit carrier route, 5-digit, or 3-digit sacks. The

Postal Service also allows pure barcoded and pure non-barcoded packages of flats to be placed in the same sack. The Postal Service also plans to propose reinstituting preparation of an SCF sack for nonletter-size pieces (but not an SCF package). The Postal Service is also investigating further changes to palletization rules. In addition, a Mailers Technical Advisory Committee (MTAC) work group has been formed to study service issues for Periodical publications. This work group consists of both Postal Service personnel and mailers. In addition, an Address Coding Enhancement Work Group has been established under MTAC and has had an initial meeting. This group is tasked with identifying barriers to achieving 100% delivery point barcoding, and developing solutions to those barriers.

g. Yes, addressing issues remain and are being jointly worked on by industry and USPS as described in (f) above.

h. As described in my answer to part (f) above, the mandate applies to the physical pieces in a barcoded mailing. That requirement is already being met and will continue to be met in the test year. Efforts towards achieving 100% ZIP+4 coding of all address lists are ongoing and I do not expect that all addresses will be 100% ZIP+4 coded in the test year.

i. That will depend on the destination of those pieces, i.e., the availability of FSMs and whether or not they are destined to zones with fewer than 10 routes, etc. Flats destined to zones with fewer than 10 routes are planned to be manually sorted to the carrier route level.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-6

In describing the MPFSM 1000 machine on p. 10 your testimony, you state that "nearly all" flats non-machinable on the FSM 881 can be processed on the FSM 1000.

[a] Please describe as completely as possible kinds of flats (e.g., pieces over one pound, tabloids, etc.) that currently are "non-machinable."

[b] What is the total volume of non-machinable periodical pieces that the FSM 881 cannot process? How many periodicals or periodical pieces currently are non-machinable because they exceed the maximum length limit of 15" prescribed by DMM SC820.3b?

Response:

a. Flats that do not meet the standards listed in sections C820.2.0 through C820.7.0 of DMM 52 are non-machinable.

b. The total number of non-machinable Periodical flats that cannot be processed by the FSM 881 is not known. Similarly, the number of Periodicals that are currently non-machinable because they exceed the maximum length limit of 15" is not known.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-7

Is there an inconsistency between the number you cite of 58.8% (through A/P 9, FY 1997) of all non-carrier route flats that are bar-coded (p. 10, line 12) and the figure of 28% that you cite on p. 10, line 29? Please clarify the meaning of these different percentages.

Response:

No. The two numbers are related to two different indicators. The 58.8% number reflects the total number of non-carrier route flats that are barcoded by mailers. The 28% number reflects the percentage of total incoming secondary processing that was performed with barcode readers on the flats sorter. As I mentioned at page 13, lines 26 through 30 of my testimony, only the zones with ten or more routes receive incoming secondary processing on the flat sorter.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-8

[a] At page 10, you state that the percentage of flat mail that is barcoded has increased since "Classification Reform." Is it your testimony that the classification changes to which you refer caused a substantial part of that growth? Please explain.

[b] To what classes and subclasses does your statement about the increased percentage of barcoded flat mail apply?

Response:

a. Yes. Trends reflect that much of the growth in barcoded flats coincided with the implementation of Classification Reform.

b. All classes.

ABP/USPS-T-4-9

At page 10, lines 10-12, you provide the percentage by which barcoded flat mail has increased. Please provide the equivalent percentages by class and subclass.

Response:

As a clarification, at page 10, lines 10-12, I provide the percentage of all non-carrier route flats that were barcoded for the Fiscal Years of 1995 through AP 9, 1997. These percentages do not represent the percentage growth for each time period. The percentages of growth in barcoded flat mail through AP 9, Fiscal Year 1997, compared to the same period in Fiscal Year 1996, were 250% in First Class, 21.6% in Periodicals, and 50.8% in Standard.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-10

At page 10 you describe the deployment of FSM 1000s, and at page 13 you discuss the possible deployment of barcode readers for those sorters. Please update this testimony and continue to do so throughout the case.

Response:

There have been no new developments in regards to the deployment of barcode readers on the FSM 1000s since my original testimony was filed.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-12

[a] In reference to your discussion (p. 13, lines 20-24) about bar-code readers added to FSM 1000s, do you disagree with public statements made by USPS officials that deployment of bar-code readers will begin in FY 1998, as contrasted with your use of the phrase "could begin in Fiscal Year 1998"?

[b] Why has management not yet asked the Governors to approve FY 1998 deployment of bar-code readers for FSM 1000 [DMA/USPS-T-4-8 (F)]?

Response:

a. Without a specific reference to the public statements to which you refer, I see no reason to conclude that there is any disagreement. I assume that the unnamed officials you cite are describing postal management's plans. The language in my testimony was intended to recognize that deployment of the barcode readers cannot occur until formally approved by the Board of Governors, which has not yet occurred.

b. Field testing of a barcode reader on the FSM 1000 must be complete before a formal recommendation can be scheduled to be brought to the Board of Governors.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-13

Please provide now, or when available, copies of all contracts for the manufacture and deployment of bar-code readers designed for attachment to FSM 1000 machines.

Response:

No contracts have been let for manufacture and deployment of barcode readers

for FSM 1000 machines.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-14

How many of the 812 FSM 881 flat sorters, whether or not retofitted with OCR capability for non-bar-coded pieces (USPS-T-4, p. 13, lines 7-9), now have barcode readers to recognize mailer-applied bar-codes? If not all FSM 881 flat sorters have BCR capability, explain why some do and some do not.

Response:

All of the FSM 881s have barcode readers.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T-4-15

Confirm that your response to DMA/USPS-T-4-1 (c) that Witness Tolley, Exh. USPS-6A, projects the distribution of barcoded letters and flats for the FY 1997-1999 period is not completely accurate, because Witness Tolley does not project volumes of automated periodicals in the Exhibit.

Response:

Confirmed. This is also applicable to DMA/USPS-T4-1(b).

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T4- 16

USPS has filed an objection to ABP/USPS-T-4-3, which requests identification of all "Operations Models" referred to by Witness Moden in the introduction to his testimony. The USPS objection is based primarily on the reference to the requested models in the witness' biographical statement, and not in his substantive testimony. ABP will re-phrase the interrogatory, and requests a response to the re-phrased question as follows:

[a] Are any of the Operations Models referred to by Witness Moden in the introduction to his direct testimony the subject of his substantive testimony?

[b] If one or more models are discussed in T-4, please identify these models and the pages in the testimony where they appear.

Response:

a. No.

b. Not applicable.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T4-17

[a] In light of the failure of Witness Moden to confirm the accuracy of the summary of USPS automation regulations as originally stated in ABP/USPS-T4-4(a), what was the minimum percentage of pieces in an automation mailing of flat shaped periodicals required to bear accurate nine-digit zip codes *prior* to July 1, 1996?

[b] Identify the effective date of these pre- July 1, 1996 regulations.

Response:

a. The minimum percentage of pieces in an automation mailing of flat shaped periodicals required to bear an accurate nine-digit ZIP code *prior* to July 1, 1996 was 85%.

b. From September 20, 1992 through March 31, 1993, the basic requirement was that at least 85% of the pieces in a ZIP+4 barcoded flats mailing had to be ZIP+4 or delivery point barcoded. On April 1, 1993 through September 30, 1993, a temporary reduction in the basic requirement allowing mailings to contain a minimum of 80% ZIP+4 or delivery point barcoded pieces was placed into effect. From October 1, 1993 until July 1, 1996, the requirement for at least 85% ZIP+4 or delivery point barcoded pieces was in effect.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF AMERICAN BUSINESS PRESS

ABP/USPS-T4-18

[a] Please produce any circulars, directives, regulations or written USPS policies that describe the "normal acceptance procedures" to which you refer in your response to ABP/USPS-T4-4[b].

[b] Also as a follow-up question to your response to ABP/USPS-T4-4[b] referred to in [a], does USPS currently "allow some tolerance for all types of errors, including *absence of a zip plus 4 or delivery unit barcode in a flat-size automation mailing, before* assessing postage at higher rates"?

Response:

a. I am not aware of any circulars, directives, regulations, or written USPS policies that describe the "normal acceptance procedures" to which I referred to in my response to ABP/USPS-T4-4(b). However, I am told that acceptance units complete a Presort Verification Record (PS Form 2866) for each mailing that is verified. This form is used to tally the various types of errors that may be found in a presort mailing such as improper labeling or absence of a ZIP+4 or delivery point barcode in a flat size automation mailing. The Postal Service desires that all presort mailings be 100% accurate, but also recognizes that there is a need for some margin of error. Accordingly, all of the errors that occur within a presort mailing are documented and tallied on the PS 2866. After tallying all of the errors in a presort mailing, the acceptance employee checks to see if the overall error percentage is within a 5 percent tolerance and processes the mailing in accordance with the instructions on the form.

b. Yes. A 5 percent tolerance is allowed today as part of the presort verification process. Absence of a zip plus 4 or delivery unit barcode in a flat-size automation mailing is recorded as a miscellaneous error and is included in the 5 percent

tolerance.

ABP/USPS-T4-19

[a] In reference to your original response to ABP/USPS-T4-12[b], has the field testing of barcode readers on the FSM 1000 begun?

[b] If your response to [a] is affirmative, when did the testing begin, and where are the tests being conducted?

[c] Please provide notice when the "formal recommendation" to the Governors to purchase and deploy bar code readers for the FSM 1000, to which you refer to in ABP/USPS-T4-12[b], occurs.

Response:

a. Yes.

b. Prototype testing started in Syracuse, New York in June of this year. Additional testing, using production software, will be conducted later this year and the site(s) have yet to be determined.

c. Field testing must be completed before formal recommendation can be made to the Board of Governors. As mentioned above in 19(b), additional testing, using production software, will be conducted later this year. We will provide notice when a formal recommendation is made to the Board of Governors.

ABP/USPS-T4- 20

As a follow-up to your response to ABP/USPS-T26-6(b), redirected from witness Seckar, do you agree that the deployment of the FSM 1000 deployed with a barcode reader could reduce the makeup differences between flats that are now automated and flats that are now not automated but would be automated and machinable because of deployment of the FSM 1000? Please explain an affirmative or a negative answer.

Response:

It is difficult to say whether equipping the FSM 1000 with a barcode reader could reduce the makeup differences between flats that are now automated and flats that are now not automated. As I mentioned at page 13, lines 1 through 4, of my testimony, we will be looking at the current makeup differences between barcoded and non-barcoded mail. While I cannot anticipate what changes may result, it might be that the preparation requirements for automated and non-automated flats are made more similar. However, assuming that those preparation changes could happen in advance of any future deployment of a barcode reader on the FSM 1000, then the presence or absence of a barcode reader on the FSM 1000 may have minimal impact on makeup differences.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF AMERICAN BUSINESS PRESS
REDIRECTED FROM WITNESS SECKAR

ABP/USPS-T-26-6. On p. 13, lines 4 and 19-21, you observe that automated and non-automated flats have different mail makeup, density, and eligibility requirements.

a. Could the difference be explained in part by the greater incentive, for example, for periodicals that currently are non-automated and sacked to consolidate 3-digit and 5-digit packages in 3-digit and 5-digit sacks, as compared with packages of automation-compatible periodicals, as shown in Table A-2, Ex. USPS-T-26J p. 4.

b. Will the increased ability to sort flats mechanically that are now nonmachinable, by deployment of the FSM 1000, reduce the makeup differences between flats that are now automated and those that are not? Please explain your response.

RESPONSE:

a. Perhaps, see pages 11 through 13 of my testimony.

b. No. As you mentioned, the make-up differences are between automated flats and non-automated flats, so the difference is a function of the presence or absence of a barcode. As mentioned at page 10, lines 23 through 24, the FSM 1000s are not equipped with barcode readers. Accordingly, the deployment of the FSM 1000 will not reduce the makeup differences between flats that are now automated and those that are not.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF AMERICAN BUSINESS PRESS
REDIRECTED FROM WITNESS SECKAR

ABP/USPS-T-26-9. On p. 16 of your testimony, lines 15-17, you state that for "all basic rate flats mail," piece distribution included in the models includes outgoing primary and secondary operations, the ADC, the SCF, the incoming primary and secondary operations.

a. Describe in detail the operations that are performed at the ADC.

b. Does the model assume that incoming primary and/or secondary operations are not done at a SCF?

c. Do SCF operations include, in actual practice, incoming and secondary functions that otherwise would be performed at a five-digit delivery station or branch? If your answer is affirmative, please supply whatever statistics are available to describe the percentage of flats and/or periodicals for which incoming primary and secondary distribution is done at sectional facilities centers.

d. If the basic flats mail is dropshipped to an ADC or to a SCF, how would the model change?

RESPONSE:

a. An Area Distribution Center (ADC) is a facility that serves as a consolidation point for all classes of non-automation compatible mail letters and all flats that are destinating into a specific service area. The ADC sorts both originating and destinating mail. Originating mail is sorted to the ADCs in the ADC network and destinating mail is sorted to SCFs and/or 3-digits within its ADC service area. Also, the ADC sometimes provides an SCF sort to an adjacent service area (as opposed to just an ADC sort). Otherwise, an ADC is much like any other SCF. A more detailed overview of the operations performed at the ADC can be found in the testimony of witness Pajunas (USPS-T-2) in Docket No. MC95-1.

Although witness Pajunas primarily covered in detail the operations of the SDC, this workload is now processed in the ADCs. Accordingly, the detailed description of the SDC operations is also relevant to the ADC operations.

b. Response provided by witness Seckar.

c. Yes. The majority of our processing equipment is located at the SCFs so virtually all of the incoming primary distribution is done at those facilities. Also, where possible, this equipment is utilized for incoming secondary processing that would otherwise be performed at a five-digit delivery station or branch. However, I do not have statistics to provide you with the percentage of flats and/or Periodicals for which incoming secondary distribution is done at SCFs.

d. Response provided by witness Seckar.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF AMERICAN BUSINESS PRESS
REDIRECTED FROM WITNESS SECKAR

ABP/USPS-T-26-10. On p. 19, USPS-T-26 (lines 9-10), you refer to packages in 3-digit sacks that need to be sorted to containers for transfer to incoming primary or secondary operations, or for dispatch to delivery units.

a. If "dispatch to delivery units" occurs for packages originally enclosed in 3-digit sacks, does this mean that the incoming primary and secondary distribution could be made either at the SCF or at the delivery unit at a branch or station?

b. If the response to (a) is affirmative, explain why distribution is done at an SCF rather than at a "delivery unit" at delivery station or branch.

c. By "delivery unit," do you mean the in-office carrier piece distribution operation or all piece distributions made by clerks and by carriers at the delivery five-digit post office or station?

RESPONSE:

a. No. The 3-digit bundles in 3-digit sacks would generally be kept at the SCF for incoming primary sort, while the 5-digit bundles may be dispatched if the incoming secondary sort is to be done at the delivery unit. The level of distribution and the location where the distribution is performed are part of an SCF's local operating plan. In other words, it's predetermined what levels of sort will be performed at a particular facility. Therefore, it is possible that incoming secondary for some zones will be performed at the plant (e.g., automated flats) while other zones may be done at the delivery unit.

b. Not applicable for 3-digit bundles. As far as 5-digit bundles, see my response to 9c and 10a.

c. Response provided by witness Seckar.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF AMERICAN BUSINESS PRESS
REDIRECTED FROM WITNESS SECKAR

ABP/USPS-T-26-13.

a. In your discussion of carrier route mail distribution, how would the handling in opening unit and bundle distribution operations referred to at USPS-T-26, p. 22, lines 6-12, differ if carrier route packages were placed on ADC, SCF, 3-digit and 5-digit pallets or enclosed in sacks sorted to the foregoing presort levels?

b. After a pallet is broken up, are the packages on the pallet re-containerized by USPS at the particular facility to which the pallet was sent?

RESPONSE:

a. Below is a listing of the pallet levels you referenced and the level of distribution that would be performed as an initial handling of carrier route bundles residing on those levels.

ADC - sort to SCF, 3-digit and/or 5-digit

SCF - sort to 3-digit and/or 5-digit

3-digit - sort to 5-digit

5D - cross dock from plant to delivery unit and/or sort to Carrier Route.

The same sorts would also be performed on carrier route bundles enclosed in equivalent sacks.

b. Yes. Generally, carrier route packages on pallets are sorted to containers; however, they may sometimes be taken directly to the carrier's ledge. When containerized, some of the containers will be transported to other locations and some containers will remain at the plant.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE ASSOCIATION OF PRIORITY MAIL USERS REDIRECTED FROM WITNESS SHARKEY

APMU/USPS-T33-9.

For each quarter of PFY 1996 and PFY 1997, please provide all service performance data available for **Express Mail** from the Electronic Marketing Reporting System, and data from any other system which the Postal Service uses to ascertain service performance of Express Mail.

a. Please show the percentage of Express Mail deliveries that met the established service standards.

b. What percent of Express Mail deliveries were delivered one day late?

c. What percent of Express Mail deliveries were delivered two days late?

d. What percent of Express Mail deliveries were delivered three or more days late?

Response:

a. See attachment to DMA/USPS-T4-31(b).

b. See a. The report from EMRS does not reflect the percent of Express Mail deliveries that were delivered one day late.

c. See a. The report from EMRS does not reflect the percent of Express Mail deliveries that were delivered two days late.

d. See a. The report from EMRS does not reflect the percent of Express Mail deliveries that were delivered three or more days late.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE ASSOCIATION OF PRIORITY MAIL USERS REDIRECTED FROM WITNESS SHARKEY

APMU/USPS-T33-13.

In response to APMU/USPS-T11-14(c) in Docket No. R94-1, witness Foster expressed his understanding:

> that if a piece can be identified as being Priority Mail, either through the use of boxes, envelopes, labels, or tape bearing the Priority Mail designation, or through the piece being identified as Priority Mail by the customer, the piece is entered into the Priority Mail mailstream at the origin office and remains in that mailstream until it reaches the delivery office. My understanding is that if the piece cannot be identified as Priority Mail through one of the means described above, it is handled as heavyweight First-Class Mail. My understanding is that if there is any doubt regarding the identification of the piece as Priority Mail, the piece is to be entered into the Priority Mail mailstream.

a. Does this describe the current practice of the Postal Service?

b. Do any operations policies that are issued by Postal Service headquarters and that are currently in effect distinguish between the way "identified" and "non-identified" Priority Mail pieces are to be handled, and the level of service that is to be given to each? If so, please provide a copy of each such policy.

c. If a customer pays the correct Priority Mail postage but fails to identify the piece in any other way as Priority Mail, what level of service does the postage entitle the customer to receive?

d. What was the percentage (of total Priority Mail) of "non-identified" Priority Mail during PFY 96 and PFY 97?

Response:

a. Yes, with the additional stipulation that non-identified pieces subsequently discovered mixed with identified Priority Mail pieces in distribution operations, are to be processed along with the identified Priority Mail.

b. Yes. Guidelines regarding the handling of identified and non-identified Priority Mail are attached.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE ASSOCIATION OF PRIORITY MAIL USERS REDIRECTED FROM WITNESS SHARKEY

c. If a piece of mail bearing the correct Priority Mail postage is found during normal handling, the piece is treated as Priority Mail.

d. For FY 1996: 63% identified & 37% non identified

For FY 1997: 67% identified & 33% non identified.

UNITED STATES POSTAL SERVICE
475 L'ENFANT PLAZA SW
WASHINGTON DC 20260

MAY 10 1993

MEMORANDUM FOR AREA MANAGERS, PROCESSING & DISTRIBUTION
AREA MANAGERS, CUSTOMER SERVICES

SUBJECT: Priority Mail Identifiers

On April 7, I provided you with seven initial steps to improve Priority Mail performance. These procedures were discussed and agreed to by all of us at our April 1 meeting.

Based upon input from mailers and subsequent discussion amongst key Vice Presidents involved in this issue, the Priority Mail definition is being expanded. Effective immediately, Item EP14-F, the Priority Mail Flat rate envelope, as well as mail with Priority Mail postage and identified as Priority Mail by the customer are to be considered properly identified. In addition, non-identified mail received in bulk with Priority Mail postage, but which the customer clearly intended to be processed as Priority Mail must be treated as Priority Mail.

While it is virtually impossible to describe every situation that may arise with regard to the identification and handling of Priority Mail, any doubt should err on the side of providing the higher level of service. This is consistent with our focus on customer satisfaction.

Please alert all field personnel to this policy direction and continue to emphasize the need to improve our levels of Priority mail service. Continued emphasis on identification of individual Priority Mail pieces will continue to be critical to service improvement.

Thank you for your cooperation in enhancing Priority Mail service and customer satisfaction.

Stephen E. Miller

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-1. Please confirm that some Burroughs OCR's can read more than one line of an address and apply a Delivery Point Bar Code. If you do not confirm, please explain fully.

Response:

Confirmed.

DFC/USPS-T4-2. Please provide the manufacturer name(s) of all Single-Line OCR's that are still in use.

Response:

Burroughs

Pitney Bowes

DFC/USPS-T4-3. After the Low-Cost MLOCR deployment project is finished, will some small facilities still be using a Burroughs OCR?

Response:

Possibly. As I mentioned on page 6, line 8 of my testimony, the Low-Cost OCR deployment is targeted to sites as a replacement for SLOCRs. It is possible that the SLOCR might be moved to a smaller facility, where it could be used for limited applications.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-4. Please provide the percentage of all mail bearing delivery-point bar codes (or 9-digit bar codes, if a DPBC is unnecessary for a particular address) that actually received Delivery Point Sequencing.

Response:

I am unable to provide the percentage of all mail bearing delivery point bar codes that actually received DPS processing. However, I can tell you that 32% of all delivery point barcodes received DPS processing in the plants. This percentage does not include DPS volumes processed by CSBCS sites, so the overall percentage would be higher when CSBCS processing is considered.

DFC/USPS-T4-5. Please refer to your testimony at page 9, lines 21-26. Please provide the Postal Service's objective for using DPS or sector-segment sortation to sort mail destined to five-digit ZIP Codes that are unique to a post-office-box section.

Response:

The objective of the DPS program is to reduce the carrier's in-office time. Accordingly, we utilize the majority of our processing capacity to provide DPS to delivery zones with ten or more routes. Providing DPS or sector-segment sortation to 5-digit zones, that are unique to a post office box section, does not yield as great a cost savings as a 5-digit zone that contains carrier routes - specifically zones with ten or more routes. However, local sites do have the discretion to provide DPS or sector-segment to 5-digit zones, that are unique to post office box sections, when the processing capacity is available and it is deemed cost effective.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-6. Please refer to your response to DFC/USPS-T4-1 and -2. Does the Postal Service use the term "Single-Line OCR" ("SLOCR") to refer to Burroughs OCR's that can read more than one line of an address and apply a Delivery Point Bar Code? If yes, please explain why.

Response:

Yes. While we acknowledge that the Burroughs OCRs can read more than one line, these machines are severely limited in contrast to our MLOCRs. For instance, the directory lookup of the SLOCRs is limited and generally contains the addresses for just a few 3-digit service areas. In contrast, the MLOCR has access to the entire national database of addresses. So while, it is true that the SLOCRs can read more than one line of the address, the aforementioned limitations prevent them from being able to process all of the lines of addresses that may not be contained in the limited directory.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-7. Please confirm that a Pitney Bowes OCR cannot read more than one line of an address and apply a Delivery Point Bar Code.

Response:

Confirmed.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-8. Please provide a list, by machine type and facility name, of all facilities that still use at least one Burroughs or Pitney Bowes OCR.

Response:

A list of sites that recently still had at least one SLOCR is attached. However, it is probable that many of the SLOCRs have been removed as the Low-Cost OCR has been deployed.

SLOCR Sites

MOJAVE CA
EUREKA CA
REDDING CA
BATON ROUGE LA
OKLAHONA CITY OK
TULSA OK
AMARILLO TX
ALBANY GA
COLUMBUS GA
JOHNSON CITY TN
JACKSON TN
MID MISSOURI MO
BALTIMORE MD
CUMBERLAND MD
NJI BMC
KENNEDY AMC
CENTRAL MA
BOSTON
BROCKTON MA
CAPE COD MA
EASTERN MAINE
BURLINGTON VT
PLATTSBURGH NY
WATERTOWN NY
GREENSBURG PA
DUBOIS PA
ERIE PA
ALTOONA PA
WILLIAMSPORT PA
SCRANTON PA
WHEELING WV
ZANESVILLE OH
STEUBENVILLE OH
MANSFIELD OH
BRISTOL VA
BECKLEY WV
GREENSBORO NC
COLUMBIA SC
GREAT FALLS MT
BUTTE MT
MISSOULA MT
DENVER CO
GRAND JUNCTION CO
CASPER WY
ROCK SPRINGS WY
POCATELLO ID
SALT LAKE CITY UT
PROVO UT
PHOENIX AZ
PORTLAND OR
MEDFORD OR
BEND OR
EVERETT WA
WENATCHEE WA
YAKIMA WA

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-9. Please provide the deployment schedule for retrofitting AFCS machines and MLOCR's with wide-area bar-code readers.

Response:

I am not aware of any plans to retrofit the AFCS machines with wide area barcode readers. Also, all MLOCRs received wide area barcode read capability as part of the gray scale camera modification.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-10. Please provide the deployment schedule, by facility location, of the Low-Cost MLOCR program.

Response:

The deployment schedule is attached.

Attachment to DFC/USPS-T4-10
(Page 1 of 2)

DELIVERY DATE	SITE NAME	ST
3/3/97	SE PENNSYLVANIA P&DF	PA
3/7/97	WATERTOWN	NY
4/23/97	PHOENIX P&DC	AZ
4/25/97	REDDING	CA
5/2/97	WILLIAMSPORT P&DF	PA
5/2/97	HICKORY (LCOCR)	NC
5/9/97	CHICAGO CENTRAL	IL
5/9/97	MILWAUKEE P&DC	WI
5/9/97	BIRMINGHAM P&DC	AL
5/9/97	PENSACOLA P&DC	FL
5/16/97	ALTOONA P&DF	PA
5/16/97	WINCHESTER	VA
5/16/97	SAN JUAN P&DC	PR
5/16/97	TYLER P&DC	TX
5/16/97	PHOENIX P&DC	AZ
5/16/97	SEATTLE P&DC	WA
5/23/97	TERRA HAUTE	IN
5/23/97	CHARLOTTESVILLE	VA
5/23/97	MINNEAPOLIS	MN
5/23/97	BROCKTON P&DC	MA
5/23/97	WORLDWAY AMF	CA
5/23/97	DENVER P&DC	CO
5/30/97	STEUBENVILLE CSF	PA
5/30/97	BRISTOL	TN
5/30/97	PLATTSBURGH	NY
5/30/97	SAN JUAN P&DC	PR
5/30/97	WORLDWAY AMF	CA
5/30/97	GREENVILLE P&DC	TX
6/6/97	GREENSBURG MPC	PA
6/6/97	WHEELING	WV
6/6/97	BLOOMINGTON P.O.	IN
6/6/97	BLUEFIELD P.O.	WV
6/6/97	RAPID CITY P&DF	SD
6/6/97	ANCHORAGE P&DC	AK
6/13/97	ZANESVILLE	OH
6/13/97	BECKLEY	WV
6/13/97	MINOT	ND
6/13/97	SAVANAH P&DF	GA
6/13/97	GREENVILLE P&DC	TX
6/13/97	WACO P&DF	TX
6/20/97	JOHNSTOWNS P&DF	PA
6/20/97	IRON MOUNTAIN P&DF	MI
6/20/97	ABILENE MPO	TX
6/20/97	BOISE	ID
6/20/97	EVERETT	WA
6/20/97	PORTLAND P&DC	OR
6/27/97	WILMINGTON	DE
6/27/97	QUINCY	IL
6/27/97	FORT SMITH MPO	AR
6/27/97	CASPER	WY
6/27/97	MEDFORD	OR
6/27/97	YAKIMA	WA
7/4/97	SCRANTON P&DF	PA
7/4/97	GRAND FORKS	ND
7/4/97	ALEXADRIA MAIN OFFICE	LA
7/4/97	WICHITA FALLS MPO	TX
7/4/97	GREAT FALLS	MT

Attachment to DFC/USPS-T4-10
(Page 2 of 2)

DELIVERY DATE	SITE NAME	ST
7/4/97	POCATELLO	ID
7/11/97	HURON P&DF	SD
7/11/97	MANKATO P&DF	MN
7/11/97	BRYAN	TX
7/11/97	MISSOULA	MT
7/11/97	PROVO	UT
7/11/97	WENATCHEE	WA
7/18/97	QUINCY	IL
7/18/97	MOJAVE	CA
7/18/97	ALBANY	GA
7/18/97	FORT MYERS	FL
7/18/97	BUTTE	MT
7/18/97	GRAND JUNCTION	CO
7/25/97	NEW CASTLE P&DF	PA
7/25/97	BISMARCK P&DF	ND
7/25/97	MOJAVE	CA
7/25/97	JOHNSON CITY	TN
7/25/97	TEXARKANA	TX
7/25/97	ROCK SPRINGS	WY
8/1/97	BLOOMINGTON P&DF	IL
8/1/97	LA CROSSE	WI
8/1/97	EUREKA	CA
8/1/97	FORT MYERS	FL
8/1/97	BRYAN	TX
8/1/97	BEND P&DC	OR
8/8/97	CHILLICOTHE	OH
8/8/97	TERRA HAUTE	IN
8/8/97	MADISON P&DC	WI
8/8/97	FORT MYERS	FL
8/8/97	JACKSON CSF	TN
8/8/97	LUFKIN	TX
8/15/97	WILKES BARRE P&DF	PA
8/15/97	CUMBERLAND	MD
8/15/97	GRAND RAPIDS P&DC	MI
8/15/97	CARBONDALE	IL
8/15/97	BROCKTON P&DC	MA
8/15/97	CHATTANOOGA P&DC	TN
8/22/97	MANSFIELD GMF	OH
8/22/97	GREENSBORO	NC
8/22/97	BRIDGEPORT P&DF	CT
8/22/97	EASTERN MAINE P&DF	ME
8/22/97	COLUMBUS	GA
8/22/97	ABILENE MPO	TX
8/29/97	JONESBORO	AR
TBD	MSTC - Norman	OK
TBD	TRAINING	ECA
TBD	TRAINING	ECA
TBD	McALLEN	TX

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-11. Please refer to your response to DFC/USPS-T4-5 and explain why providing DPS or sector-segment sortation to five-digit zones that are unique to a post-office-box section does not yield as great a cost savings as providing DPS or sector-segment sortation to five-digit zones that contain at least 10 carrier routes.

Response:

The primary reason that providing DPS (or sector-segment) to zones that are unique to post office box sections does not yield as great as savings as providing DPS to zones with at least ten carrier routes is because carriers do not have to case DPS mail, but clerks must still put the mail in the post office box. So, while distribution efficiency to post office box sections might be enhanced, that activity is not eliminated as it is in carrier casing operations.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-12. Please provide a list similar to the one that you provided in your response to DFC/USPS-T4-8 that identifies the SLOCR type - Burroughs or Pitney Bowes - that each facility on your list has or had.

Response:

See attached list.

SLOCR Sites

MOJAVE CA	Burroughs
EUREKA CA	Burroughs
REDDING CA	Burroughs
BATON ROUGE LA	Bell & Howell
OKLAHONA CITY OK	Bell & Howell
TULSA OK	Bell & Howell
AMARILLO TX	Bell & Howell
ALBANY GA	Burroughs
COLUMBUS GA	Burroughs
JOHNSON CITY TN	Burroughs
JACKSON TN	Burroughs
MID MISSOURI MO	Burroughs
BALTIMORE MD	Burroughs
CUMBERLAND MD	Burroughs
NJI BMC	Burroughs
KENNEDY AMC	Burroughs
CENTRAL MA	Burroughs
BOSTON	Burroughs
BROCKTON MA	Burroughs
CAPE COD MA	Burroughs
EASTERN MAINE	Burroughs
BURLINGTON VT	Burroughs
PLATTSBURGH NY	Burroughs
WATERTOWN NY	Burroughs
GREENSBURG PA	Burroughs
DUBOIS PA	Burroughs
ERIE PA	Burroughs
ALTOONA PA	Burroughs
WILLIAMSPORT PA	Burroughs
SCRANTON PA	Burroughs
WHEELING WV	Burroughs
ZANESVILLE OH	Burroughs
STEUBENVILLE OH	Burroughs
MANSFIELD OH	Burroughs
BRISTOL VA	Burroughs
BECKLEY WV	Burroughs
GREENSBORO NC	Burroughs
COLUMBIA SC	Burroughs
GREAT FALLS MT	Burroughs
BUTTE MT	Burroughs
MISSOULA MT	Burroughs
DENVER CO	Burroughs
GRAND JUNCTION CO	Burroughs
CASPER WY	Burroughs
ROCK SPRINGS WY	Burroughs
POCATELLO ID	Burroughs
SALT LAKE CITY UT	Burroughs
PROVO UT	Burroughs
PHOENIX AZ	Burroughs
PORTLAND OR	Burroughs
MEDFORD OR	Burroughs
BEND OR	Burroughs
EVERETT WA	Burroughs
WENATCHEE WA	Burroughs
YAKIMA WA	Burroughs

DFC/USPS-T4-13.

a. During which years were new Burroughs and Pitney Bowes OCR's originally deployed? How many OCR's of each type were purchased and deployed?

b. Were the Burroughs OCR's generally deployed in the northern half of the country and Pitney Bowes OCR's deployed in the southern half of the country?

Response:

a. The Burroughs and Pitney Bowes SLOCRs were deployed between 1982 and 1985. There were 126 machines of each type for a total of 252 machines.

b. I am told that the information is no longer available.

DFC/USPS-T4-14. Suppose a letter has a mailer-applied wide-area delivery-point bar code in the address block but no FIM.

a. If this letter is processed on an AFCS that is operating in ISS mode, will the RBCS system (including the RCR) attempt to resolve the address, or will it defer to the mailer-applied bar code?

b. If the RBCS system will defer to the mailer-applied bar code, will the MPBCS-OSS spray a bar code at the bottom of the envelope?

c. If the letter is processed on an MLOCR, will the MLOCR defer to the mailer-applied bar code, or will it attempt to verify the address?

Response:

a. It is assumed that mail with a mailer applied bar code will be typed. If the AFCS/ISS is operating in the "lift script" mode, the bar code will be ignored and the mailpiece will be routed to the stacker for the OCR. The OCR will attempt to read and sort on the mailer applied bar code. If the AFCS/ISS is operating in the "lift everything" mode, the image will be sent to the RBCS system. The RCR has no capability to resolve bar codes, so it will attempt to resolve the address.

b. Not applicable.

c. The MLOCR defers to the mailer applied bar code.

DFC/USPS-T4-15. Please refer to your response to DFC/USPS-T4-8. Why would large ADC's such as Minneapolis, Greensboro, and Denver still have an SLOCR?

Response:

The equipment list that was provided as an attachment to DFC/USPS-T4-8 was based on information contained in AUTO. As mentioned in the response to OCA/USPS-T4-20(b), the information in AUTO is not up-to-date. Therefore, it is possible that the equipment is no longer located at those facilities.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-16. Please provide a list of (1) all facilities that have or will receive RBCS and (2) the location of the REC for each facility that has or will receive RBCS.

Response:

See attached list.

Attachment to DFC/USPS-T4-16 (Page 1 of 6)
Cross Reference - Processing and Distribution Center to Remote Encoding Center

P&DC Supported	REC Name
Akron, OH	Akron, OH
Albany, NY	Albany, NY
Albuquerque, NM	Salt Lake City, UT
Amarillo, TX	Abilene, TX
Anaheim, CA	San Bernadino, CA
Asheville, NC	Fayetteville, NC
Atlanta, GA	Chattanooga, TN
Augusta, GA	Jacksonville, FL
Austin, TX	Beaumont, TX
Bakersfield, CA	Modesto, CA
Baltimore, MD	Greensboro, NC
Bangor, ME	Albany, NY
Baton Rouge, LA	Baton Rouge, LA
Beaumont, TX	Beaumont, TX
Billings, MT	Twin Falls, ID
Binghamton, NY	Lynchburg, VA
Birmingham, AL	Birmingham, AL
Bloomington, IL	Kalamazoo, MI
Boise, ID	Twin Falls, ID
Boston, MA	Albany, NY
Bowling Green, KY	Louisville, KY
Bridgeport, CT	Nashua, NH
Brockton, MA	Nashua, NH
Bronx, NY	Western Nassau, NY
Brooklyn, NY	Lumberton, NC
Buffalo, NY	Lynchburg, VA
Burlington, VT	Nashua, NH
Canton, OH	Akron, OH
Cape Girardeau, MO	Davenport, IA
Carol Stream, IL	Knoxville, TN
Cedar Rapids, IA	Des Moines, IA
Champaign, IL	Kalamazoo, MI
Charleston, SC	Charleston, SC
Charleston, WV	Falling Waters, WV
Charlotte, NC	Fayetteville, NC
Charlottesville, VA	Fayetteville, NC
Chattannoga, TN	Bowling Green, KY
Chicago, (C) IL	Fort Wayne, IN
Chicago, (N) IL	Fort Wayne, IN
Cincinnati, OH	Pittsburgh, PA
Clarksburg, WV	Falling Waters, WV
Cleveland, OH	Akron, OH
Colorado Springs, CO	Glendale, AZ
Columbia, MO	Wichita, KS
Columbia, SC	Charleston, SC

Attachment to DFC/USPS-T4-16 (Page 2 of 6)
Cross Reference - Processing and Distribution Center to
Remote Encoding Center

P&DC Supported	REC Name
Columbus, OH	Dayton, OH
Corpus Christi, TX	McAllen, TX
Dallas, TX	Little Rock, AR
Dayton, OH	Dayton, OH
Daytona Beach, FL	Bowling Green, KY
Denver, CO	Glendale, AZ
Des Moines, IA	Wichita, KS
Detroit, Mi	Gary, IN
Dulles, VA	Charleston, WV
Duluth, MN	Davenport, IA
Eau Claire, WI	Duluth, MN
El Paso, TX	Beaumont, TX
Elmira, NY	Syracuse, NY
Erie, PA	Pittsburg, PA
Eugene, OR	Portland, OR
Evansville, IN	Louisville, KY
Everett, WA	Portland, OR
Fargo, ND	Wichita, KS
Fayetteville, AR	Sherwood, AR
Fayetteville, NC	Fayetteville, NC
Flint, MI	Kalamazoo, MI
Florence, SC	Charleston, SC
Flushing (Queens), NY	Lumberton, NC
Fort Myers, FL	Chattanooga, TN
Fort Wayne, IN	Fort Wayne, IN
Fort Worth, TX	Abilene, TX
Fox Valley, IL	Gary, IN
Frederick, MD	Greensboro, NC
Fresno, CA	Selma, CA
Ft Lauderdale, FL	Antioch, TN
Gainesville, FL	Jacksonville, FL
Gary, IN	Peoria, IL
Grand Island, NE	Wichita, KS
Grand Rapids, MI	Gary, IN
Green Bay, WI	Des Moines, IA
Greensboro, NC	Salem, VA
Greenville, SC	Charleston, SC
Gulfport, MS	Jacksonville, FL
Hackensack, NJ	Western Nassau, NY
Harrisburg, PA	Dayton, OH
Hartford, CT	Syracuse, NY
Hickory, NC	Salem, VA
Honolulu, HI	Chula Vista, CA
Houston, TX	Beaumont, TX
Huntington, WV	Falling Waters, WV
Huntsville, AL	Birmingham, AL

Attachment to DFC/USPS-T4-16 (Page 3 of 6)
Cross Reference - Processing and Distribution Center to
Remote Encoding Center

P&DC Supported	REC Name
Indianapolis, IN	Madisonville, KY
Industry (Alhambra), CA	Riverside, CA
Jackson, MS	Jacksonville, Fl
Jacksonville, FL	Chattanooga, TN
JFK Air Mail Center, NY	Western Nassau, NY
Kalamazoo, MI	Fort Wayne, IN
Kansas City, KS	Wichita, KS
Kansas City, MO	Wichita, KS
Kilmer (New Brunswick), NJ	Princeton, NJ
Knoxville, TN	Bowling Green, KY
Kokomo, IN	Kalamazoo, MI
Lafayette, IN	Fort Wayne, IN
Lafayette, LA	Baton Rouge, LA
Lakeland, FL	Tampa, FL
Lancaster, PA	York, PA
Lansing, MI	Fort Wayne, IN
Las Vegas, NV	Glendale, AZ
Lehigh Valley, PA	Lehigh Valley, PA
Lexington, KY	Louisville, KY
Lima, OH	Dayton, OH
Lincoln, NE	Des Moines, IA
Little Rock, AR	Little Rock, AR
Long Beach, CA	San Bernadino, CA
Los Angeles, CA	Riverside, CA
Louisville, KY	Louisville, KY
Lubbock, TX	Abilene, TX
Lynchburg, VA	Falling Waters, WV
M.L. Sellers(San Diego), CA	Chula Vista, CA
Macon, GA	Bowling Green, KY
Madison, WI	Duluth, MN
Manasota, FL	Birmingham, AL
Manchester, NH	Nashua, NH
Manhattan, NY #1	Fishkill, NY
Manhattan, NY #2	Fishkill, NY
Mankato, MN	Duluth, MN
Marina (Inglewood), CA	McAllen, TX
Marysville, CA	Modesto, CA
McAllen, TX	Beaumont, TX
Memphis, TN	Tampa, FL
Miami, FL	Birmingham, AL
Mid Florida, FL	Jacksonville, Fl
Mid Island, NY	Princeton, NJ
Mid-Hudson, NY	Western Nassau, NY
Middlesex-Essex, MA	Lynchburg, VA
Midland, TX	McAllen, TX
Milwaukee, WI	Des Moines, IA

Attachment to DFC/USPS-T4-16 (Page 4 of 6)
Cross Reference - Processing and Distribution Center to
Remote Encoding Center

P&DC Supported	REC Name
Minneapolis, MN	Davenport, IA
Mobile, AL	Jacksonville, FL
Monmouth, NJ	Western Nassau, NY
Montgomery, AL	Bowling Green, KY
Muncie, IN	Fort Wayne, IN
Nashville, TN	Antioch, TN
New Castle, PA	Pittsburg, PA
New Haven, CT	Albany, NY
New Orleans, LA	Baton Rouge, LA
Newark, NJ	Kearny, NJ
No Jersey (DVD), NJ	Kearny, NJ
Norfolk, NE	Wichita, KS
Norfolk, VA	Newport News, VA
North Bay, CA	Selma, CA
North Houston, TX	Beaumont, TX
North Metro, GA	Antioch, TN
North Texas, TX	Little Rock, AR
Northern Va, VA	Charleston, WV
Northwest (Waltham)	Albany, NY
Oakland, CA	Hayward, CA
Oklahoma City, OK	Tulsa, OK
Olympia, WA	Portland, OR
Omaha, NE	Des Moines, IA
Orlando, FL	Tampa, FL
Oshkosh, WI	Wichita, KS
Oxnard, CA	Chula Vista, CA
Palatine, IL	Peoria, IL
Pasadena, CA	McAllen, TX
Pasco, WA	Twin Falls, ID
Paterson, NJ (NJ Metro)	Fishkill, NY
Pensacola, FL	Jacksonville, FL
Peoria, IL	Kalamazoo, MI
Philadelphia, PA	Lehigh Valley, PA
Phoenix, AZ	Glendale, AZ
Pittsburg, PA	Pittsburgh, PA
Portland, ME	Syracuse, NY
Portland, OR	Salt Lake City, UT
Portsmouth, NH	Lynchburg, VA
Providence, RI	Lynchburg, VA
Raleigh, NC	Salem, VA
Reading, PA	York, PA
Reno, NV	Portland, OR
Richmond, VA	Newport News, VA
Roanoke, VA	Falling Waters, WV
Rochester, MN	Davenport, IA
Rochester, NY	Syracuse, NY

P&DC Supported	REC Name
Rock Island, IL	Davenport, IA
Rockford, IL	Fort Wayne, IN
Rocky Mount, NC	Salem, VA
Royal Oak, MI	Peoria, IL
Sacramento, CA	Modesto, CA
Saginaw, MI	Knoxville, TN
Saint Cloud, MN	Davenport, IA
Saint Louis, MO	Duluth, MN
Saint Paul, MN	Duluth, MN
Saint Petersburg, FL	Bowling Green, KY
Salem, OR	Portland, OR
Salinas, CA	Modesto, CA
Salt Lake City, UT	Salt Lake City, UT
San Antonio, TX	Laredo, TX
San Bernadino, CA	Riverside, CA
San Francisco, CA	Selma, CA
San Jose, CA	Modesto, CA
Santa Ana (No. Cnty), CA	San Bernadino, CA
Santa Barbara, CA	Chula Vista, CA
Santa Clarita, CA	McAllen, TX
Savannah, GA	Birmingham, AL
Scranton, PA	Pittsburgh, PA
Seattle, WA	Salt Lake City, UT
Shreveport, LA	Baton Rouge, LA
Sioux City, IA	Davenport, IA
Sioux Falls, SD	Wichita, KS
South Bend, IN	Kalamazoo, MI
South Florida, FL	Chattanooga, TN
South Jersey, NJ	York, PA
South Suburban, IL	Peoria, IL
Southeastern, PA	York, PA
Southern MD, Md	Charleston, WV
Spokane, WA	Twin Falls, ID
Springfield, IL	Kalamazoo, MI
Springfield, MA	Nashua, NH
Springfield, MO	Davenport, IA
Stamford, CT	Albany, NY
Stockton, CA	Modesto, CA
Suburban MD, MD	Charleston, WV
Syracuse, Ny	Syracuse, NY
Tacoma, WA	Portland, OR
Tallahassee, FL	Jacksonville, FL
Tampa, Fl	Tampa, FL
Toledo, OH	Akron, OH
Topeka, KS	Wichita, KS
Traverse City, MI	Kalamazoo, MI

Attachment to DFC/USPS-T4-16 (Page 6 of 6)
Cross Reference - Processing and Distribution Center to
Remote Encoding Center

P&DC Supported	REC Name
Trenton, NJ	Princeton, NJ
Tucson, AZ	Glendale, AZ
Tulsa, OK	Tulsa, OK
Tyler, TX	Sherwood, AR
Utica, NY	Lynchburg, VA
Waco, TX	Beaumont, TX
Washington, DC	Greensboro, NC
Waterbury, CT	Albany, NY
Waterloo, IA	Davenport, IA
Wausau, WI	Des Moines, IA
West Jersey, NJ	Kearny, NJ
West Palm Beach, FL	Birmingham, AL
Westchester, NY	Kearny, NJ
Western Nassau, NY	Western Nassau, NY
White River Junction, VT	Syracuse, NY
Wichita, KS	Wichita, KS
Wilkes Barr, PA	Pittsburgh, PA
Wimington, DE	York, PA
Worchester, MA	Nashua, NH
Youngstown, OH	Akron, OH

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF DOUGLAS F. CARLSON

DFC/USPS-T4-17. Suppose a typewritten letter is processed on an AFCS that is operating in ISS mode. Will the AFCS lift the image and send it to the RBCS system for resolution, or will it not lift the image and instead send the letter to a stacker for transfer to an MLOCR? If the AFCS can operate in either mode, please explain the circumstances under which the AFCS would be operated in each mode.

Response:

The subsequent processing of a letter after it goes through the AFCS/ISS is dependent on whether the AFCS/ISS is operating in "lift script only" or "lift everything" mode. The advantage of operating in the "lift everything" mode is you save a mail handling on type written mail that the MLOCR can't resolve. The problem with using the "lift everything" mode is one of capacity. It puts a lot more images through the RBCS network (i.e. the LAN that connects the image lift to the rest of the system), increases the images processing capability requirements for the RCR, and adds mail to the OSS. Therefore, facilities generally use the "lift script only" mode.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-1. Please refer to page 4, lines 21-26, of your testimony.

a. Does the Postal Service have projections of how much letter mail will be barcoded in FY1997, FY1998 and FY1999, or for any portion of this period?

b. Does the Postal Service have projections of barcoded flat mail for this period?

c. Does the Postal Service have projections of the distribution of barcoded letters and flats by mail class during this period?

d. Does the Postal Service have projections for this period of the percentages of barcodes that will be applied by mailers, but USPS OCRs and by USPS RBCSs?

e. If so, please provide this information, divided by subclass to the extent available, together with an explanation of the method by which these projections were developed.

Response:

a. Yes. The projections of total letter mail volume that will be barcoded are 117.9 billion for FY 1997 and 126.0 billion for FY 1998. Projections for FY 1999 are not available.

b. Yes. See Testimony of witness Tolley (USPS-T-6), Exhibit USPS-6A.

c. No. I am unable to provide a breakdown of all barcoded letters and flats by class. However, I am told that a volume forecast of customer prebarcoded mail by class and mail type is provided in the testimony of witness Tolley, Exhibit USPS-6A.

d. Yes. As mentioned in 1a, FY 1999 projections of barcoded letter mail volumes are not available. Projections for FY 1997 and FY 1998 barcoded letter percentages

applied by mailers and the Postal Service are listed below. Flat mail barcodes will be 100% applied by mailers.

Percentage Share of Barcoded Letters

	FY 1997	FY 1998
Mailer Applied	51.9%	50.6%
USPS - OCR	24.9%	24.5%
USPS - RBCS	23.2%	24.9%

e. Where available, I have provided specific information in my responses to the previous four questions. The Postal Service does not have information that allows the dividing of the percentage shares of mailer applied barcodes versus USPS barcodes by class. In the instances of where I do not refer you to witness Tolley (USPS-T-6), volume projections for FY 1997 and FY 1998 were derived by applying FY 1996, AP 8 year-to-date volume trends to FY 1995 year end volumes. Postal applied barcodes also considered additional processing capacity that would be gained as a result of scheduled equipment deployments in FY 1997 and FY 1998.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-2. On page 5, lines 1-6, of your testimony you say that two employees on an OCR can do the work of 17 employees on an LSM.

a. Have you adjusted for the depth of the sort of the OCR?

b. What is the cost savings (including, but not limited to, reduced labor costs) in substituting an OCR for an LSM for a particular volume of mail?

c. How much does an MLOCR cost? What are the costs (including, but not limited to, labor costs) of operating an MLOCR? Why are there no new MLOCRs planned to be deployed?

d. How much does it cost to retrofit an MLOCR with a Greyscale Carnera [sic], a co-directory lookup, and a co-processor?

e. What is the cost of modifying a Delivery Barcode Sorter so that it can function as an MLOCR?

f. How much does an RBCS cost? What are the processing rate and staffing requirements for a RBCS? What are the costs (including, but not limited to, labor costs) of operating an RBCS?

g. How much does a DBCS cost? What are the processing rate and staffing requirements for a DBCS? What are the costs (including, but not limited to, labor costs) of operating a DBCS?

h. How much does a CSBCS cost? What are the processing rate and staffing requirements for a CSBCS? What are the costs (including, but not limited to, labor costs) of operating a CSBCS?

i. How much does a MPBCS cost? What are the processing rate and staffing requirements for a MPBCS? What the costs (including, but not limited to, labor costs) of operating an MPBCS?

Response:

a. Yes. While the OCR's depth of sort is lower than that of an LSM, the overall handlings, for mail that is initially processed on an OCR and subsequently

processed on automation equipment, are still more efficient than processing the mail on the LSM.

b. I don't know. The Postal Service has not conducted any studies to determine specifically the cost savings that result from substituting an LSM with an OCR.

c. The cost of an MLOCR is approximately $554,605. I am told that the processing cost per piece for all OCRs, which are predominately MLOCRs, is shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example USPS-T-25 at Appendix I, page 20, the rows for "MLOCR." The costs for OCRs are detailed in LR-H-77, page 192. There are no new MLOCRs planned for deployment because none are required. As I mentioned in lines 13 and 14 on page 5 of my testimony, the mailer share of total barcoded letters exceeds our original projections.

d. Greyscale Camera - $31,869

Co-processor - $23,000

Co-Directory - $18,000

e. The cost to modify a DBCS, so that it can function as an MLOCR, is approximately $190,000.

f. The Remote Bar Coding System (RBCS) includes the equipment as described in my testimony on page 6, line 12 through page 7, line 3. As I mentioned, RBCS will have been deployed to 250 sites when deployment is completed. Each RBCS site is different in that it is made up of different numbers of components, depending on

the mail processing requirements at the site. The number of components and their average cost are shown below.

ITEM	TOTAL COST	QUANTITY	AVG COST
IPSS	$341,780,328	250	$1,367,121
AFCS/ISS	$103,728,037	908	$114,238
MLOCR/ISS	$166,745,751	879	$189,699
MPBCS/OSS	102,076,060	1,124	$90,815
RCR	$47,571,533	250	$190,286
HANDWRITING UPGRADE	$54,000,000	250	$216,000
LMLM	$64,850,000	250	$180,139
TOTAL	$880,751,709	250	$3,523,007

I am told the labor productivities associated with MLOCR, MPBCS-OSS and REC sites are shown in LR-H-113, pages 10, and 100. The costs for MLOCRs (including the ISS) are discussed in part c above. The processing costs per piece for the MPBCS-OSS are shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example USPS-T-25 at Appendix I, page 20, the rows for "BCS-OSS." The cost related to MPBCS is detailed in LR-H-77, page 192. The processing costs per piece for the remaining portion of RBCS, which includes IPSS, OSS and the RCR are shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example USPS-T-25 at Appendix I, page 20, the rows for

"RBCS." The costs related to this RBCS equipment is detailed in LR-H-77, page 192 in the row labeled "RBCS."

g. The cost of a DBCS is approximately $217,566. I am told the combined labor productivity for DBCS and MPBCS for different types of operations is shown in LR-H-113, page 100. The processing costs per piece for DBCS is shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example USPS-T-25 at Appendix I, page 21, the rows for "DBCS." The costs related to DBCS is detailed in LR-H-77, page 192.

h. The cost of a CSBCS is approximately $73,000. I am told the labor productivity for CSBCS is shown in the testimony of witness Hatfield, USPS-T-25 at Appendix I, page 32. The processing costs per piece for CSBCS is shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example USPS-T-25 at Appendix I, page 21, the rows for "CSBCS." The costs related to CSBCS is detailed in LR-H-77, page 192.

i. Since we have not purchased any of these machines for seven years and do not intend to purchase additional units, there is no current estimated procurement cost for this equipment. I am told the combined labor productivity for DBCS and MPBCS for different types of operations as well as the labor productivity for the MPBCS-OSS is shown in LR-H-113, page 100. The processing costs per piece for

MPBCS are shown in the model cost summary pages of the testimonies of witnesses Hatfield and Daniel, USPS-T-25 and USPS-T-29 respectively. See for example, USPS-T-25 at Appendix I, page 21, the rows for "MPBCS." The cost for the MPBCS-OSS is discussed above in part f. The costs related to MPBCS is detailed in LR-H-77, page 192.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-3. Please refer to Page 8, Lines 11-19 of your testimony.

a. When all equipment is fully deployed, how many fewer city carriers does the Postal Service expect to have employed? Please explain fully.

b. Please quantify the cost savings due to the increased use of DPS mail (including, but not limited to, cost savings from the elimination of the need for manual casing of letters in office) by mail class? Please quantify the estimated increase in, and savings from, DPS use for FY1997, FY1998 and FY1999? What is the estimated decrease in city carrier workhours due to DPS for FY1997, FY1998 and FY 1999? Please provide a full explanation of the computation of these estimates.

Response:

a. As I mentioned on page 9, lines 5 through 8, of my testimony, through Accounting Period 9, 1997, the number of city carriers is 5,280 below SPLY. It is expected that the number of city carriers will continue to decrease as additional zones are put on DPS, but I am unable to give you a projection on how many fewer city carriers will be employed. It is important to recognize that our equipment programs are intended to enable us to work more efficiently and provide workhour savings in the specific work functions affected by the equipment.

That being said, workhour savings from letter mail automation do not necessarily translate directly into equivalent complement reductions. Complement is driven by the total workload, not just workload associated with preparing letters for delivery. The total workload is affected by the mail volume and mail mix for a route, the number of possible deliveries on a route, and/or the services that are provided. The actual complement required to deliver the mail is a function of the overall

workload including, but not limited to, the functions previously mentioned. Therefore, while letter mail automation equipment is reducing the amount of time needed to prepare mail for delivery, the number of possible deliveries and other workload components contributing to overall workload could be increasing.

b. The distribution of the increase in DPS savings in city carrier costs for FY97 and FY98 by class is shown at the following portions of the workpapers of witness Patelunas, USPS-T-15. The FY97 cost reduction due to DPS is shown at Patelunas workpaper WP-A, Part 1 of 2, Table A, Table 6, pages 295-296. The TY98 before rates cost reduction is shown at Patelunas workpaper WP-D, Part 1 of 2, Table A, Table 6, pages 247-248. The TY98 after rates cost reduction is shown at Patelunas workpaper WP-F, Part 1 of 2, Table A, Table 6, pages 247-248. The basis for the distribution by class is from the LR-H-129 at page I-1.

The additional savings for DPS for FY97 and FY98 in dollars and hours (in 1000s) are listed below. Additional savings projected for DPS in FY99 is not available.

	Cost Reduction	Hours
FY97	$201,542	7,900
FY98	$342,341	13,093

(See USPS LR-H-10, Exhibit C, pages 1 and 2).

The calculation of these savings and hours are done as described by Mr. Shipe, USPS-T-3, in Docket MC95-1 on pages 15-17. See also in LR-H-10, pages 5-8, and 12 for a description of the programs including city carrier savings and the calculation of the savings.

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DMA/USPS-T4-4. Please refer to Page 9, Lines 22-25 of your testimony. Why won't all zones eventually receive DPS for letters? Please explain fully.

Response:

Generally, it is not cost efficient to DPS zones with fewer than ten carrier routes. The primary reason is that the volume of letters destinating to those zones is not sufficient enough to produce capturable savings in carrier office time.

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DMA/USPS-T4-5. Please refer to Page 10, Lines 8 and 9 of your testimony.

a. Please confirm that the Postal Service is not planning to process flats to delivery point sequence on automation machinery. If confirmed, please explain fully why the Postal Service has no plans to process flats to delivery point sequence on automation machinery.

b. Please describe any reports or tests conducted by USPS concerning the potential cost savings from applying DPS to flats.

Response:

a. Confirmed. As I mentioned on page 10, lines 14 through 26, of my testimony, the FSM 881 and the FSM 1000 are the pieces of equipment that are used to process flats in today's environment and will continue to be used over the next several years. This equipment is not conducive for sorting flats to DPS primarily due to the throughput rate and transport speed of these machines. As exhibited in Witness Shipe's testimony in Docket No. MC95-1, USPS-T-3, Exhibit B, letter mail must receive two passes across Delivery Bar Code Sorters in order to place the mail in delivery point sequence. Processing flats to DPS would be no different and would also require multiple passes across the FSM. Consequently, the substantially lower throughput rate and transport speed of an FSM, as compared to a Delivery Bar Code Sorter, does not make DPS processing of flats cost efficient in the foreseeable future. However, there is always the possibility that technological advances could produce a next generation FSM that could make DPS processing of flats cost effective.

b. I am not aware of any reports or tests conducted concerning the potential costs savings from applying DPS to flats.

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DMA/USPS-T4-6. Please refer to Page 11, Line 11 of your testimony.

a. Why can barcodes on flats only be applied by mailers? Please explain fully.

b. Does the USPS have any plans to install at any point in the future flat barcoding and processing equipment to a degree comparable to the installation of letter processing machines? If yes, please describe fully.

Does the Postal Service have any plans to apply barcodes to flats to any extent at any point in the future? If yes, please describe fully. If the answer to either question is "no," please describe in detail the current state of the thinking within the Postal Service concerning the relative costs and benefits of the installation of such equipment.

Response:

a. Today, neither the FSM 881 or FSM 1000 has OCR capabilities. As I mentioned on page 13, lines 7 through 10, of my testimony, all of the FSM 881s will be retrofitted with OCR capabilities and will only read and sort flats. Given the numerous layouts and designs of flat sized mailpieces and the lack of a barcode clear zone, it is not practical for us to try and spray barcodes on flats. Also, many of the presorted flats are sorted to a 5-digit level and only one handling is necessary to sort the mail to carrier route, so spraying a barcode has no advantage over the OCR since there are no subsequent sortations.

b. No to both questions. The future flats sorting equipment is covered in my testimony on pages 13 and 14, and as I mentioned in 6a, there are several reasons as to why our applying barcodes to flats is not practical and would not yield benefits above the costs of installing the equipment.

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DMA/USPS-T4-8. Please refer to Page I1, Line II and Page 13 of your testimony.

a. You describe plans to retrofit FSM 881s with OCRs. Why will the OCRs not spray barcodes?

b. Are there any plans by the USPS to apply a barcode reader to FSM 881s?

c. For an MPFSM 881, how many pieces per hour can the machine sort and what size crew is required to perform the sorting? How much does such a machine cost? What are the costs of operating such a machine?

d. What is the maximum sorting speed of an FSM 1000 with a barcode reader? What is the sorting speed of an FSM 1000 with an OCR, but no barcode reader? What is the sorting speed of an FSM 1000 without an OCR or barcode reader?

e. What is the crew size of an FSM 1000 with a barcode reader? What is the crew size of an FSM 1000 with an OCR but no barcode reader? What is the crew size of an FSM 1000 without an OCR or barcode reader?

f. How much does an FSM 1000 cost? What is the cost of adding a barcode reader to an FSM 1000? What are the costs of operating such a modified machine?

Response:

a. See responses to questions 6a and 6b.

b. All 812 FSM 881s are already equipped with a wide area barcode reader.

c. A crew of six employees is used to operate the flat sorter. I am told the labor productivity for FSM 881 for different types of keying operations is shown in LR-H-113, page 98. The labor productivity for the FSM 881 with the barcode reader/OCR is as discussed in the testimony of witness Seckar, USPS-T-26 at page 30. The cost of an FSM 881 is approximately $285,000. The processing costs per piece for the FSM 881 operations are shown in the model cost summary

pages of witness Seckar's testimony, USPS-T-26. These are contained in LR-H-134. See for example LR-H-134 at Section 2, page 16, the rows for "FSM-BCR/FSM-OCR" and Section 2, page 22, the rows for "FSM-881." The costs related to FSM 881 are detailed in LR-H-77, page 193.

d. As mentioned on page ten, lines 23 through 24, of my testimony, the FSM 1000 is not presently equipped with barcode readers. It is also not equipped with an OCR. As a result, I am unable to provide you with approximate estimates of the maximum throughput for the scenarios that you outlined. However, I can tell you that the maximum throughput of today's existing FSM 1000 without an OCR or barcode reader is approximately 6000 pieces an hour.

e. A crew of six is needed for each of the scenarios you described. There are no future plans to place an FMOCR on the FSM 1000 and the barcode reader is not yet deployed.

f. The cost of an FSM 1000 is approximately $455,000. The barcode reader for the FSM 1000 is in the planning stage and authorization to purchase such readers has not yet been requested of the Board of Governors. Since it has yet to be deployed, we are unable to provide operating costs for the FSM 1000 with a barcode reader.

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DMA/USPS-T4-9. Refer to Pages 13 and 14 of your testimony.

a. How much would you expect efficiency for flats to increase as a result of the deployments and modifications you discuss in your direct testimony? Please explain fully.

b. How many flats with barcodes were keyed by mistake on the flat sorter in FY1996? How many barcoded flats does the USPS estimate will be mistakingly keyed after the implementation of the FMOCR?

Response:

a. I do not have a precise estimate of how much efficiency will increase as a result of the deployments and modifications mentioned in my testimony. The deployment of additional FSM 1000s will allow us to shift more mail from manual operations into mechanized operations so this will yield better efficiency. Adding OCR capability to the FSM 881 will also improve efficiency. The OCR will eliminate keying errors and will also increase barcode utilization as I mentioned in my testimony on page 14, lines 11 through 19.

b. The Flat Sorter is not able to provide how many barcode flats were keyed during processing, so I am unable to provide you with an estimate for the total number of barcoded flats keyed in FY 1996. Once the implementation of the FMOCR is complete, virtually all instances of barcoded flats being keyed on an FSM 881 will be eliminated. Any barcoded flats that may still be keyed are likely to be rejects that could not be read by the barcode reader and would, therefore, not be keyed by mistake.

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DMA/USPS-T4-10. Please refer to Page 16, Lines 13-16 of your testimony.

a. In the MODS system, for which operations are first piece handlings counted and for which operations are they derived from conversion factors?

b. When were the conversion factors last revised?

c. Please describe how the conversion factors were calculated and how they operate. Provide the underlying data and sampling plan.

d. Please confirm that subsequent piece handlings are always "flowed" from initial piece handlings.

Response:

a. In general, all MODS operations that receive First Handling Pieces (FHP) receive both counted FHP and FHP derived from conversion factors.

b. I am told they were last revised in 1986.

c. Documentation describing the conversion factor underlying data, sampling plan, and computational procedures is no longer available. A description of the use of conversion factors can be found in Library Reference H-147. See especially section 221.

d. Confirmed for manual operations. Not confirmed for automated and mechanized operations. See Library Reference H-147 for details.

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DMA/USPS-T4-11. Please refer to Page 21, Lines 11-14 of your testimony where you state: "Manual cases become the method-of-last-resort, especially late in the evening as rejects from automated operations appear in quantity. To meet service commitments, manual cases must be staffed to handle these late surges.

a. At what time during the evening do these "late surges" occur?

b. What shapes and classes of mail make up the majority of manually sorted mail during the late surge period?

c. What shapes and classes of mail make up the majority of manually sorted mail before the late surge period?

d. Please list the "service commitments" which require the late surge manual case staffing.

Response:

a. In general, activity increases in manual cases as outgoing mail is prepared for dispatch near the end of Tour 3, and again as local mail is prepared for dispatch near the end of Tour 1.

b. First Class letters and flats on Tour 3; First Class letters and flats, Standard letters,and Periodicals on Tour 1.

c. Same as b above.

d. See the 1997 National Five-Digit Zip Code and Post Office Directory, Volume 2, page 10-3.

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DMA/USPS-T4-12. At page 28 of his testimony, USPS witness Moeller (USPS-T-36) refers to the "Postal Service's concern regarding its letter automation program" (lines 1-2) and cites your testimony as support for the proposition that a zero percent pass-through of the letter/nonletter differential is appropriate in light of this concern. See also the testimony of USPS witness O'Hara (USPS-T-30) at page 36.

a. Please confirm that, under the USPS proposal, a mailer of Standard (A) letters with density adequate to meet Basic ECR requirements would have four choices: (1) apply barcodes and sort the mail to five digits, in which case he would pay 16.0 cents per piece; (2) sort the mail to ECR specifications and apply a barcode, in which case he would pay 15.7 cents per piece for pieces destined for delivery offices where either a CSBCS was available or where letters were sequenced manually and pay 16.0 cents per piece for the remaining pieces; (3) sort his mail to ECR specifications (without adding a barcode) and pay 16.4 cents per piece; or (4) neither sort to ECR specifications nor add a barcode, in which case his mail would travel at the "Presort-3/5-Digit" level, and he would be charged 20.9 cents per piece.

b. Would it be fair to conclude from the Postal Service's proposals in this case that, for letters, mailer-applied barcodes yield cost savings to the Postal Service at least 0.4 cents per piece greater than carrier route presortation? Please explain fully any "no" answer.

c. Please describe generally the ways in which delivery point sequencing (DPS) saves city carrier costs in ways that carrier route presortation does not. Please include in your answer responses to the following:

   i. Is it generally the case that city carriers would never handle DPS letters piece-by-piece?

   ii. Would DPS letters and non-DPS letters be combined by the carrier into one bundle per addressee?

   iii. Would the DPS process require the carrier to carry an additional bundle to each address?

d. Please confirm that delivery office supervisors can minimize overtime costs by deferring certain portions of the mail stream (especially Standard (A) letters) and that overtime is not paid to carriers unless they work more than an additional half hour on a given day.

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e. Does the Postal Service have any estimates of the extent to which DPS letters save actual costs? Please provide any such estimates and explain their derivation in detail.

f. Does the increased volume of DPS letters increase the ability of postal supervisors to plan city carrier workloads and/or to implement deferral strategies so that all mail is delivered in accordance with applicable service standards at the lowest possible cost? Please explain fully.

g. Does the Postal Service have any studies on the extent to which DPS permits a reduction in the number of carrier routes needed to service a particular geographic area, for example, by permitting carriers to spend less time in-office, and more time out-of-office? Please describe the results of any such studies and make such studies available as library references.

h. Please describe in detail any other ways in which DPS letters result in actual USPS cost savings.

Response:

a. Redirected to witness Moeller (USPS-T-36).

b. Redirected to witness Moeller (USPS-T-36).

c. DPS letters require no in-office preparation, thus they do not require piece handlings by carriers. City carriers take DPS letters directly to the street where they carry them as a separate bundle. In contrast, carrier route letters require in-office preparation. Carrier route letters are cased with other letters in delivery sequence.

d. Part 1 of your question is confirmed. When carriers cannot prepare all of the mail that requires in-office preparation within their scheduled office time, supervisors

may authorize assistance, overtime, or permit the curtailment of non-preferentail mail.

Part 2 of your question is not confirmed. City carriers are paid overtime for any time worked in excess of 8 hours per day and 40 hours per week.

e. The objective of the DPS program is to reduce the carrier's in-office time. With that said, the total reduction in office time for the combined years of FY 1995 and FY 1996 was 19.3 million work hours. The savings are derived from an improvement in the Office Efficiency Indicator (OEI) during FY 1995 and FY 1996. OEI is an indicator of the in-office cost of providing delivery, and it is determined by dividing the number of possible deliveries by the amount of in-office workhours.

f. Somewhat. As I mentioned in 12d, when carriers cannot prepare all of the mail that requires in-office preparation within their scheduled office time, supervisors may authorize assistance, overtime, or permit the curtailment of non-preferential mail. Since DPS mail does not require in-office preparation, the volume of DPS mail does not factor into this process except that with more letter mail in DPS, there is less mail subject to volume fluctuations which can cause a carrier to exceed the scheduled office time.

g. No.

h. DPS letters do not require clerks to manually sort the mail to the carrier. In contrast, non-automated letters must be manually sorted to the carrier by clerks in a plant or a delivery office. Also, the quality of addresses on DPS letters is

typically better than non-automated letters since the majority of barcoded letters are from mailers. Mailers are required to match their address lists against CASS certified address coding software. As a result, we get accurate addresses and do not have to re-handle pieces because of incorrect addressing.

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DMA/USPS-T4-13. Are there any plans by the USPS to automate the processing of nonletters/nonflats (parcels) in any mail class? If yes, please describe the plans and estimated cost savings. If not, please explain why the USPS has not planned for such automation.

Response:

We have already initiated efforts to barcode and automate the handling of parcels. Barcodes are applied by parcel sorting machines at BMCs and by postage validation imprinters (PVIs) when parcels are accepted at retail windows. Some customers have also voluntarily applied parcel barcodes as well. The Postal Service has also proposed a parcel barcoding discount in Standard (B) to incent even more prebarcoded parcels from mailers. Witness Daniel (USPS-T-29) has estimated the cost savings and these costs are summarized in exhibit T29-E

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DMA/USPS-T4-14. Please refer to your response to DMA/USPS-T4-3(a) in which you state that "It is expected that the number of city carriers will continue to decrease as additional zones are put on DPS, but I am unable to give you a projection on how many fewer city carriers will be employed."

a. Please define "zone".

b. Please describe in detail the places where the cost implications of the future reductions in the number of city carriers are reflected in the Postal Service's Test Year cost estimates.

Response:

a. A zone, as used in the context of "as additional zones are put on DPS," is a 5-digit ZIP code. Other commonly applied definitions of zone are included in section G030 of DMM 52.

b. Redirected to Postal Service.

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DMA/USPS-T4-15. Please refer to your response to DMA/USPS-T4-3(a) in which you state that "workhour savings from letter mail automation do not necessarily translate directly into equivalent complement reductions. Complement is driven by the total workload, not just workload associated with preparing letters for delivery. The total workload is affected by the mail volume and mail mix for a route, the number of possible deliveries on a route, and/or the services that are provided. The actual complement required to deliver the mail is a function of the overall workload including, but not limited to, the functions previously mentioned."

a. How often does the Postal Service examine whether the complement is appropriately sized for the workload within a single zone?

b. Please explain the process by which the Postal Service decides whether the complement is appropriately sized for the total workload and the factors that are taken into account in this process. Please provide any manuals, policy directives or other documents which explain this process.

c. Please provide any other factors, other than the ones you listed in your response, that determine the overall workload.

Response:

a. We do not explicitly look at complement. Instead we look at the number of route assignments needed to handle the workload. Reviews are periodically conducted, depending on the size and workload of the office, to determine if there have been significant changes in the workload, and assignments are adjusted. Accordingly, the complement is sized based on changes in the assignments.

b. Handbook M-39 (Management of Delivery Services) details the adjustment process for city carriers. The handbook is being filed in library reference LR-H-239.

c. A more detailed roster of factors, including factors that were also listed in my response to DMA/USPS-T4-3(a), that comprise the total workload is contained in the

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DMA/USPS-T14-16. *Please refer to your response to DMA/USPS-T4-4 and to* DMA/USPS-T4-1 2(c).

a. Please explain what you meant by the term "capturable savings."

b. Your response seems to imply that some savings are not "capturable". Please provide other examples of savings that are not "capturable" related to city carrier functions.

c. Please confirm that there should be measurable cost savings from the delivery point sequencing of mail in zones with fewer than ten carrier routes, because "DPS letters require no in-office preparation," thereby allowing the carrier to conduct other delivery preparation activities or to complete mail delivery sooner. If you cannot so confirm, please explain fully.

Response:

a. The term "capturable savings," as used in the context of "the volume of letters destinating to zones with fewer than ten carrier routes is not sufficient enough to produce capturable savings," relates specifically to reducing assignments. See 16b. for a further understanding of the term "capturable savings."

b. My response to DMA/USPS-T4 was not intended to imply that some savings are not "capturable." When providing DPS mail to zones with ten or more carrier routes, it is easier to achieve cost savings in the context of reducing assignments. In contrast, eliminating assignments in zones with fewer than ten routes is significantly harder because the workhour impact is smaller for the unit overall. For instance, if a zone has ten routes, and each route has an hour of savings as a result of DPS, then the total time savings is ten hours for the zone. The total savings can be more easily translated into the elimination of an assignment than a zone that has only five

routes with each route having an hour of savings. As I mentioned in DMA/USPS-T4-12(e), the objective of the DPS program is to reduce the carrier's in-office time. As illustrated above, a cumulative reduction in office-time within a zone can translate into a reduction of assignments which could result in a reduction of complement. While savings in zones with fewer than ten routes are more difficult to capture, this is not to say that they are "not capturable." These zones may be able to realize savings in areas such as overtime usage.

c. Confirmed. As mentioned at page 9, lines 25 through 26, of my testimony, the decision to extend DPS to zones with fewer than ten routes can best be made at the local level based upon factors such as machine availability. From a national perspective, I do not know whether these savings could be sufficient to justify the additional equipment that would be necessary to support DPS for every zone in the country.

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DMA/USPS-T4-17. Please refer to your response to DMA/USPS-T4-12(e).

a. Please provide the Office Efficiency Indicator (OEI) for FY 1995 and FY 1996.

b. Is the OEI calculated at each carrier station? If not, what is the lowest organizational level where it is calculated?

Response:

a. The national OEI was 122.61 in FY 1995 and 130.14 in FY 1996.

b. Yes.

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DMA/USPS-T4-18. Please refer to your response to DMA/USPS-T4-11(b).

a. Please define the terms "Tour 1," "Tour 2," and "Tour 3."

b. If on Tour 1, an office is unable to sort all the mail in the late surge period, will First Class letters and flats be sorted before Standard (A) letters?

c. If, on Tour 1, an office is unable to sort all the mail in the late surge period, will Standard (A) letters be deferred before First Class letters and flats are deferred?

d. Please describe how these "late surges' are staffed as compared to ordinary mail processing periods. For example, are pan-time or casual employees used, or do full time employees work overtime?

e. During which Tour are the majority of Standard (A) flats and parcels sorted?

f. What percentage of mail sorted during these "late surges" are made up of Standard Mail letters, flats and parcels ?

Response:

a. There are three tours, each eight hours long, in the MOD system day. They begin with Tour 2, followed by Tour 3, and end with Tour 1. The MOD system day begins and ends between 6 a.m. and 8 a.m. The local facility normally selects this time to be concurrent with or just after the last dispatch of mail to the stations so that the amount of mail on hand will be at a minimum.

b. Yes, to the extent they are separated from other classes.

c. Yes, to the extent they are separated from other classes.

d. "Late surges" are staffed using the same criteria as any other time -- to minimize cost within the constraints of national labor laws, regulations, and agreements, and local agreements. The clerical problem of fitting employee schedules against a ramp-up and subsequent ramp-down of workload may

result in greater use of part-time and casual employees during portions of the day when processing volume is at a maximum. A common staffing practice is to set the start-time for a part-time employee several hours into a tour since they will be scheduled for less than 8 hours. We do not plan overtime into a tour schedule except during a few high volume periods such as Christmas.

e. Tour 2

f. There will be a significant number of Standard letters, much of it mixed with first class letters in DPS operations, but I am not aware of any data on the percent and am unable to estimate it. There will not be many standard flats or parcels.

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DMA/USPS-T4-19. Please refer to your response to DMA/USPS-T4-6(a).

a. Although there may be "numerous layouts and designs of flat sized mailpieces," has the Postal Service ever tested spraying barcodes on flats of a standard size (e.g, 10" x 12" or 10" x 15")? If yes, please describe the results of such tests. If not, please explain why the Postal Service has not considered the application of barcodes to standard-sized flats.

b. Please explain the term "barcode clear zone."

c. Please explain whether the increase in the application of barcodes on flats by mailers indicates that, if it is practical for mailers to apply barcodes, then it should be practical similarly for the Postal Service to spray barcodes on flats, at least for standard-sized flats ?

d. Please explain why the Postal Service believes it is impractical to apply barcodes to flats when it already applies barcodes to parcels using parcel sorting machines and postage validation imprinters?

e. Please describe the number of flats that are presorted to the 5-digit level both in absolute numbers and as a percentage of all flats.

Response:

a. No. As I mentioned in DMA/USPS-T4-6(a), many flats are sorted to a 5-digit level and only one handling is necessary to sort the mail to carrier route, so spraying a barcode has no advantage over the OCR since there are no subsequent sortations. Further, "flats of standard size" would have to be segregated from "flats of non-standard size" in order to have a chance of spraying a barcode in a designated barcode clear zone. Also, I have been advised that many mailers are reluctant to provide a barcode clear zone because of possible conflicts with their layout and design needs.

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b. The barcode clear zone is a specifically defined location on a mailpiece where a POSTNET barcode is sprayed by Optical Character Readers (OCRs). To ensure that the barcode is readable during subsequent processing on barcode sorters, the barcode clear zone is free of all printing, markings, and colored borders.

c. No. To my knowledge, mailers generally apply barcodes to flats as part of the address printing process. That is, the barcode is printed, within the address block, at the same time the address is printed. That process is considerably different (and technically easier) then reading the address and subsequently applying a barcode on the FSM for the reasons identified in 19(a) as well as the problems inherent in OCR recognition (i.e., print quality, address block identification, etc.)

d. The Postal Service has considered applying barcodes to flats. However, as I mentioned in 19(a) many mailers have expressed concerns about providing a barcode clear zone on their flat because of conflicts with layout and design needs. Similarly, many mailers have expressed concerns about the application of a label to their flat. Also, as I mentioned in 19(a), many flats are sorted to a 5-digit level and only one handling is necessary to sort the mail to carrier route, so spraying a barcode has no advantage over the OCR since there are no subsequent sortations.

e. See Tables 10-15 in LR-H-113; Tables 13-18 in LR-H-190; Tables 8-11 in LR-H-185; and Tables 10-15 in LR-H-195 for a breakdown of flats presorted to the 5-digit level.

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DMA/USPS-T4-20. Please refer to your response to DMA/USPS-T4-8(e) and page 10, lines 21, of your direct testimony (USPS-T-4). Why are there no plans to place an FMOCR on the FSM 1000, particularly where the FSM 1000 "is intended to process nearly all of the flats that are non-machinable on the FSM 881"?

Response:

As I mentioned in my response to DMA/USPS-T4-8(e), there are no future plans to place an OCR on the FSM 1000. However, that does not mean that the Postal Service will not examine, at a later date, the need for, and feasibility of, OCR processing on the FSM 1000. At present, there are other priorities that supersede the placement of an OCR on the FSM 1000. The first priority is to complete the phase two deployment of the FSM 1000s. The next priority would be to interface a barcode reader on the FSM 1000s. As I mentioned at page 13, lines 20 through 24, of my testimony, if the results from the FSM 1000 Barcode Reader tests are positive and approval is obtained from the Board of Governors, deployment could begin in FY 1998.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-21. Please refer to your response to DMA/USPS-T4-12(d).

a. Please describe and quantify (for example, by mail volume over a given time period) the extent to which non-preferential mail is curtailed when mail is unable to be prepared within the scheduled office time by carriers.

b. Please explain what portion of this non-preferential mail was Standard (A).

c. Please estimate the cost savings due to supervisors' decisions not to authorize "assistance" or "overtime" to process non-preferential mail due to the deferrable nature of such mail. Please include such estimates specifically for Standard (A).

Response:

a. The quantity of non-preferential mail that is curtailed is tracked at the national level in linear feet. I am told that during the most recent five day period, ending August 28, 1997, the cumulative average curtailment per city route for the period was 9.51 feet.

b. 100 percent.

c. This information is not available. Also see DMA/USPS-T4-22.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-22. Please refer to your response to DMA/USPS-T4-12(f). Please describe any reports or studies conducted by the Postal Service measuring the amount of "assistance" or "overtime" costs saved due to the decrease in mail that needs to be processed in-office because of DPS.

Response:

I am not aware of any such reports or studies conducted by the Postal Service to measure the amount of assistance or overtime saved as a result of DPS. The Postal Service does regularly track the performance of offices that receive DPS mail, and as I mentioned in my response to DMA/USPS-T4-12(e), cost savings have been realized as a result of the improvement in OEI. However, I am not able to identify how much of these savings were due to decreases in assistance and/or overtime.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-23. Please refer to your response to DMA/USPS-T4-13.

a. Are barcodes applied to parcels in all mail classes (including Standard (A)) by parcel sorting machines or by postage validation imprinters? If yes, please describe the number and types of parcels sprayed with barcodes by mail class.

b. Has the Postal Service considered any proposal to apply ? parcel barcoding discount. to Standard (A)? If "yes," please provide details of such a proposal and explain why such a proposal was not introduced in R97-1. If "no," please explain why such a discount is being considered for Standard (B), but not Standard (A).

c. Does the Postal Service have any plans to apply barcodes to parcels at mail processing facilities other than BMCs and at retail windows? If "yes," please provide details of such plans. If "no," please explain why the Postal Service is not considering expanding the application of barcodes to parcels.

Response:

a. Yes. The number and types of parcels sprayed with barcodes by mail class is not available.

b. Redirected to witness Moeller (T-36).

c. No. There are no plans to apply barcodes to parcels at mail processing facilities other than BMCs and at retail windows, because relatively few parcels are processed at these facilities.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-24. Please refer to your response to DMA/USPS-T14-1(a) and (d) (redirected from witness Bradley).

a. Please define "Full Time Regular," "Casual" and "Part Time Flexible" employee categories. Please identify and define any other employee categories within the Postal Service. Please include within your definitions any special parameters or limitations concerning when such employees can work, such as the number of consecutive days of employment for employees of a given category, or whether there are limitations on the number of employees of a given category that can work at one time.

b. Please provide the compensation and benefits levels of Full Time Regular, Casual, and Part Time Flexible employees and any other employee category listed in your response to subpart a.

c. Please provide the percentage of total mail processing direct labor work hours in 1996 performed by Casual and Part Time workers. Please also provide such information by A/P.

d. Please provide the average number of hours that a Casual worker works per week. Please also provide such information by A/P.

e. Please provide the average number of hours that a Part Time worker works per week. Please also provide such information by A/P.

f. Please describe the staffing used to process non-preferential mail. For example, do Full Time Regular, Casual and Part Time Flexible employees all process such mail ?

g. If your response to subpart f. is "yes," please provide the proportion of nonpreferential mail processed by Full Time Regular employees, by Casual employees and by Part Time Flexible employees. Please also provide such information specifically for Standard (A).

h. Please confirm that, given the deferrable nature of non-preferential mail and staffing procedures, no employee overtime work costs will be accrued by the Postal Service in processing non-preferential mail.

Response:

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

a. The relevant categories are Full Time Regular, Part Time Regular, Part Time Flexible, Casual, and Transitional Employee. They are defined and the "special parameters or limitations" of their employment are detailed in Section 7 of the APWU Agreement in LR-H-88. When reading Section 7, note that a Part Time Flexible employee is simply a Part Time member of the Regular Workforce without any fixed work schedule.

b. Tables of compensation levels are attached. Casual pay is determined in accordance with the local labor market and there are no standard tables. A memo discussing casual pay is included in the attachment. Benefits are detailed in Sections 10, 11, and 21 of the APWU Agreement in LR-H-88.

c. Redirected for USPS answer.

d. Redirected for USPS answer.

e. Redirected for USPS answer.

f. Yes.

g. I am not aware of any data that relates categories of employees to classes of mail processed. Accordingly, I am unable to estimate the requested proportions.

h. Not confirmed. For example, Standard A letters are mixed with First Class letters in DPS operations. Any overtime incurred would apply to both.

5708

American Postal Workers' Union (APWU)
Transitional Employee (TE) Schedule
Effective February 17, 1996 (PP 5-96)
For Employees Hired Before 7/6/96

PS Grade	1	2	3	4	5	6	7	8	9	10
Rate	9.53	9.68	9.84	11.00	11.73	12.49	12.79	15.21	15.62	16.04

American Postal Workers' Union (APWU)
Transitional Employee (TE) Schedule
Effective July 6, 1996 (PP 15-96)
For Employees Hired On Or After 7/6/96

PS Grade	1	2	3	4	5	6	7	8	9	10
Rate	8.59	8.74	8.90	10.06	10.79	11.55	11.85	14.27	14.68	15.10

American Postal Workers' Union (APWU)
Transitional Employee (TE) Schedule
Effective November 23, 1996 (PP 25-96)
For Employees Hired On Or After 7/6/96

PS Grade	1	2	3	4	5	6	7	8	9	10
Rate	8.91	9.06	9.22	10.38	11.11	11.87	12.17	14.59	15.00	15.42

American Postal Workers' Union (APWU)
Transitional Employee (TE) Schedule
Effective November 22, 1997 (PP 25-97)
For Employees Hired On Or After 7/6/96

PS Grade	1	2	3	4	5	6	7	8	9	10
Rate	9.22	9.37	9.53	10.69	11.42	12.18	12.48	14.90	15.31	15.73

American Postal Workers' Union (APWU)
Transitional Employee (TE) Schedule
Effective November 7, 1998 (PP 24-98)
For Employees Hired On Or After 7/6/96

PS Grade	1	2	3	4	5	6	7	8	9	10
Rate	9.53	9.68	9.84	11.00	11.73	12.49	12.79	15.21	15.62	16.04

Postal Service (PS) Schedule

5709

Full-Time Annual Basic Rates

RSC P (APWU)

Effective March 15, 1997 (PP 7-97)

	AA	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Most Prev. Step
	21,924	24,223	26,285	28,349	31,419	31,630	31,841	32,051	32,260	32,471	32,681	32,892	33,103	33,310	33,522	33,732	211
2	22,235	24,571	26,685	28,794	31,927	32,155	32,382	32,609	32,839	33,065	33,293	33,522	33,748	33,978	34,205	34,431	227
3	22,565	24,944	27,111	29,277	32,477	32,722	32,971	33,213	33,461	33,704	33,953	34,197	34,443	34,688	34,934	35,178	249
4		24,911	27,576	29,803	33,074	33,339	33,606	33,872	34,135	34,401	34,667	34,934	35,201	35,466	35,731	35,995	267
5		26,375	29,225	31,513	33,720	34,005	34,292	34,576	34,863	35,148	35,434	35,721	36,005	36,293	36,577	36,863	287
6		27,931	30,975	32,155	34,416	34,727	35,038	35,346	35,658	35,968	36,276	36,588	36,899	37,209	37,522	37,832	311
7		28,523	31,639	32,853	35,171	35,505	35,838	36,173	36,510	36,841	37,177	37,509	37,843	38,179	38,512	38,845	333
8				33,437	35,979	36,342	36,704	37,066	37,431	37,792	38,157	38,517	38,881	39,243	39,604	39,969	365
9				34,254	36,861	37,255	37,646	38,039	38,428	38,819	39,210	39,604	39,994	40,389	40,780	41,172	391
10				35,114	37,792	38,215	38,636	39,060	39,484	39,905	40,328	40,752	41,173	41,597	42,020	42,442	424

Part-Time Regular Employees - Hourly Basic Rates

1	10.54	11.65	12.64	13.63	15.11	15.21	15.31	15.41	15.51	15.61	15.71	15.81	15.91	16.01	16.12	16.22
2	10.69	11.81	12.83	13.84	15.35	15.46	15.57	15.68	15.79	15.90	16.01	16.12	16.23	16.34	16.44	16.55
3	10.85	11.99	13.03	14.08	15.61	15.73	15.85	15.97	16.09	16.20	16.32	16.44	16.56	16.68	16.80	16.91
4		11.98	13.26	14.33	15.90	16.03	16.16	16.28	16.41	16.54	16.67	16.80	16.92	17.05	17.18	17.31
5		12.68	14.05	15.15	16.21	16.35	16.49	16.62	16.76	16.90	17.04	17.17	17.31	17.45	17.59	17.72
		13.43	14.89	15.46	16.55	16.70	16.85	16.99	17.14	17.29	17.44	17.59	17.74	17.89	18.04	18.19
		13.71	15.21	15.79	16.91	17.07	17.23	17.39	17.55	17.71	17.87	18.03	18.19	18.36	18.52	18.68
8				16.08	17.30	17.47	17.65	17.82	18.00	18.17	18.34	18.52	18.69	18.87	19.04	19.22
9				16.47	17.72	17.91	18.10	18.29	18.48	18.66	18.85	19.04	19.23	19.42	19.61	19.79
10				16.88	18.17	18.37	18.58	18.78	18.98	19.19	19.39	19.59	19.79	20.00	20.20	20.40

Part-Time Flexible Employees - Hourly Basic Rates

1	10.96	12.11	13.14	14.17	15.71	15.82	15.92	16.03	16.13	16.24	16.34	16.45	16.55	16.66	16.76	16.87
2	11.12	12.29	13.34	14.40	15.96	16.08	16.19	16.30	16.42	16.53	16.65	16.76	16.87	16.99	17.10	17.22
3	11.28	12.47	13.56	14.64	16.24	16.36	16.49	16.61	16.73	16.85	16.98	17.10	17.22	17.34	17.47	17.59
4		12.46	13.79	14.90	16.54	16.67	16.80	16.94	17.07	17.20	17.33	17.47	17.60	17.73	17.87	18.00
5		13.19	14.61	15.76	16.86	17.00	17.15	17.29	17.43	17.57	17.72	17.86	18.00	18.15	18.29	18.43
6		13.97	15.49	16.08	17.21	17.36	17.52	17.67	17.83	17.98	18.14	18.29	18.45	18.60	18.76	18.92
7		14.26	15.82	16.43	17.59	17.75	17.92	18.09	18.26	18.42	18.59	18.75	18.92	19.09	19.26	19.42
8				16.72	17.99	18.17	18.35	18.53	18.72	18.90	19.08	19.26	19.44	19.62	19.80	19.98
9				17.13	18.43	18.63	18.82	19.02	19.21	19.41	19.61	19.80	20.00	20.19	20.39	20.59
10				17.56	18.90	19.11	19.32	19.53	19.74	19.95	20.16	20.38	20.59	20.80	21.01	21.22

Step Increase Waiting Period (in Weeks)

Steps (From-To)»	AA-A	A-B	B-C	C-D	D-E	E-F	F-G	G-H	H-I	I-J	J-K	K-L	L-M	M-N	N-O	YRS
Grades 1 - 3	96	96	88	88	44	44	44	44	44	44	34	34	26	26	24	14.9
Grades 4 - 7		96	96	44	44	44	44	44	44	44	34	34	26	26	24	12.4
8 - 10				52	44	44	44	44	44	44	34	34	26	26	24	8.8

schedule reflects the $312 per year COLA increase to basic salary effective 3/15/97.

Mail Handlers' Schedule
Full-Time Annual Basic Rates
Effective March 15, 1997 (PP 7-97)

MH GRADE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	MOST PREV. STEP
4	22,404	27,023	29,160	32,310	32,564	32,820	33,075	33,330	33,585	33,843	34,098	34,353	34,608	34,863	35,118	255
5	23,672	28,607	30,804	32,932	33,205	33,482	33,754	34,030	34,307	34,579	34,855	35,127	35,403	35,677	35,952	276
6	25,020	30,290	31,421	33,600	33,898	34,196	34,493	34,792	35,090	35,387	35,686	35,988	36,284	36,583	36,882	299
Flexible Employees - Hourly Rates																
4	11.20	13.51	14.58	16.16	16.28	16.41	16.54	16.67	16.79	16.92	17.05	17.18	17.30	17.43	17.56	
5	11.84	14.30	15.40	16.47	16.60	16.74	16.88	17.02	17.15	17.29	17.43	17.56	17.70	17.84	17.98	
6	12.51	15.15	15.71	16.80	16.95	17.10	17.25	17.40	17.55	17.69	17.84	17.99	18.14	18.29	18.44	
Hourly Rate Regulars																
4	10.77	12.99	14.02	15.53	15.66	15.78	15.90	16.02	16.15	16.27	16.39	16.52	16.64	16.76	16.88	
5	11.38	13.75	14.81	15.83	15.96	16.10	16.23	16.36	16.49	16.62	16.76	16.89	17.02	17.15	17.28	
6	12.03	14.56	15.11	16.15	16.30	16.44	16.58	16.73	16.87	17.01	17.16	17.30	17.44	17.59	17.73	

STEP INCREASE WAITING PERIODS (IN WEEKS)

Steps (From-To)=>	A-B	B-C	C-D	D-E	E-F	F-G	G-H	H-I	I-J	J-K	K-L	L-M	M-N	N-O	Years
Grades 4 - 6	96	96	44	44	44	44	44	44	44	34	34	26	26	24	12.4

NOTE: This schedule reflects the $312 per year COLA increase to basic salary effective 3/15/97.

June 6, 1994

MEMORANDUM FOR MANAGERS, HUMAN RESOURCES (DISTRICT)

SUBJECT: Casual Pay Rate; Delegation of Authority

Per Mr. Henderson's memorandum of November 13, 1992 (copy enclosed), you have the authority to pay casual employees above the $8.00 per hour maximum when local market conditions or special circumstances dictate higher rates to attract and retain these employees. The determination of pay rates for casuals should continue to be based on local market rates by utilizing the information sources listed in Mr. Henderson's memorandum.

As clarification to Mr. Henderson's memo, hourly rate exceptions are limited to the applicable craft Transitional Employee (TE) rate for the particular position, and not the minimum base rate being paid to newly hired career employees. Note that the NALC and APWU have different TE rates.

It is emphasized that the current rate range of $5.00 to $8.00 per hour is still considered adequate for hiring and retaining most of our casual work force. Full use of recruitment and retention techniques must be paramount to simply raising the rates.

/s/

Suzanne J. Henry

Enclosure

cc: Mr. Mahon
Mr. Green
Mr. Caraveo
Mr. Jacobson
Mr. Riley
Managers, Human Resources (Area)

CASUAL FILE Complement 2nd

5712

NOV 1 8 1993

MEMORANDUM FOR MANAGERS, HUMAN RESOURCES
DISTRICT OFFICES

SUBJECT: Casual Pay Rate; Delegation of Authority

Current pay policy provides a service-wide range of up to $8.00 hourly for casual employees. This range is still adequate in most areas to attract and retain casuals to supplement the clerk, carrier, and mail handler workforce. It is recognized, however, that in some areas of the country, $8.00 an hour may not be sufficient to recruit casuals, especially in certain skilled functions and we occasionally receive requests for exceptions. To ensure expeditious response to such requests, effective immediately, you are delegated the authority to hire casuals at installations in their district at hourly rates up to the minimum base rates being paid to newly hired career employees in the craft in which the casuals will be working. For example, tractor trailer operator casuals may be hired at an hourly rate of up to $11.97, the base for an hourly rate regular PS-06, step A.

If you determine that your current rates need to be increased, an assessment should be made of the various labor markets within the district to ensure the establishment of the lowest possible rate. To assist in this determination, information can be obtained from sources such as:

- Local employers offering similar work
- State Unemployment Offices
- Economic development agencies
- Chambers of Commerce
- Bureau of Labor Statistics
- Local temporary employment firms

This delegation of authority is limited to establishing the rate of pay for casual employees within the framework described above. The numbers of, and time frames for, employing casuals to augment the regular work force continue to be governed by the applicable labor agreements.

/s/

William J. Henderson
Vice President
Employee Relations

cc: Mr. Caraveo
Mr. Green
Mr. Jacobson
Mr. Mahon
Area Managers
Managers, Human Resources
Area Offices

ER111:JWHerleman:4212
#2133 (10/28/92)

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-25. Please refer to your response to DMA/USPS-T14-1(c) (redirected from witness Bradley). Please provide data on the number and types of employees reassigned or terminated in FY95 and FY96 due to the need to eliminate extra labor in the work force.

Response:

I am not aware of any employees that were terminated in FY 95 or FY 96 due to a need to eliminate extra labor in the workforce. Employees are commonly reassigned at the local level due to the continuing need to rebalance work assignments in response to shifts in mail processing workloads. I am not aware of any data that attempts to relate these continuing reassignments to a need to eliminate extra labor in the workforce in FY 95 or FY 96.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-26. Please refer to your response to DMA/USPS-T14-7 (redirected from witness Bradley).

a. Please describe the study underlying the TEP conversion factors, including when and in what facilities the study was conducted.

b. Please confirm that the TEP conversion factors have not been updated or revised since 1985-86.

c. Please explain whether the Postal Service has any plans to conduct an updated study to calculate TEP conversion factors to determine workload at BMCs.

d. Please provide the average weight, density, and volume by shape for all pieces for all years from FY 1988 to FY 1996 and for the year that the conversion factor study was performed.

e. For each operation, please estimate, as quantitatively as possible, the percentage of FHP which were counted and the percentage that were determined through the use of the national conversion factors implemented in 1985-1986.

Response:

a. I have been informed that it was a time-and-motion study completed in 1985, but there is no surviving documentation describing the study.

b. Confirmed.

c. I have been informed that an update is being considered.

d. I have been informed that this data is not tracked by shape. To the extent that class can be used as a proxy for shape, the CRA, (LR-H-2), contains the data by class. However, note that densities in the CRA have not been updated since FY92. The FY 92 densities are merely carried forward.

e. FHP is not used in BMCs. The Primary Parcel Sorting Machine counts parcels. All other activities do not count pieces. Instead, they count the relevant processing unit which is then converted to Total Equivalent Parcels (TEP) using the corresponding TEP factor. For example, the Sack Sorting Machine counts sacks and the sack count is multiplied by the factor for sacks to estimate the TEP.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-28. Please identify, describe and produce all studies or reports conducted since 1988 by the USPS concerning:

a. the general nature and quantification of mail processing peak load and premium pay costs and the attribution of such costs to mail classes, including:

i) whether specific amounts of premium pay costs can be causally related to particular classes of mail.

ii) whether specific amounts of overtime costs are causally related to particular classes of mail.

iii) whether mail processing capacity is less or greater than demand at particular time intervals, both for total demand and pref mail demand.

b. the flexibility of mail processing labor capacity, including the use and flexibility of both regular and supplemental staff (including Part Time Flexible employees) and limitations on labor flexibility such as advance notice requirements, restrictions on the use of supplemental labor and limits on overtime (whether due to collective bargaining agreements or otherwise).

c. mail deferral patterns, including the frequency, length and extent of mail deferral by class and the reasons for such deferral.

d. mail arrival patterns, including fluctuations in arriving mail volumes by sub-class, by hour, Tour, day, week and AP.

e. the relationship between mail arrival rates, peak processing requirements and staffing patterns (including staff levels and composition).

f. the relative productivities of manual, mechanized and automated processing and how such productivity varies with fluctuating mail volumes.

Response:

a. Redirected to witness Alexandrovich.

b. A 1991 report entitled "Modeling Postal Service Mail Processing and Delivery Operations" is being filed as LR-H-255. I am not aware of any other reports or studies on this subject.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

c. I am unable to provide you with mail deferral patterns dating back to 1988. See DMA/USPS-T4-21(a) for more information on how deferred mail is tracked at the national level and the extent to which mail has been deferred recently. Also, see DMA/USPS-T30-5(a) for reasons as to why mail may be deferred or may not meet service standards.

d. I am not aware of any such study.

e. I am not aware of any such study.

f. Productivities are described in the flow models provided in this case. See LR-H-113, the testimony of witnesses Danial, Hatfield, and Seckar, and corresponding flow model testimony in prior cases. See the testimony of witness Bradley on how productivity varies with fluctuating mail volume.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-30. Please respond to the following by providing separate answers for (1) nonpref mail in general and (2) Standard (A) in particular:

a. Please describe the Postal Service's current service standards including when such standards require this mail to be processed.

b. Please identify, describe, and produce any reports or studies concerning the overall service performance of nonpref mail including the percentage of nonpref mail that meets its service standards and the number of days by which various classes within nonpref mail are delayed beyond their service standards.

c. Please describe the consequences when nonpref mail does not meet its service standards.

d. Please confirm that service standards do not require that USPS process nonpref mail during premium pay hours. If not confirmed, please explain fully.

e. Please confirm that the deferrabilty of nonpref mail lowers peak load costs. If not confirmed, please explain fully.

f. Please provide a profile of mail processing of nonpref mail by hour, Tour, day, week and AP.

g. Please explain whether nonpref is routinely deferred to level workloads, including the degree to which it is deferred beyond the peak period in which First Class mail must be processed to meet its service standards.

h. Please describe, identify, and produce all studies and reports analyzing the extent to which nonpref mail processed during premium pay periods reflects processing voluntarily deferred to those periods.

i. Please describe, identify, and produce all studies and reports analyzing the extent to which nonpref mail is not responsible for mail processing overtime costs and premium costs related to non-processing functions (such as delivery unit costs).

Response:

a. See sections 458.0 through 458.345 of the Postal Operations Manual (POM 7)

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

filed in Docket No. MC96-3 as USPS LR-SSR-161, and the National Five-Digit Zip Code and Post Office Directory, Volume 3, page 10-3.

b. I am not aware of any studies or reports describing the overall service performance of nonpref mail.

c. I am not certain what you mean by the term "consequences" in this context. When mail does not meet its service standards, customers are disappointed.

d. Not confirmed. When nonpref mail is mixed with pref mail (e.g. in DPS operations), the nonpref mail must be processed during premium pay hours so that the intermingled pref mail can meet pref service standards.

e. Redirected to witness Alexandrovich.

f. Nonpref is processed primarily during Tour 2. I am not aware of any studies or reports providing the requested profile.

g. Nonpref can be and is deferred to level workloads. It is rarely processed on Tour 1 unless it is mixed with pref mail.

h. I am not aware of any such studies or reports.

i. I am not aware of any such studies or reports.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-31. Please respond to the following interrogatories with respect to pref mail in general:

a. Please describe the Postal Service's current service standards including when such standards require this mail to be processed.

b. Please identify, describe, and produce any reports or studies concerning the overall service performance of pref mail including the percentage of pref mail that meets its service standards and the number of days by which various classes within pref mail are delayed beyond their service standards.

c. Please describe the consequences when pref mail does not meet its service standards.

d. Please confirm that service standards require pref mail to be processed at night and on Sundays.

e. Please provide a profile of mail processing of pref mail by hour, Tour, day, week and AP.

Response:

a. See sections 453 of the Postal Operations Manual (POM 7) filed in Docket No. MC96-3 as USPS LR-SSR-161, and the National Five-Digit Zip Code and Post Office Directory, Volume 3, page 10-3.

b. See attached.

c. See my response to DMA/USPS-T4-30(c).

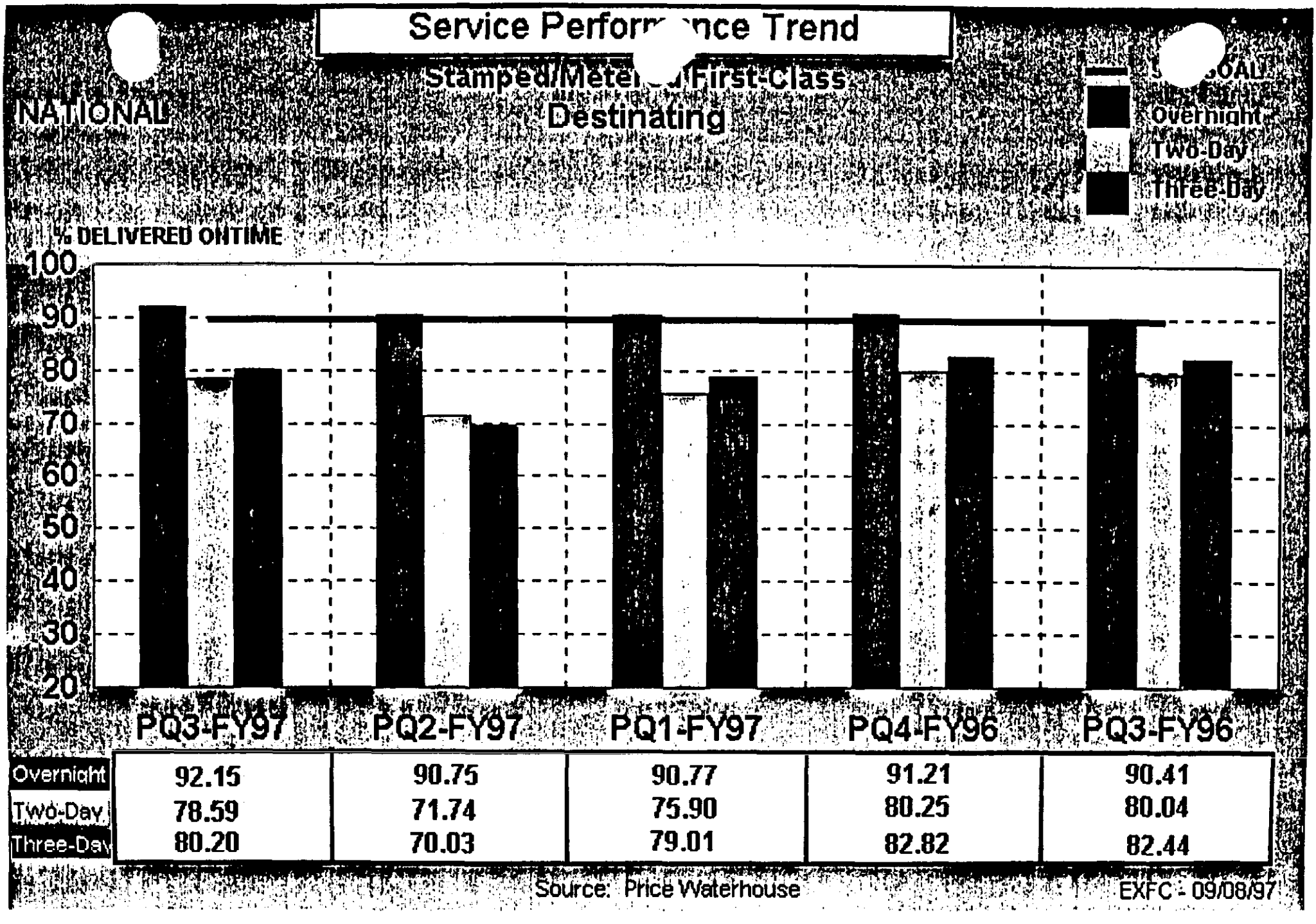
d. To meet service standards, a portion of pref mail must be processed at night and on Sundays.

e. I am not aware of any such profile.

Service Performance Trend

Stamped/Metered First-Class Destinating

NATIONAL



	PQ3-FY97	PQ2-FY97	PQ1-FY97	PQ4-FY96	PQ3-FY96
Overnight	92.15	90.75	90.77	91.21	90.41
Two-Day	78.59	71.74	75.90	80.25	80.04
Three-Day	80.20	70.03	79.01	82.82	82.44

Source: Price Waterhouse

EXFC - 09/08/97

Attachment to DMA/USPS-T4-31b (page 1)

5722

EXPRESS MAIL - AM NETWORK - SERVICE PERFORMANCE

	FY	PQ 1	PQ 2	PQ 3	PQ 4
NATIONAL TOTAL	97	95.5	91.3	95.6	
	96	95.8	90.2	95.5	96.0
	95	95.6	93.3	96.0	95.8

Attachment to DMA/USPS-T4-31b (page 2)

PRIORITY MAIL SERVICE REPORT
NATIONAL SUMMARY
LD AND METERED COMPOSITE -- IDENTIFIED AND NON-IDENTIFIED

SERV COMM	FY	PQ 01 % ON TIME	02 % ON TIME	03 % ON TIME	04 % ON TIME
1 DAY	95	82	81	86	86
	96	85	83	87	89
	97	86	85	87	.
2 DAY	95	79	72	80	82
	96	80	67	79	82
	97	78	65	77	.
3 DAY	95	80	67	84	87
	96	82	71	79	82
	97	79	66	79	.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-32. Please describe, identify and produce any reports or studies conducted by the USPS concerning (i) the relative percentages of pref and nonpref mail being processed during a lull in a Tour when peak capacity is not being reached and (ii) the relative percentages of pref and nonpref mail processed during the peak period of mail processing.

Response:

I am not aware of any such reports or studies.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-34. Please describe:

a. The maximum percentage of the regular work force that may consist of part time workers at any given time.

b. The minimum daily tour for both full time and part time workers.

c. The premium that must be paid for processing mail between 6 p.m. and 6 a.m.

d. The premium that must be paid for processing mail on Sunday.

Response:

a. See Article 7 in the NALC Agreement and the APWU Agreement in, both LR-H-88, and in the NPMHU Agreement in LR-H-253.

b. See Article 8 in the above referenced agreements.

c. See Article 8.7 in the above referenced agreements.

d. See Article 8.6 in the above referenced agreements.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-36. Does the USPS, either at the national, regional or local levels, schedule deliveries of Standard (A) mail in order to level mail processing volumes? If "yes," please explain the extent of such scheduling.

Response:

Assuming you mean delivery by a Postal carrier, no.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-38. Please provide the relative percentages of mail processed, by sub-class, on (i) automated machines, (ii) mechanized machines, and (iii) manually.

Response:

I am not aware of any operational data on automated, mechanized or manual volumes by sub-class.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-39. Please refer to your response to DMA/USPS-T4-16.

a. Please confirm that the term "assignments" as used in your response refers to the carriers assigned to and working out of the zone in question.

b. Please confirm that a reduction in assignments from 10 to 9, means that the number of carriers assigned to and working out of the zone in question has been reduced by one individual.

c. Is it universally the case throughout the Postal Service that city delivery carriers are full-time employees? Please explain any "no" answer fully and quantify the extent, if any, that other types of employees perform city delivery carrier functions.

d. Please confirm that the term "complement" as used in your responses refers to the total number of city delivery carriers assigned to and working out of a particular zone.

e. Please confirm that a "reduction of assignments" would "result in a reduction of complement."

f. Please list all the ways in which a zone might be able to "realize savings" in areas other than reduction of complement or reduction in overtime usage.

Response:

a. Not confirmed. The term assignments refers to authorized bid positions.

b. Not confirmed. The elimination of one assignment may not necessarily equate to a reduction of one individual.

c. There are many categories of city delivery carriers. Within the career employee categories, there are Full Time employees as well as the Part Time Regulars (PTRs) and Part Time Flexibles (PTFs). Within the non-career employee categories, there are transitional city carriers and casual employees. All of these employees perform some or all of the city carrier functions that are detailed in the M-41.

d. Confirmed.

e. Not confirmed. See 39(b).

f. A zone might be able to "realize savings" in straight-time work hours.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-40. Please refer to your response to DMA/USPS-T4-16b.

a. Do the operating budgets for 5-digit ZIP code offices contain amounts planned to be spent on city delivery carrier overtime costs? Please explain fully.

b. Is it relatively rare or relatively common for the operating budget of a 5-digit ZIP code office to contain the budget authority referred to sub-part a.? Is there a special process through which such authority is approved, as distinct from the process through which other amounts of budget authority are approved? Please describe in detail the process through which the amount of any such budget authority is determined.

c. If such amounts of budget authority are other than extremely rare, please describe generally the size of the typical overtime budget authority and the factors utilized in determining its size.

d. Please describe as completely as possible the relevance, if any, in this budget process of mail mix. For example, do the relative amounts of mail of various classes play a role in determining the amounts, if any, budgeted for overtime for city delivery carriers?

Response:

a. Yes. Fiscal Year operating budgets provided to 5-digit ZIP code offices recognize that some overtime may be necessary to manage the variances in workload.

b. It is difficult to say whether it is relatively rare or relatively common for the operating budget of a 5-digit ZIP code office to contain the authority referred to in sub-part a because the authority can vary by district and may be determined by factors such as the level or size of the office. Similarly, it is possible that some districts may utilize a special process to determine how this authority is approved. In short, field office budgets are derived from national objectives that are based on target total operating expenses. Accordingly, the areas and districts work with field sites to establish local budgets for work hours including overtime hours.

c. As mentioned in 40(b), the budget authority can vary by district based on factors such as the level or size of the office, so there is no "typical size" of overtime budget authority.

d. Generally, the mail mix by class does not play a role in determining the amount of overtime for city delivery carriers in 5-digit ZIP code offices. However, the work content could play a role in the budget process for 5-digit ZIP code offices. For instance, if a zone was scheduled to be added to DPS, then this change would be considered during the budget process.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-41. Please refer to your testimony at page 9, lines 25 through 26, where you state, "some zones with fewer than 10 routes may also receive DPS as a result of local decisions." Please refer, also, to your answer to DMA/USPS-T4-16c.

a. Please describe in as much detail as possible the factors (other than machine availability) that could justify DPS for zones with fewer than 10 routes.

b. Is there a subset of zones with fewer than 10 routes the characteristics of which would make it beneficial to provide them with DPS? If so, please describe this subset and its characteristics. Please explain fully.

c. Is either (i) budgeted city delivery carrier overtime or (ii) actual city delivery carrier overtime expenses a characteristic that would indicate that DPS would be beneficial for a given zone? If so, please describe as fully as possible the ways in which DPS could reduce overtime expenses (or any other expenses) in such a zone.

d. How many 5-digit ZIP code offices have ten or more carriers? How many carriers work out of such offices? How many 5-digit ZIP code offices have fewer than ten carriers? How many carriers work out of such offices? In providing your answers, please distinguish between city delivery carriers and rural carriers.

Response:

a. Factors, other than machine availability, that could justify DPS for zones with fewer than ten routes are: the ability to combine zone(s) on the same piece of equipment; the zone(s) being close in proximity to the plant, and having ample availability of transportation to the zone(s). Further, these factors have to be matched with the ability of the zone(s) to improve service and/or capture savings.

b. See 41(a).

c. Yes. Sorting mail in delivery point sequence on automation reduces carrier in-office workhours, both straight-time and overtime, by eliminating the need for the carrier to manually sort that volume into delivery order. This can lead to route adjustments which can reduce the requirements for complement and equipment.

d. This information will be provided when available.

DMA/USPS-T4-42. Please refer to your response to DMA/USPS-T4-21a, where you state that "during the most recent five day period, ending August 28, 1997, the cumulative average curtailment per city route for the period was 9.51 feet."

a. Please describe the "9.51 feet" figure in more detail. For example, (i) does "feet" measure the height of a stack of this mail, if this mail were stacked vertically? (ii) Does "cumulative" mean that the amount of mail curtailed each day is added for the five most recent days? (iii) Does the Postal Service track curtailment using a "rolling" five-day figure or is curtailment measured for discrete five-day periods? (iv) If the figure is not calculated on a "rolling" basis, please describe the reasons for choosing a five-day period, as contrasted to a seven-day, or a one-day period, or some other period.

b. What percentage of the average carrier's capacity does the "9.51 feet" figure represent? What is the average capacity of a city carrier? If there is some variation in the capacity of various city routes, please describe in as much detail as possible the range of city carrier capacity.

c. Please provide the cumulative average curtailment per city route for each period of time for which this data was collected over the most recent twelve-month period.

d. Is there a limit to the extent to which non-preferential mail may be curtailed (e.g., a particular cumulative average curtailment per city route in linear feet) above which additional workers or overtime will be used to process such mail? If "yes," please explain fully.

Response:

a. The 9.51 feet figure provided in DMA/USPS-T4-21(a) is a linear measurement, so it would equate to the height of a stack of mail if stacked vertically. The cumulative 9.51 feet figure represents the average amount of mail per city route curtailed each day added for the five given days. However, I am told the Postal Service does not track curtailment by five-day periods and the information for the five-day period was provided only because it represented the most recent data available for "mail volume over a given time period." In this case, the "mail volume over a given time period" represented the current week to date, since the response to DMA/USPS-T4-21(a) was filed on Friday, August 29, and the only curtailment information available for the current week was from Saturday to Thursday. Although the "extent to which non-preferential mail is curtailed" was

provided in the response to DMA/USPS-T4-21(a), we do not track curtailment in the context of cumulative average volumes and the response was provided solely in the interest of meeting the request to "quantify the mail volume over a given time period." Curtailed volume is monitored on a daily basis, but the volume is not aggregated by any period such as week, accounting period, or quarter. The national average per route is a snapshot that is relevant from the standpoint that it can be used to identify field offices that may differ dramatically from the national average for the given day.

b. I am told, that based on the average daily volume per route, the cumulative average volume per route for a five day period is 61.3 feet. Therefore, the 9.51 feet figure would represent approximately 15 percent of the average volume. However, there are some important things to understand about these results. First, the same mail may be reported as curtailed volume for consecutive days, so the 9.51 feet figure may therefore include some double counts. For instance, mail with a window of requested in-home dates may be curtailed consecutive days. Moreover, the average daily volume per route varies depending on the day of the week and/or the time of year. As mentioned above in (a), the 9.51 feet figure was a week to date number for the last week of August. This week is typically an above average week in volume because of the numerous back to school mailings. Additionally, the week in which the cumulative 9.51 was reported also included the final remnants from the impacts of the United Parcel Service strike. Last, as mentioned above in (a), the Postal Service monitors curtailed volume on a daily basis, so the 9.51 feet figure as well as the 15 percent figure provided in this response are not relevant to how we track curtailment.

c. As mentioned in 42(a), curtailment is not tracked or recorded by cumulative average volumes per city route for a given time period. I am, therefore, unable to provide you with the cumulative average curtailment per city route over the most recent twelve month period.

d. No, there is no volume limit. Non-preferential mail is processed in accordance with the service standards referenced in DMA/USPS-T30-4(c).

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-43. Please refer to your response to NDMS/USPS-T4-4(b). Please explain the reasoning underlying your response.

Response:

Processing Standard (A) parcels on the FSM 1000 would intermingle mail pieces that require different mail preparation procedures at the delivery unit and thus require an additional handling operation there.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-44. Please refer to your response to NDMS/USPS-T4-8, where you state "I am told that processing data for the SPBS without a barcode reader is contained in Docket MC96-1." Please provide a more specific citation to where the requested information may be found in that docket.

Response:

It appears that parts (a) & (b) of NDMS/USPS-T4-8 seek a comparison of processing with an SPBS without a barcode reader and an SPBS with a barcode reader. The operational processing data that allows such a comparison is available in the testimony of witness Garvin (USPS-T3) and in Library Reference SPA-2 of Docket No. MC96-1. Although the reference does not specifically contain the average and maximum throughput of an SPBS with and/or without a barcode reader, it does reflect the differences in the two processes. However, it is important to recognize that the SPBS is operator paced and that the level of throughput and/or productivity achieved with or without a barcode reader can vary due to factors such as the configuration of the machine as well as the mix of the mail. Also, in Docket No. MC96-1, the Postal Service provided a figure of 2,760 pieces per hour for the induction capacity of the SPBS. See Tr. 2/218.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-45. Please refer to your response to NDMS/USPS-T4-10.

a. Please provide the unit cost for retrofitting a small number of machines.

b. Please explain fully whether it is likely that unit cost for retrofitting a small number of machines is greater than the unit cost of a production buy.

c. Please explain fully whether the unit cost for retrofitting a small number of machines serves as the upper bound for the unit cost of a production buy.

Response:

a. I am told that the cost to add barcode readers to the SPBSs at the Southeastern PA facility and at the Philadelphia AMC is contained in Docket No. MC96-1 at Tr. 1/14-16.

b. I do not know what the cost was for the other machine that has SPBS readers nor do I know the unit cost of a production buy. Therefore, I am unable to say whether the unit cost for retrofitting a small number of machines is greater than the unit cost of a production buy.

c. See response to (b). Accordingly, I am unable to say whether the unit cost for retrofitting a small number of machines serves as the upper bound for the unit cost of a production buy.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-46. Please refer to your response to DMA/USPS-T4-30(d). Please provide all situations in which nonpref mail is mixed with pref mail, thereby creating a condition where the nonpref mail must be processed during premium pay hour so that the intermingled pref mail can meet its service standards.

Response:

As mentioned in my response to NAPM/USPS-T25-28, nonpref mail "could" become mixed with pref mail as early as the facer/canceller operation. In that case, it is conceivable that the nonpref mail could remain commingled with pref mail throughout all processing operations until it is finally delivered. With that in mind, it cannot be assumed that premium pay is needed in all instances when nonpref mail becomes mixed with pref mail so that the intermingled pref mail can meet its service standards. Generally, nonpref mail is not mixed with pref mail until it gets to the delivery point sequencing operations, and the response to DMA/USPS-T4-30(d) was provided merely to illustrate that it is possible for nonpref mail to be processed with pref mail using premium pay. However, delivery point sequencing operations are not always conducted during premium pay hours.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-48. Please refer to your response to OCA/USPS-T4-5. Please provide a description of all mechanized and automated mail processing equipment planned for deployment by the end of FY 1999 which are not described in your testimony.

Response:

Below is a list and description of each type of equipment included in the response to OCA/USPS-T4-5. In instances where previous descriptions have already been provided, I have cited the Library Reference or response.

Letter Distribution

1. Mail Cartridge Systems - This system is designed to automate the loading of letter mail trays on automated processing equipment as well as the sweeping of mail from those machines.
2. Postal ID Code Readers - The Postal Service is considering mounting ID code readers on all barcode sorters to assist in the sorting process.
3. RCR/HW Mod Kits - See page nine of Library Reference H-10. The Hand Written Address Interpretation (HWAI) modification improves the RCR's ability to process script letter mail.
4. DBCS/OCRs MOD Kits (Low Cost OCR) - See page six of Library Reference H-10.
5. DBCS/OSS MOD Kits - See response to ABA&EEI&NAPM/USPS-T25-10 (b).
6. MMC Stacker MOD Kits - The Postal Service is considering modifications to the stackers on some of the DBCSs.
7. AFCS/ISS - See response to ADVO/USPS-22.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

Flat Distribution

1. Flat Mail OCR (FMOCR) for FSM 881s - See page 11 of Library Reference H-10.
2. Flat Mail WABCR for FSM 1000 - As mentioned at page 13, lines 20 through 24, the Postal Service is evaluating the placement of barcode readers on the FSM 1000s. The barcode reader would read mailer applied barcodes on flats that are processed across the FSM 1000.
3. Additional FSM 1000s - See page 8 of Library Reference H-10.
4. New Design Flat Sorting Machines - See response to NDMS/USPS-T4-19.

Canceling Operations

Automatic Facer Cancellers - See response to ADVO/USPS-22.

Miscellaneous Processing Equipment

1. WABCR for CFS work stations - The Postal Service is considering adding a barcode reader to CFS work stations.
2. Upgraded computer systems for CFS sites - The Postal Service is considering upgrading the computer systems that are used in CFS sites.
3. Mechanized work stations for CFS sites - The Postal Service is considering deploying additional mechanized work stations in CFS sites..
4. Material Handling Robots - See page 11 of Library Reference H-10.
5. Tray Management Systems (TMS) - TMS consists of conveying equipment, staging devices, interfaces to operations, and controls for moving trays of mail within P&DCs.

6. Small Parcel and Bundle Sorters (SPBS) - See page 7 of Library Reference H-10.

7. SPBS Feed Systems - See page 13 of Library Reference H-10.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-49. Please refer to your response to OCA/USPS-T4-7 regarding management's "lack of confidence" in MODS data in LR-H-220, page 8. Please explain the bases of management's lack of confidence in daily MODS data including its data collection reliability and its deficiencies in assisting management as an operating tool.

Response:

See my response to OCA/USPS-T4-10, parts c, d, and e.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-51. Please refer to your response to NDMS/USPS-T4-13(e) in which you state that "field sites generally refrain from processing Standard (A) parcels on the FSM 1000 because of capacity concerns and impact on the delivery units."

a. Please explain fully the types and extent of the "capacity concerns" to which you referred and explain why such "concerns" have discouraged facilities from processing Standard (A) parcels on the FSM 1000.

b. Please refer to witness Crum's response to UPS/USPS-T28-11(c) where he states that parcels may be cased with letters and flats. Please explain why casing or carrying parcels with flats would inhibit processing parcels on the FSM 1000.

Response:

a. As mentioned in my testimony, the Postal Service is in the process of deploying FSM 1000s in order to process the volume of non-carrier route flats that is non-machinable on the FSM 881. Accordingly, plants that have already received FSM 1000s target their usage for processing flats that meet the flat size dimensions specified in section C050 of the DMM but do not meet the FSM 881 machinability requirements as specified in section C820. As a result, capacity concerns with FSM 1000s are generally related to either (1) there is only enough machine capacity within a given operating window to process only the targeted mailbase (i.e., flats that are non-machinable on the FSM 881) and still make the service commitment for that mail or (2) FSM 1000 machine time is not available because the machine is being used to process other classes of mail. For instance, the FSM 1000 may be processing outgoing First Class flats (that cannot be processed on the FSM 881), so other classes of mail would be staged for later processing, in accordance with distribution priorities and subject to the conditions mentioned in part (1). These capacity concerns combined with the concerns mentioned in DMA/USPS-T4-43

discourage sites from processing Standard (A) parcels on the FSM 1000.

b. Witness Crum was only acknowledging that some Standard (A) parcels may be carried with flats, and his statement should not be interpreted as meaning that all Standard (A) parcels are carried in the flat mail bundle. The weight, size, and shape variations of pieces that qualify as Standard (A) parcels precludes many of them from being compatible with work methods used for flat shaped mail pieces.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-52. Please refer to your response to DMA/USPS-T4-30(c) and DMA/USPS-T4-31(c) in which you state that the consequences that occur when nonpref mail and pref mail do not meet their service standards are that "customers are disappointed." Please explain whether there are operational consequences of delayed mail, such whether local managers or staff are reproved when nonpref or pref mail do not meet their service standards or whether management will give a higher priority to processing the backlog of nonpref or pref mail.

Response:

Local facility managers receive goals for service and budget at the beginning of each fiscal year. Accordingly, local manager's progress toward these goals and overall performance against these objectives are discussed with immediate managers at several points during the fiscal year and adjustments are made where necessary. In regard to your question about priority being given to processing a backlog of mail, management would place a higher priority on processing the backlogged mail before processing newly arrived mail in accordance with the distribution priorities outlined in section 453 of the *Postal Operations Manual* (POM 7) which was filed in Docket No. MC96-3 as USPS LR-SSR-161.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-53. Please refer to your response to DMA/USPS-T4-30(f) and DMA/USPS-T4-31(f). Please provide any data that the Postal Service has, whether or not contained in a "report" or "study," concerning the processing of pref and nonpref mail by the requested time intervals.

Response:

I am not aware of any information, whether or not contained in a "report" or "study", concerning the processing of pref and nonpref mail by the requested time intervals.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-54. Please refer to your response to DMA/USPS-T4-36. Please respond to this interrogatory by interpreting it to mean the scheduled deliveries of Standard (A) mail to a mail processing or distribution facility by private mailers in order to level mail flows.

Response:

In a sense, the Drop Ship Appointment System (DSAS) is used for leveling mail flows in the context that it is used for scheduling deliveries of Standard (A) mail to processing facilities. The system allows USPS processing facilities to communicate to mailers the times of day when they can best accommodate drop shipments. Similarly, the facilities can designate a set number of appointments within those times based on dock availability and local conditions.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-55. Has the Postal Service ever performed studies to determine the regional, seasonal, or temporal variations in MODs conversion factors? If so, please provide the results of these studies, indicate when they were performed, and produce them as library references.

Response:

I am not aware of any such studies.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-56. (a) When was MODs implemented?

(b) Was its predecessor system the Workload Recording System ("WLRS")?

Response:

a. I am told it was 1973.

b. Yes.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-60. (a) What organization within the Postal Service is responsible for maintaining MODs?

(b) When did the organization identified in subpart (a) become responsible for maintaining MODs?

(c) Which organization within the Postal Service was responsible for maintaining MODS before the organization identified in subpart (a)?

Response:

a. Operations Support

b. It has always been Operations Support, although the responsible subgroup within Operations Support has changed with successive reorganizations.

c. n/a

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-61. Please describe and provide copies of all national reports produced by MODs. Please also describe the purpose of each report, its distribution, the frequency of production, and the date of inception of the report.

Response:

The MODS system itself does not produce any national reports. Instead, national reporting of MODS data is accomplished through MODS subsystems within the Corporate Information System (CIS) and Executive Information System (EIS). These subsystems provide an elaborate set of options to select the desired data elements, time periods, operations, geographic areas, type of report, etc. The requested report is generated on demand based on the selected options.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-62. (a) In MODs offices, does an individual's clocked MODs hours provide the basis for paying that individual?

(b) If the response to subpart (a) is "no," what data system is used for determining the hours worked by an employee?

(c) If an employee's hours are revised from what is clocked into MODs during the course of a pay period or after a pay period, are the hours by operation also changed in the MODs data?

(d) If your response to subpart (c) is "yes," please explain whether changes in hours of operation have always occurred when an employee's hours were changed.

(e) If your response to subpart (d) is "no," when was the change in operation hours made?

Response:

a. Yes.

b. n/a

c. Yes.

d. It is my understanding that this has always been the policy. Of course, on occasion the responsible personnel may forget to make the change.

e. n/a.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

DMA/USPS-T4-85. Please refer to your direct testimony at page 9, lines 22-26, and to your response to interrogatory NAA/USPS-T4-7.

(a) What percentage of total routes are in zones possessing 10 or more city routes and/or rural routes with city style addressing?

(b) What percentage of the total volume of letters do the routes in subpart (a) receive?

(c) What percentage of total routes are in zones with five to nine routes?

(d) What percentage of the total volume of letters do the routes in subpart (c) receive?

(e) What percentage of total routes are represented by the 1,183 zones with fewer than 10 routes that receive DPS as a result of local decisions?

(f) What percentage of the total volume of letters do the routes in subpart (e) receive?

Response:

a. Approximately 71% of the total routes are in zones that are served by plants with MPBCSs or DBCSs and have 10 or more city and/or rural routes. Similar to the response to DMA/USPS-T4-85(b), this percentage is not limited to just the rural routes with city style addressing.

b. Redirected to the Postal Service.

c. Approximately 8% of the total routes are in zones that destinate at plants with MPBCSs or DBCSs and have 5 to 9 city and/or rural routes.

d. Redirected to the Postal Service.

e. The 1,183 zones with fewer than 10 routes that receive DPS as a result of local decisions is less than .1% of the total routes.

f. Since the zones with fewer than ten routes receive DPS as a result of a local decision, I am unable to provide an estimate of the percentage of the total volume of letters that the routes receive.

DMA/USPS-T4-86. Please refer to pages 5-7 of your direct testimony. Please provide the number of (I) MLOCRs, (ii) Low Cost MLOCRs, (iii) RBCSs, (iv) DBCSs, (v) CSBCSs, and (vi) MPBCSs being planned for deployment in FY 1997, FY 1998 and FY 1999.

Response:

(i) There are no MLOCRs planned for deployment in FY 1997, FY 1998, or FY 1999.

(ii) There were 100 Low Cost OCRs planned for deployment in FY 1997. I am not aware of any additional planned deployments after FY 1997.

(iii) RBCS is not a piece of equipment. As mentioned in my testimony, there are currently 250 RBCS sites and 55 REC sites. I am not aware of any additional REC sites and/or RBCS sites planned in FY 1998, or FY 1999.

(iv) Approximately 300 DBCSs remained to be deployed in FY 1998 to bring the total of DBCS deployments to nearly 4,800. None are scheduled for FY 1999.

(v) The deployment of 3,732 CSBCSs was completed during FY 1997. I am not aware of any additional planned deployments after FY 1997.

(vi) There are no MPBCSs planned for deployment in FY 1997, FY 1998, or FY 1999.

DMA/USPS-T4-87. Please refer to page 9, lines 12-15, of your direct testimony in which you state there are "no major new equipment deployments (for letters) planned in the near term."

a. Please explain why this is so.

b. Please define "major equipment deployment." Please explain whether there is any new "minor" equipment deployments planned.

c. Please define what you mean by "near term." Please explain whether there are any long term plans to deploy new equipment.

Response:

a. As mentioned in my testimony, the Postal Service's goal is to have 88% of all letters barcoded in FY 1998 and to use those barcodes in accordance with the Postal Service's operating concepts in order to maximize the savings potential of the automation program. There are no major new equipment deployments planned because there is no additional equipment needed to achieve this objective.

b. A "major equipment deployment" describes the deployment of a piece of equipment to the majority of our larger processing field sites. Accordingly, it represents a significant capital investment that must be approved by the Board of Governors, so it is considered a major equipment deployment. As for "minor" equipment deployments, that is a term that is not relevant to our deployment process. However, there are some enhancements and/or modifications that are being considered and/or have been completed to letter processing equipment that could be considered "minor" in the context in which you phrased the question. These items are listed in DMA/USPS-T4-48.

c. The context in which I used the phrase "near term" in my testimony relates specifically to within the test year.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-88. Please refer to page 9, lines 26-27, of your direct testimony where you state that "(b)y the end of Fiscal Year 1998, we anticipate that there will be 154,000 routes on DPS."

a. Please explain whether you have revised your estimate of the number of DPS routes that will exist by the end of FY 1998 since the filing of R97-1.

b. How many DPS routes do you estimate for the end of: (I) FY 1999 and (ii) FY 2000.

Response:

a. The estimated number of routes on DPS by the end of FY 1998 has not been revised.

b. The estimate of 154,000 routes on DPS in FY 1998 is reflective of a "full-up" environment. Accordingly, I do not have estimates for FY 1999 or FY 2000 at this time.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-89. Please refer to page 13, lines 5-24, of your direct testimony. Please provide the number of (I) FSM 881s, (ii) FSM 881s with OCRs, (iii) FSM 1000s (iv) FSM 1000s with BCRs, and (v) FSM 1000s with HSFFs being planned for deployment in FY 1997, FY 1998 and FY 1999.

Response:

(i) There are no FSM 881s planned for deployment during the period of FY 1997 through FY 1999.

(ii) All 812 FSM 881s are scheduled to be retrofitted with OCRs from FY 1998 to FY 1999.

(iii) There were 100 FSM 1000s deployed in FY 1997. An additional 240 FSM 1000s are scheduled for deployment from FY 1998 to FY 1999.

(iv) The Postal Service is still testing barcode readers on the FSM 1000. Accordingly, there has been no Board of Governors approval and there are no deployments scheduled from FY 1998 to FY 1999.

(v) There are no FSM 1000s with HSFFs planned for deployment from FY 1997 to FY 1999.

DMA/USPS-T4-90. Please refer to page 16, lines 13-16, of your direct testimony where you state that "(m)ail volume is measured for each piece handling operation by machine meter, machine printouts, actual piece counts, or, if these methods are not feasible, by weight, or containers, which are then converted to pieces within MODS using national conversion factors," and to your response to DMA/USPS-T4-10.

a. Please describe how "machine meter" and "machine printouts" measure mail volume.

b. Please describe how mail "weight, feet, or containers" are converted to pieces using "national conversion factors."

c. Please describe for which operations and for which types of mail volume is measured by (I) machine meter, (ii) machine printouts, (iii) actual piece counts, or (iv) use of national conversion factors.

Response:

a. All USPS sorting machines have some form of mechanical or automated method for counting pieces processed. In the case of machine meters, the data is numerically displayed on a dial or other similar device. That data is then transcribed to a form for subsequent entry into the MODS system. In other cases, piece count information is generated by computer as part of the automated sorting operation. Data generated in this way can be automatically fed to the MODS system via local area network, by diskette or a printout can be generated for subsequent entry into the MODS system.

b. For mail that is weighed, the total weight of the mail (less the tare weight of the container) is multiplied by the applicable conversion factor (e.g., letter or flats) to determine the number of pieces. For volumes measured linearly (i.e., in feet), the number of feet of mail is multiplied by the applicable conversion factor (e.g., letters or flats) to determine the number of pieces. For volumes derived from container

counts, the number of containers is multiplied by the applicable conversion factor (e.g., letters or flats) to determine the number of pieces.

c. All of the automated and mechanized letter and flat sorting equipment used to distribute mail has the ability to generate piece count data as the mail is sorted, i.e., read by a machine (OCR, BCS) or keyed by an operator (LSM, FSM). Similarly, virtually all of the parcel, sack and bundle distribution systems have the same capability. See LR-H-147 for a definition of the specific operations which utilize those equipment types. The use of national conversion factors for TPH is limited to manual distribution operations. Actual piece counts would be used in very limited circumstances where the volumes involved are extremely small (e.g. registry).

DMA/USPS-T4-91. Please refer to page 16, lines 25-26, of your direct testimony. Please explain how MODS is currently used to "develop local staffing plans and work schedules."

Response:

The MODS system is the sole source of workload data in mail processing. As such, it is the input used for scheduling and staffing decisions. It is used in making both long term and short term decisions. For example, during the course of a tour, volumes processed compared to expected or "normal" volumes, provide an indication of the need for supplemental workhours (PTF, casual) or overtime. Longer term, historical MODS data is used as input to Site META to develop daily volumes and volume arrival profiles. See LR-H-221 for a description of the Site META model.

DMA/USPS-T4-92. Please refer to page 19, lines 2-8, of your direct testimony.

a. Please explain how workloads for each BMC operation use "conversion factors" to convert parcel workloads to "an equivalent parcel sorting workload" using PIRS. In responding, please explain how such conversion factors are calculated and the derivation of the data upon which the conversion factors were determined.

b. Please explain how letter and flat workload and processing productivities are calculated at BMCs using PIRS.

Response:

a. A parcel is the elemental workload unit. Standard conversion factors are used to convert all other workload units (e.g. sacks, containers, etc.) to equivalent parcel sorting workloads in order to make comparisons between facilities possible.. For example, in order to convert sacks counted on the sack sorting machine into equivalent parcels, the number of sacks is multiplied by the equivalent parcel conversion factor for such sacks. Since parcels are the elemental unit to which all others are converted, there is no need to convert parcels to an equivalent parcel sorting workload. The conversion factors used in this process have been in existence since 1985. I am told that the conversion factors were calculated from a "time and motion study" , but have no knowledge of the actual computations or the data involved

b. As noted in my testimony, BMCs process containers and parcels. They do not perform individual piece distribution of letters or flats. See DMA/USPS-T14-34 for a narrative description of PIRS.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-93. Please refer to page 19, lines 10-13, of your direct testimony in which you state that "productivities have changed significantly over the long period, FY 88 to FY 96, covered by the cost study."

a. Please explain how "productivities have changed significantly" between FY88 and FY 96 and provide all data supporting your response.

b. Please describe and provide (as a library reference) the "cost study" to which you refer if you are not referring to witness Bradley's testimony.

c. Although a review of the "major factors that affect productivity" (pages 19 through 22 of your direct testimony) indicates reasons that productivity may have declined, please explain whether the great increase in automated machinery and DPS (as detailed in Section II of your direct testimony) should lead to an overall increase in productivity.

Response:

a. The data speak for themselves. I am told that volumes and workhours by AP for FY88 - FY 96 are available in dataset VVMPO.dat , found in LR-H-148, and productivity is merely the quotient thereof.

b. My testimony was referring to witness Bradley's testimony.

c. Deployment of automated processing equipment increases the efficiency of postal processing operations.

DMA/USPS-T4-94. Please refer to page 20, lines 13-22, of your direct testimony. Please quantify the increase in OCR rejects. Please explain why, although the OCR reject rate may have grown, overall productivity should not increase because of the greater volume of mail being processed more efficiently using barcode readers?

Response:

I am told that the reject rate for the OCR cost pool increased from 31% in 1993 to 36% in 1996. The efficiency of postal processing operations has increased with the deployment of automated processing equipment.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-95. Please refer to page 22, lines 16-23, of your direct testimony. Please explain why the marginal cost of mail processing activities should not differ between MODS and non-MODS offices if the complexity and the employees' familiarity with the local delivery area of non-MODS facilities are significantly different from MODS facilities.

Response:

I have not studied marginal costs and thus am not able to respond to this question.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA

DMA/USPS-T4-96. Please refer to your response to DMA/USPS-T4-18, subpart c, where you state that Standard A letters will be deferred before first class letters and flats are deferred if on Tour 1 an office is unable to sort all the mail in the late surge period.

a. Is this also the case for (I) Tour 2 and (ii) Tour 3? If not, please explain your response(s) fully.

b. Does the deferral in Tour 1 that you cited in your response to DMA/USPS-T4-18 lead to Standard A mail being sorted manually or on LSMs, rather than on OCRs or BCSs? Please explain your response fully.

c. If your response to either part of subpart (a) is "yes," does the deferral in (I) Tour 2 or (ii) Tour 3 similarly lead to Standard A mail being sorted manually or on LSMs, rather than on OCRs or BCSs? Please explain your response fully.

Response:

a. The processing priorities are spelled out in the Postal Operations Manual (LR-H-147). Standard A mail will be deferred before First Class mail is deferred whenever there is a conflict based upon service commitments and capacity constraints to the extent that the two classes of mail are separated from each other. However, most Standard A volume is processed on tour 2 while tour 3 is primarily an outgoing preferential processing tour, and tour 1 is primarily an incoming preferential processing tour.

b. No. Deferral means that Standard A mail will be processed after the First Class Mail within the same processing operation.

c. No. See response to (b) above.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION, INC.
REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-1. Please describe the flexibility that a manager at a mail processing facility has in adjusting his labor force to the amount of mail which must be processed.

a. If during a shift it is clear that there is extra labor, are there limits to the manager's ability to size the work force to the amount of work?

b. If, over the course of an Accounting Period (AP), it is clear that there is extra labor, are there limits to the manager's ability to size the work force to the amount of work?

c. If, over the course of a year, it is clear that there is extra labor, are there limits to the manager's ability to size the work force to the amount of work?

d. To the extent that there is extra labor during a shift, how does a manager decide which operation to assign the labor to?

RESPONSE:

a. Certainly there are limits, but a manager generally has adequate flexibility to size the workforce to the workload. Casual and Part Time Flexible employees will be clocked-out first. If this is inadequate, Full Time Regular employees will be surveyed to find who would like Annual Leave or Leave Without Pay. Alternatively, non-preferential volumes that were scheduled for later could be staffed immediately.

b. Certainly there are limits. Our managers understand that mail volume varies day-by-day throughout the month, and they plan week-by-week their estimated casual and Part Time Flexible needs. This ability to reduce Casual and Part Time Flexible schedules generally provides sufficient flexibility to size the workforce to the workload.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION, INC.
REDIRECTED FROM WITNESS BRADLEY

c. Certainly there are limits, but if attrition is insufficient there are contractual provisions for reassignment and termination which would provide sufficient flexibility.

d. The manager will consider the employee's skills and look at other operations where those skills could be used. Alternately, non-preferential volumes could be rescheduled for immediate processing or the manager could get the excess labor off the clock as discussed in a. above.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION, INC.
REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-7 On page 21 of your testimony, you state that you use Total Equivalent Pieces (TEP) as the measure of workload at BMCs. Please derive the derivation of TEP.

a. For which operations does TEP use actual counts and on which operation are counts derived from conversion factors?

b. If any TEP are derived by conversion factors, please provide them.

c. If any TEP are derived by conversion factors, when were the conversion factors developed.

RESPONSE:

The derivation of TEP is explained by witness Bradley.

a. TEP uses counts for parcels. Conversion factors are used for all other operations.

b. Conversion factors were provided in response to UPS/USPS-T4-1.

c. The conversion factors were implemented in 1985-1986 based on a study completed earlier.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION, INC.
REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-7 On page 21 of your testimony, you state that you use Total Equivalent Pieces (TEP) as the measure of workload at BMCs. Please derive the derivation of TEP.

a. For which operations does TEP use actual counts and on which operation are counts derived from conversion factors?

b. If any TEP are derived by conversion factors, please provide them.

c. If any TEP are derived by conversion factors, when were the conversion factors developed.

RESPONSE:

The derivation of TEP is explained by witness Bradley.

a. TEP uses counts for parcels. Conversion factors are used for all other operations.

b. Conversion factors were provided in response to UPS/USPS-T4-1.

c. The conversion factors were implemented in 1985-1986 based on a study completed earlier.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORY T14-23C OF THE DIRECT MARKETING ASSOCIATION REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-23.

c. Your discussion focused only on the problem of adjusting staffing levels at a facility to mail processing labor requirements within a given activity. Is there also an *overall* constraint operating in mail processing, such that the Postal Service faces short-term rigidities in its ability to match the overall number of clerks and mail handlers it employs at a facility to the total mail processing labor requirements across all MODS activities at that facility?

Response:

c. I interpret this question as asking whether there are binding constraints on the Postal Service's ability to adjust the total craft workforce in a facility to match the total craft workload in the short term (i.e. within a year). Although there are procedural obstacles as noted below, the obstacles are certainly not prohibitive in my experience.

There is an annual workhour budget for each facility based on anticipated workload, and management incentives are based, in part, on budget performance. Hiring "freezes" were used locally on occasion before restructuring in 1992, but since then the only constraint on hiring has been the need to stay within the budget or justify an increase. Excess employees can be reduced through attrition or in accordance with the Labor Agreements. See Articles 6 and 12 of the APWU and NPMHU agreements in LR-H-88.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-51. Please refer to page 25 of your direct testimony, Library Reference H-148 at page H148-4, and your response to DMA/USPS-T14-26a, all of which emphasize the "great value" MODS brings to your econometric analysis because it is an "operational data set.. used for management decisions." Please list all Postal Service planning and management functions or decisions you are aware of which rely, or have relied, on MODS data, and describe the role(s) MODS data plays (or played) in each.

Response:

See Section B "Uses of MODS Data" on pages 16 and 17 of my testimony.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DIRECT MARKETING ASSOCIATION

Handbook M-41 (City Delivery Carrier Duties and Responsibilities). The handbook is being filed in library reference LR-H-239.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE DMA REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-60. Please refer to your response to OCA/USPS-T4-10 where you state that "[i]t is my understanding that the MODS data are widely used by local, regional, and national management." Please fully describe all such uses by local, regional, and national management.

Response:

See Section B, "Use of MODS Data", on pages 16 and 17 of my testimony.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORY T14-23C OF THE DIRECT MARKETING ASSOCIATION REDIRECTED FROM WITNESS BRADLEY

DMA/USPS-T14-23.

c. Your discussion focused only on the problem of adjusting staffing levels at a facility to mail processing labor requirements within a given activity. Is there also an *overall* constraint operating in mail processing, such that the Postal Service faces short-term rigidities in its ability to match the overall number of clerks and mail handlers it employs at a facility to the total mail processing labor requirements across all MODS activities at that facility?

Response:

c. I interpret this question as asking whether there are binding constraints on the Postal Service's ability to adjust the total craft workforce in a facility to match the total craft workload in the short term (i.e. within a year). Although there are procedural obstacles as noted below, the obstacles are certainly not prohibitive in my experience.

There is an annual workhour budget for each facility based on anticipated workload, and management incentives are based, in part, on budget performance. Hiring "freezes" were used locally on occasion before restructuring in 1992, but since then the only constraint on hiring has been the need to stay within the budget or justify an increase. Excess employees can be reduced through attrition or in accordance with the Labor Agreements. See Articles 6 and 12 of the APWU and NPMHU agreements in LR-H-88.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE FGFSA

FGFSA/USPS-T4-1

Provide the "standard conversion factors for each operation", which you refer to on page 19 of your testimony.
a) Provide the source and date of development for each.

Response:

See UPS/USPS-T4-1 for the conversion factors.

a. The conversion factors were implemented in 1985-1986 based on a time and motion study completed earlier.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE FGFSA

FGFSA/USPS-T4-2

In the manual sortation of non-machinable parcels, to what extent are the productivities changed by the use of the Small Parcel and Bundle Sorter (SPBS) and the SPBS Feed System see description of those items in LR-H-10)

Response:

It is difficult to estimate to what extent productivities would be changed by processing non-machinable parcels on the SPBS as opposed to manual sortation. There are several important factors to recognize. Most of the parcels that are not within the machinability dimensions mentioned in section E620.2.5 of the DMM also cannot be processed on the SPBS, so there is not much "candidate volume" to sort on the SPBS. Moreover, even if a non-machinable parcel could be processed on an SPBS, all BMCs do not have SPBS machines and those that do have an SPBS use it primarily for the sorting of bundles as opposed to parcels. The weight, size, and shape of the parcel are also important factors which can have an impact on both mechanized and manual sorting productivities.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE FGFSA

FGFSA/USPS-T4-3

To what extent is the Linear Parcel Sortation System currently in use, and what is the expected implementation of the acquisition of additional equipment? When will it be available and in use at all BMC'S?

Response:

The Linear Parcel Sortation System is currently in use at three BMCs. No additional deployments are scheduled at this time.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE FGFSA

FGFSA/USPS-T4-4

On page 20 of your testimony you refer to 'many of the packages are poorly wrapped". To what extent are these poorly wrapped parcels presented to the Postal Service by mailers using DBMC rates?

Response:

I am not aware of any data relating the quality of parcel wrapping to the source of the parcels in November and December, or at any other time, and thus cannot answer this question.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE FGFSA

FGFSA/USPS-T4-5

Refer to your testimony at page 21. To what extent is the need to staff manual sorting operations to handle 'late surges" to meet service commitments due to the Parcel Post mail? Is the late surge of parcel post mail deferrable to the following day, without creating an inability to meet service commitments for that mail?

Response:

My testimony on page 21 refers to "late surges" in manual operations due to rejects from automated operations. I have not observed significant "late surges" for parcels.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE McGRAW-HILL COMPANIES

MH/USPS-T4-1. With reference to the requirement (DMM E240, adopted after MC95-1) that to be eligible for automation rates, all pieces in a Periodicals mailing must bear an accurate ZIP + 4 barcode (or delivery point barcode), please explain how this requirement has affected the efficiency of handling and processing flats that previously were permitted to be commingled in an automation flat-Periodicals mailing (so long as they bore an accurate 5-digit barcode).

Response:

Pieces that were previously permitted to be commingled in an automation flat Periodicals mailing only bore an accurate 5-digit and could not be sorted to the carrier route level by the FSM barcode reader. As a result, these pieces rejected during incoming secondary processing with the barcode reader and had to be rehandled manually. Today, pieces that do not bear an accurate ZIP + 4 barcode (or delivery point barcode) are not permitted to be commingled in an automation flat Periodicals mailing. As a result, we are able to save a handling, because we do not have to process it on the incoming secondary barcode sort program only to have it rejected because of lack of a ZIP+4 (or delivery point) barcode.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE McGRAW-HILL COMPANIES

MH/USPS-T4-2. In view of the planned retrofitting of FSM 881s with OCR capabilities, and in light of your response to TW/USPS-T4-12(b), please explain whether the Postal Service will consider reinstating its past policy of permitting flats bearing an accurate 5-digit barcode to comprise up to fifteeen percent of a flat Periodicals mailing that is eligible for automation rates. If not, why not?

Response:

It is difficult for me to say whether the Postal Service will consider reinstating its past policy of permitting flats bearing an accurate 5-digit barcode to comprise up to fifteeen percent of a flat Periodicals mailing that is eligible for automation rates. There are several factors we will have to consider as the OCR is deployed to field sites' FSMs. First, the 100% ZIP+4 (or delivery point barcode) requirement compels mailers to keep the quality of their address lists at the highest possible level. Address accuracy helps to prevent costly rehandlings to the Postal Service, so we would not want to institute any kind of change that is contrary to this objective. Similarly, as I mentioned in TW/USPS-T4-10(b), the read rate of the flat mail OCR is not expected to be comparable to a flat mail barcode reader OCR. Therefore, this equates to potentially fewer rejects if the mailer applies a ZIP+4 (or delivery point barcode) versus a 5-digit barcode or no barcode. Third, the Postal Service is considering the placement of barcode readers on the FSM 1000, so there could be additional considerations specifically related to the FSM 1000. In short, it is too early to speculate whether the current requirement can be reconsidered, since the OCR has not been deployed to field sites yet.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE McGRAW-HILL COMPANIES

MH/USPS-T4-3. With reference to your testimony at p.10, lines 19-21, please explain the extent to which the FSM 1000 is capable of processing (a) flats enclosed in polywrap materials other than those currently certified by the Postal Service as acceptable for processing on the FSM 881 (See response to TW/USPS-T4-5(a), (b) flats weighing more than one pound, or (c) tabloid-sized flats.

Response:

a. I am not aware of any other manufacturers' polywrap materials, other than those listed in the attachment to TW/USPS-T4-5(a), that can be processed on the FSM 1000.

b. The FSM 1000 can process flats weighing more than one pound as long as they are within the dimensions specified in TW/USPS-T4-5(f).

c. The FSM 1000 can process tabloid-sized flats as long as they are within the dimensions specified in TW/USPS-T4-5(f).

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE McGRAW-HILL COMPANIES

MH/USPS-T4-4. Please state the extent to which, and the reasons for why, Periodicals (second-class) mail has been processed with (or after) Standard A (third-class) mail at ADCs (or other mail processing facilities other than delivery units) since January 1996, resulting in a delay (loss of preference) in the processing or delivery of Periodicals (second-class) mail, and provide all documents relating to such practice.

Response:

I am not aware of such a practice. Mail is processed in accordance with the distribution priorities stated in section 453 of the Postal Operations Manual (POM 7) filed in Docket No. MC96-3 as USPS LR-SSR-161.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T4-3. Please refer to your response to TWIUSPS-T4-8, part c.

a. Please provide a precise definition of activities and areas that are part of the opening unit function.

b. Please reconcile your statement in part c. that MODS operations 110-129 always mean opening unit with your statement in part f of the question that operations 120-129 are pouching operations.

Response:

a. As defined more formally in LR-H-147, Appendix A, Section 110C and 180C, opening unit functions include the sortation of containers and items, emptying the mail from containers, sortation of bundles, and movement of mail to and from opening units. Due to automation and Reclassification, an increased proportion of opening unit work consists of identifying the content of trays and moving the trays to and from distribution operations. Perhaps more than in any other operation, personnel in Opening Units move about the plant to perform their functions. Postal facilities have a wide variety of dock arrangements, floor arrangements, material handling systems, (e.g. conveyors, elevators, chutes, etc.), and customized procedures to control the movement of mail around the facility. These local circumstances dictate how and where opening unit functions are performed (i.e. the "activities and areas"). Local management then assigns operation numbers within the opening unit series to best assist them in managing opening units consistent with their local circumstances.

b. My answer in TW/USPS-T4-8c, "110C and 180C", is correct as stated. Per the cited reference, 110C means 110-117 and 180C means 180-189. As stated in part f,

120-129 is pouching and, as stated in part g, 110-117 and 180-189 are opening units.

MPA/USPS-T4-4. Please refer to your response to TW/USPS-T4-9, parts a. and e.

a. Please explain why an employee clocked into a MODS mail processing operation who is observed by an IOCS clerk as doing window service or administrative work is not violating proper clocking in and out procedure.

b. Is it possible for clerks to move frequently between window or administrative operations and mail processing or to engage in window or administrative operations and mail processing almost simultaneously?

Response:

a. As I indicated in TW/USPS-T4-9 parts a and e, when an employee is moving frequently between a mail processing operation and window service or administrative work, or is engaged in both operations almost simultaneously, they need not clock out of the mail processing operation (see LR-H-147, Section 312.12). For example, many offices use a separate window for caller service and parcel pickup that is equipped with a buzzer rather than full time attendance. When an employee casing mail in the back hears the buzzer, she goes to the window to perform the window service and related administrative work. Also, the 24-hour window at an Airport Mail Facility is commonly serviced this way at night. An additional consideration is the actual meaning of the IOCS tally. I am told that if an IOCS clerk sees an employee in the window area (e.g. bringing or getting packages) they are commonly tallied as window service.

b. Yes. See part a above.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T4-5. Please refer to your testimony at page 10 on non-carrier route barcoded flats. Please provide a breakdown of barcoded flats by class for 1995, 1996, 1997, and 1998.

Response:

In FY 1995, 1.7% of all First Class flats were barcoded; in FY 1996, 2.1% of all First Class flats were barcoded; and in FY 1997, AP 9 year-to-date, 6.4% of all First Class flats were barcoded.

In FY 1995, 38.8% of all non-carrier route Periodical flats were barcoded; in FY 1996, 42.9% of all non-carrier route Periodical flats were barcoded; and in FY 1997, AP 9 year-to-date, 54.5% of all non-carrier route Periodical flats were barcoded.

In FY 1995, 50.6% of all non-carrier route Standard (A) flats were barcoded; in FY 1996, 62.6% of all non-carrier route Standard (A) flats were barcoded; and in FY 1997, AP 9 year-to-date, 83.5% of all non-carrier route Standard (A) flats were barcoded.

See testimony of witness Tolley (USPS-T6), Exhibit USPS-6A for the FY 1998 breakdown.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T4-6. Please refer to your testimony on page 11 with respect to the percent of incoming secondary volume processed on the flat sorter. Please provide the precise percentage of machineable incoming secondary volume processed on the flat sorter.

Response:

As indicated in the Postal Service's response to TW/USPS-2b, the overall machinability of "bulk" non-carrier route presort flats is 85.73 percent. This estimate does not include First-Class single- piece flats which is why it is referred to as the overall "bulk" average machinability. If we assume that this same percentage applies to First-Class single piece flats, and it may not, we obtain the following. The result reported in my testimony was that 52 percent of the incoming secondary processing of flats at Processing & Distribution plants were processed on the flat sorter. If 85.73 percent of all non-carrier route presort flats are machinable, then approximately 61 percent of the machinable flats (.52/.8573=.606) received FSM incoming secondary at plants.

MPA/USPS-T4-7. Please refer to your testimony on pages 11-12 with respect to the peculiar outputs from the cost models for barcoded and nonbarcoded Periodicals. Please explain any relationship between the enigmatic results of the barcoded/nonbarcoded cost models to the anomalous results for Periodicals costs in general, as described by Witness O'Hara.

Response:

See response to TW/USPS-T4-3(d).

MPA/USPS-T4-8. Please refer to your testimony at page 13. You state that you expect to develop solutions to the enigmatic cost model results for Periodicals and Standard (A) Nonprofit mail in time for the implementation of new rates. Please explain whether you mean operational solutions or cost measurement solutions.

Response:

As I mentioned at page 12, lines 3 through 5, there are unique preparation requirements that apply only to Periodicals mail and it is possible they may have been a factor in creating the enigmatic results. Therefore, the solutions may be preparation solutions as opposed to operational. Also, my testimony was not referring to cost measurement solutions.

MPA/USPS-T4-9. On page 13 of T-4 you describe future flat sorting equipment. You do not describe any replacement equipment for the FSM 881. Please describe any studies, tests or evaluations currently underway or planned for the near future on possible replacement machines for the FSM 881.

Response:

See response to NDMS/USPS-T4-19.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T4-10. On page 13 of your testimony you describe a high speed flats feeder for the FSM 881 and a barcode reader for the FSM 1000.

a. Please describe the results of the field test on the HSFF. Please estimate the increase in throughput for an FSM 881 equipped with an HSFF and provide a cost estimate for retrofitting all FSM 881 machines with HSFFs.

b. Please describe the results of the field test on the FSM 1000 BCR modification. Please estimate the increase in throughput for a FSM 1000 equipped with BCR and provide a cost estimate for retrofitting all FSM 1000s with BCRs.

c. Assuming the Board of Governors approves deployment of BCRs for the FSM 1000, please describe when deployment is likely to be completed for the first 100 FSM 1000s and for all 340 FSM 1000s.

Response:

a. The results of the test did not meet several of the criteria that were evaluated. Accordingly, there are no plans at this time to equip the FSM 881 with a HSFF. Since a procurement has not taken place, I am unable to provide a cost.

b. We have experienced about an 85% read rate with the barcode reader on the FSM 1000. It is estimated that the barcode reader could yield about a 30% improvement in productivity. As I mentioned in ABP/USPS-T4-19, additional testing with production software is still needed. Also, since a procurement has not taken place, I am unable to provide a cost.

c. Deployment is contingent on approval from the Board of Governors. Accordingly, I am unable to estimate the starting and ending dates of such a deployment.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T-11. Please refer to page 16, lines 23-26 of your testimony. Please explain in detail the manner in which MODS-dependent "calculations" are used by local management in making local staffing and scheduling decisions.

Response:

MODS provides the data by tour and operation on volumes and workhours. Calculations can range from a quick computation, dividing an anticipated volume increase by productivity, to an elaborate mail flow simulation using Site META. The former might be used to decide, for example, to move an employee into an operation 30 minutes earlier, and the latter might be needed to justify a change in total facility staffing. Additional information is provided in MPA/USPS 1 and 2 above.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T-12. Please refer to your testimony at page 20 where you discuss the effect of labor agreements on staffing changes. Please confirm that the seniority based bidding process which cascades through the facility limits the Postal Service's ability to match staff to workload in a timely manner.

Response:

Not confirmed. The Postal Service has adequate flexibility to match staff to workload using casuals, transitional employees, overtime, etc. However, productivity is effected as I indicated in my testimony (page 21).

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE MPA

MPA/USPS-T-13. Please refer to page 21 of your testimony where you describe how manual cases must be staffed to handle rejects from automation operations. Please describe what employees assigned to manual cases do while awaiting late surges of reject volume.

Response:

We staff to workload. Supervisors plan to move employees onto the cases when the volume is there, not before.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORY T25-6 OF THE MAJOR MAILERS ASSOCIATION REDICRECTED FROM WITNESS HATFIELD

MMA/USPS-T25-6.

On page 18 of USPS-T25, you state that "the Postal Service intends to reduce LSM processing equipment in automated facilities as much as operationally feasible" and that in your models, "mail that is rejected from automated equipment is sent directly to manual processing." Is it the Postal Service's position that, given all of the costs involved, it is less expensive to process non-machinable letters manually rather than on letter sorting machines. Please explain.

Response:

I assume that the reference to "non-machinable letters" refers only to automation compatibility, and that the letters referred to in the question are machinable on the LSM. The decision to remove LSMs was made for many reasons. Elimination of LSMs simplifies a facility's mailflows, and manual distribution quality is better than LSM quality, which contributes to better service. As more and more of the good machinable mail was diverted from LSMs to automation, the quality of the remaining mail base was considerably less, resulting in increased pick-off arm problems, jams, etc., which negatively impacts LSM productivity. For incoming secondary sortation, LSM operators are paid at a higher level than are manual distribution clerks. LSM clerks also require extensive training. Because of the nature of the job, turnover among LSM clerks is high and the continual training of new operators is costly. Finally, because of the availability of automated processing equipment in the facilities without LSMs, the overall percentage of letter mail distributed manually is very nearly the same as in sites with LSMs.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE MAJOR MAILERS ASSOCIATION
REDIRECTED FROM WITNESS JOSEPH D. MOELLER

MMA/USPS-T36-7.

a. Please confirm that Standard Mail (A) letters are generally processed on the same barcode sorters as First-Class letters.
b. If you cannot confirm, please explain the frequency of occurrences when Standard Mail (A) letters and First-Class letters are processed separately and the circumstances that dictate such separate processing.
c. Are barcode sorters capable of processing Standard (A) letters and First-Class letters together without impairing throughput and productivity?
d. Can barcode sorters detect the difference between First-Class letters and Standard (A) letters and, if so, how?

RESPONSE:

a. Confirmed.

b. Not applicable.

c. Yes, as long as the letters meet the automation compatibility requirements.

d. No.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-1

a. What is the total number of Small Parcel and Bundle Sorter (SPBS) machines (I) currently deployed, and (ii) on order?
b. At the present time, is the Postal Service contemplating ordering more SPBS machines?
c. If deployment of SPB S machines is not yet complete, when will all machines currently on order be deployed?

Response:

a. There are currently 224 SPBSs deployed and nine on order.

b. Yes.

c. The deployment of the nine machines currently on order is expected to be completed in November, 1997.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-2.

In Docket No. MC96-1 the Postal Service indicated that it had retrofitted a small number of SPBS machines with barcode readers, and that such readers enabled the Postal Service to process barcoded parcels more efficiently and at lower unit cost. Does the Postal Service currently have any plans to retrofit more SPBS machines with barcode readers?

a. If so, please indicate the number of retrofit kits that the Postal Service expects to (i) order and (ii) deploy by the end of Test Year.
b. If not, please explain why the Postal Service is not expanding barcoding/automation/mechanization, with the greater efficiency which that entails, to small parcels processed on SPBS machines.

Response:

No, see response to (b) below.

a. Not applicable.

b. The experiment, referenced in Docket Number MC96-1, does not expire until April 28, 1998 and management has made no final decisions regarding retrofitting SPBS machines with barcode readers.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-3.

a. When all SPBS machines currently on order are fully deployed. how many Postal Service facilities then will have an SPBS but not have an FSM 1000?

b. When all FSM 1000s currently on order are fully deployed, how many Postal Service facilities then will have an FSM 1000 but not have an SPBS?

Response:

(a) - (b) I do not know.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-4.

For purposes of responding to this interrogatory, assume that some mailers of Standard A parcels prefer to bypass the BMC and, in consequence thereof, dropship their parcels and enter them at DSCFs. Assume further that (i) the size and shape of the parcels comport with all requirements for the FSM 1000 described in your response to TW/USPS-T4-5(f) *(i.e.,* they are capable of being processed on the FSM 1000), and (ii) the SCF has available capacity on both its FSM 1000(s) and its SPBS(s).

a. On which machine would the Standard A parcels most likely be processed?

b. Under what circumstances or conditions would the parcels likely be processed on the FSM 1000?

Response:

a. SPBS

b. None.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-5.

Does the Standard A mailstream contain any types of parcels that cannot be processed on an SPBS? If your answer is affirmative, please refer to the attachment to RIAA/USPS-T7-4 in Docket No. MC97-2, and explain fully the types of parcels not amenable to processing on a SPBS, using the categories shown there *(i.e.*, (i) CD Box, (ii) video box, (iii) check box, (iv) other box, (v) other, (vi) film envelope, (vii) roll tube, (viii) clothing bag, (ix) prescription on drug, and (x) sample).

Response:

Yes. For instance, roll tubes have a tendency to roll off the SPBS. I am not able to provide you with a full list of all types of parcels that would not be amenable to processing on the SPBS. While it could be assumed that generic pieces, in the categories you mentioned, may be amenable to processing on the SPBS, other characteristics such as piece weight and dimensions could also be factors.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-6.

When all FSM 1000s currently on order are fully deployed, will the Standard A mailstream contain any flats that cannot be processed on either an FSM 881 or an FSM 1000? Please explain fully any affirmative answer.

Response:

Yes. Pieces not meeting the dimensions in section C820.2.0 of the DMM cannot be processed on the FSM 881, and pieces not meeting the dimensions provided in response TW/USPS-T4-5(f) cannot be processed on the FSM 1000.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-7.

Does the Postal Service have under development a high speed flat feeder (HSFF) for the FSM 1000? Please explain Postal Service plans and timetables for this feeder.

Response:

No. I am not aware of any plans or timetables to place a high speed flats feeder on the FSM 1000.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-8.

a. What is (i) the average, and (ii) the maximum throughput of an SPBS without a barcode reader?
b. What is (i)the average and (ii) the maximum throughput of an SPBS with a barcode reader?
c. What size crew is required to obtain the maximum throughput on an SPBS?

a. I am told that processing data for the SPBS without a barcode reader is contained in Docket MC96-1.

b. I am told that processing data for the SPBS with a barcode reader is contained in Docket MC96-1.

c. The number of induction stations on the SPBS varies between four and six. Using the assumption that maximum throughput would be achieved with six stations, a crew of at least 16 would be needed to staff the machine. There would be six operators, six loaders, and at least four, but no more than six, sweepers.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-10.

What is the cost of retrofitting an SPBS with a barcode reader?

Response:

As you mentioned in NDMS/USPS-T4-2, a few SPBSs have been retrofitted with a barcode reader. However, it is likely that the costs for retrofitting this small number of machines is probably not indicative of what it would cost to retrofit an SPBS as part of a production buy that would include all SPBSs. I am, therefore, unable to provide you with an estimate of what it would cost to retrofit an SPBS with a barcode reader. Also, as I mentioned, management has made no final decisions regarding retrofitting SPBS machines with barcode readers.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-11.

Please refer to your response to DMA/USPS-T4-13, in which you point out that the Postal Service has also proposed a parcel barcoding discount in Standard B to incent [sic] even more precoded parcels from mailers." Why has the Postal Service not proposed a similar discount for parcels in Standard A?

Response:

See witness Moeller's response to DMA/USPS-T4-23(b).

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4- 12.

Your response to NDMS/USPS-T32-18 (redirected from Witness Fronk) states that First-Class flats which weigh less than one ounce can be processed on FSM 881s and FSM 1000s provided they meet all other machinability requirements.

a. Prior to processing, does the Postal Service routinely and systematically attempt to cull out from the First-Class mailstream (i) flats that weigh less than one ounce or (ii) "flimsies" (and other nonmachinabies) regardless of weight, or does the Postal Service put all flats on the machine and let the machine divert the nonmachinable pieces to the reject stacker?

b. Of the First-Class flat mail pieces that weigh less than one ounce, what percentage would generally be nonmachinable?

Response:

a. Employees generally try to cull out any flats that are non-machinable.

b. I am unable to answer the question. I am unaware of any data which would provide the information requested.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-13.

Please refer to (i) your response to TW/USPS-T4-5(f) in this docket and (ii) your Docket No. MC97-2, response to NDMS/USPS-T13-I, and:

a. Confirm that the FSM is capable of sorting pieces defined by the DMM as "nonletters" and "nonflats."

b. Confirm that the minimum length for a letter is 5 inches and the minimum length for a flat is 6 inches, while the minimum length for a piece sorted on the FSM 1000 is 3.94 inches.

c. Confirm that the maximum length for a flat is 15 inches, while the maximum length for the a piece sorted on the FSM l000s 15.75 inches.

d. Confirm that the maximum thickness for a flat is 0.75 inches, while the maximum thickness for a piece sorted on the FSM 1000 is 1.25 inches.

e. Has the Postal Service adopted any policy, guideline or standard operating procedure that precludes the processing of Standard A parcels on the FSM 1000 if such parcels conform to (i) the minimum and maximum size dimensions provided in your response to TW/USPS-T4-5(f) and (ii) any other packaging requirements that may be necessary for machinability? If so, please (i) state when such policy, guideline or standard operating procedure was issued, (ii) provide a copy, and (iii) explain all reasons why Standard A parcels that are capable of being processed on the FSM 1000 are precluded from such application.

Response:

a. Not confirmed. Pieces that are "non-letters" and/or "non-flats" could be parcels and parcels are not processed on the FSM as indicated in my response to 13(e) below.

b. Confirmed for letters. Not confirmed for flats. See section C820.2.3 of the DMM.

c. Confirmed.

d. Confirmed.

e. I am not aware of any national policy or guidelines that have been issued regarding the processing of Standard (A) parcels on the FSM 1000. However, I am aware that

field sites generally refrain from processing Standard (A) parcels on the FSM 1000 because of capacity concerns and impact on the delivery units. Processing the Standard (A) parcels on the FSM 1000 would create two separate streams of parcels for the carrier since some of the parcels would be mixed in with the carrier's flats, which would also create handling difficulties at the carrier case.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-14.

Your response to NDMS/USPS-T32-18 (redirected from Witness Fronk) says that "flat sorters by definition are considered mechanized equipment and are generally not referred to as automated equipment."

a. When an FSM 881 is equipped with an HSFF and an OCR/barcode reader, will it still be considered mechanized equipment and generally not referred to as automated equipment? Please explain what distinguishes mechanized equipment from automated equipment.

b. Does the Postal Service have under development a flat sorter that could be considered automated equipment? Please explain any answer that is not an unqualified negative.

Response:

a. Yes. However, your question somewhat implies that the OCR and HSFF will deployed around the same period. A contract has been awarded for the flat mail OCR and deployment will start in FY 1998. In contrast, as I mentioned at page 13 of my testimony, the HSFF is under review. Generally, the difference in mechanized and automated equipment is that mechanized equipment requires operator keying and/or the mailpieces must be fed individually. Equipping the FSM 881 with an OCR and HSFF would allow us to automate more mail, but basically the machine would still be mechanized since some keying may still be performed. See responses to TW/USPS-12(d) and TW/USPS-13(a).

b. I am told that the Postal Service has reviewed some existing flat sorters that are used by other Postal Institutions. However, I am not aware of any development within the Postal Service of a flat sorter that could be considered automation equipment.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.

NDMS/USPS-T4-15

What is the productivity (in terms of either pieces per hour or pieces per hour per operator) for an FSM 881 when operated (i) manually and (ii) with a barcode reader?

Response:

See DMA/USPS-T4-8c.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC

NDMS/USPS-T4-16.

a. What are the principal causes, or the principal sources of, Remote Barcoding System Rejects?

b. To what extent are the dimensions of letter envelopes a cause of Remote Barcoding System Rejects?

Response:

a. Generally, the principal causes of RBCS rejects are related to poor readability of the address and/or insufficient address information.

b. Generally, the dimensions of the letter envelopes are not principle causes of RBCS rejects. Letters with non-automation compatible dimensions are routinely culled for manual processing and are not processed on RBCS.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC

NDMS/USPS-T4-17

Your testimony at p. 5 describes the Multiline Optical Character Reader (MLOCR). What are the minimum and maximum dimensions of mailpieces that can be processed routinely on the Postal Service's MLOCRs?

Response:

The minimum and maximum dimensions for automation compatible mailpieces are listed in C810.20 of DMM 52.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC

NDMS/USPS-T4-18

Your testimony at p. 6 describes the Advanced Facer Canceller System (AFCS). What are the minimum and maximum dimensions of mailpieces that can be processed routinely on the Postal Service's AFCSs?

Response:

The minimum and maximum dimensions that were referenced for the MLOCR in NDMS/USPS-T4-17 are also applicable for the AFCS.

NDMS/USPS-T4-19. Please refer to your response to OCA/USPS-T4-5, which identifies "New Design Flat Sorting Machines" among various mail processing equipment planned for deployment by the end of FY 1999.

a. Will this new flat sorter be equipped with a high speed flat feed mechanism? If so, please describe its capabilities. If not, how will flats be inducted into the machine?

b. Please provide a comparison of the new flat sorter with both the FSM 881 and FSM 1000 in terms of

   (i) throughput per hour;
   (ii) number of stackers/separations;
   (iii) staffing requirements;
   (iv) minimum and maximum dimensions of mail pieces accepted;
   (v) flexibility requirements for mailpieces inducted into the machine; and
   (vi) perceived advantages/improvements offered by the new flat sorter.

c. Will the new flat sorter be deployed as a replacement for either the FSM 881 or the FSM 1000, or in addition to the FSM 881s and FSM 1000s that are already deployed or scheduled for deployment? Please explain fully how the new flat sorter affects and fits into the Postal Service's plans for the mechanized/automated sortation of flats.

d. Does the new flat sorter represent (i) automated or (ii) mechanized processing of flats? If the latter is your response, please explain what would be required in order for flats processing to reach the threshold that the Postal Service regards as automated processing.

Response:

a. As indicated in my response to NDMS/USPS-T4-14(b), I am told that the Postal Service has reviewed some existing flat sorters that are used by other Postal institutions. Also, as I mentioned in my response to OCA/USPS-T4-5, New Design Flat Sorting Machines are planned for deployment by the end of FY 1999. However, these statements should not be interpreted to mean that a decision has been made on this equipment and that the equipment will be deployed in the time frame mentioned. The list of planned equipment

deployments, that was provided in response to OCA/USPS-T4-5, depicts equipment that the Postal Service is evaluating and/or considering for the future. Only after thorough evaluation will the Postal Service pursue deployment of any of this equipment. Moreover, all major equipment deployments must be approved by the Board of Governors and to assume that a machine will be deployed just because we are evaluating and/or considering it is premature. Therefore, any comparisons between FSMs used today and a new design FSM, the configuration of which we have not yet determined, is impossible.

b. Not applicable. See 19 (a).

c. Not applicable. See 19 (a).

d. Not applicable. See 19 (a).

NDMS/USPS-T4-20. Please see NDMS/USPS-T4-2 and your response thereto.

a. How many SPBSs now have barcode readers?
How many of these SPBSs have been deployed at (i) BMCs? (ii) P&DCs?

b. How many SPBSs have been deployed at (i) BMCs? (ii) P&DCs?

c. Please explain whether (and when) SPBSs are used for incoming secondary sortation at P&DCs.

Response:

a. I am told that there are four SPBSs with barcode readers. None of them are deployed at BMCs; two of them are deployed at AMCs; and two of them are deployed at P&DCs.

b. I am told that there are 26 SPBS deployed at BMCs and that the remainder of the SPBSs, as indicated by AUTO in the response to OCA/USPS-T4-20(b), are located at either AMCs or P&DCs. However, I do not have information on how many are at AMCs as opposed to how many are at P&DCs.

c. Generally, SPBS are not used for incoming secondary sortation at P&DCs.

NDMS/USPS-T4-21. Please refer to your response to DMA/USPS-T4-31(b). Please identify the sources of the last two pages of service performance data provided, regarding Express Mail and Priority Mail.

Response:

The source for the Express Mail data was the Electronic Marketing Reporting System (EMRS). The source for the Priority Mail data was the Origin & Destination Information System (ODIS).

U.S. POSTAL SERVICE WITNESS RALPH J. MODEN
RESPONSE TO INTERROGATORIES OF NDMS
REDIRECTED FROM WITNESS CRUM

NDMS/USPS-T28-15.

a. What is the standard staffing configuration for an SPBS?
b. What is the average number of pieces processed per person-hour on an SPBS without a barcode reader?
c. What is the average number of pieces processed per person-hour on an SPBS with a barcode reader?
d. What is the maximum number of sortations on a typical SPBS?

RESPONSE

a. The staffing configuration varies depending on whether an SPBS has four or six keying stations. Also, the type of mail being ran on the SPBS can affect staffing needs. Generally, an SPBS requires two employees - one to key and one to feed mail - for each keying station that is being operated. The amount of employees needed to sweep the machine can also vary, but generally two are used on each side of the machine.

b. See, for examples, the testimony of witness Garvin (USPS-T-3) in docket MC96-1.

c. See, for examples, the testimony of witness Garvin (USPS-T-3) in docket MC96-1.

d. The SPBS has 100 sort separations and one reject separation.

U.S. POSTAL SERVICE WITNESS RALPH J. MODEN
RESPONSE TO INTERROGATORIES OF NDMS
REDIRECTED FROM WITNESS CRUM

DMS/USPS-T28-16.

a. What is the standard staffing configuration on an FSM 1000?
b. What is the average number of pieces processed per person-hour on an FSM 1000 without a barcode reader?
c. What is the average number of pieces expected to be processed per hour on an FSM 1000 with a barcode reader?
d. What is the maximum number of sortations on a typical FSM 1000?

RESPONSE

a. The standard staffing configuration on the FSM 1000 is six employees.

b. See library reference USPS LR-H-169.

c. See library reference USPS LR-H-169.

d. An FSM 1000 has 99 sort separations and one reject separation.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS CRUM

NDMS/USPS-T28-20(a). Please describe in qualitative terms all critical respects in which manual processing of flats differs from manual processing of parcels.

Response:

Manual distribution of flats is accomplished by casing mail in flats distribution cases. Flats to be distributed are loaded (stacked) and faced (i.e., with address side facing up) on a ledge in front of the case. The clerk performing manual distribution of flats holds a quantity of flats to be distributed in one hand or crook of one arm and distributes individual flats with the other. Distribution can be made with relatively little movement required because of the layout/configuration of the case. Manual distribution of parcels is generally accomplished by throwing/tossing parcels into sacks or other containers. Generally, parcels to be distributed manually are dumped onto a conveyor belt or into a container from which individuals distributing them must pick each parcel up one at a time, and orient the piece so that the address is readable. The employee then tosses the parcel into one of the containers as noted above. Other pieces require placement in the proper container which generally requires the sorter to carry the parcel to the container.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS DAVID R. FRONK

NDMS/USPS-T32-18

a. Are First-Class flats processed on automated equipment; i.e., on flat sorting machines such as the FSM 881 or the FSM 1000? If so, at P&DCs where FSMs are available, are First-Class flats routinely given (i) outgoing primary, (ii) outgoing secondary, (iii) incoming primary, and/or (iv) incoming secondary sortation on automated equipment?

b. Can First-Class flats that weigh less than one ounce be processed on FSMs? (ii) Sometimes? (iii) Always? (iv) Never? (v) If not, please specify how flats that weigh less than one ounce are segregated and processed.

Response:

a. Yes, First-Class flats are processed on flat sorting machines such as the FSM 881 or the FSM 1000. However, although the FSM 881 does have a barcode reader, flat sorters by definition are considered mechanized equipment and are generally not referred to as automated equipment. With that in mind, First-Class flats are routinely given outgoing primary, outgoing secondary, incoming primary, and/or incoming secondary on mechanized flat sorters.

b. Yes, as long as the flat meets all of the other machinability requirements. However, it is my understanding that many of the flats that are under one ounce have difficulty meeting the other machinability requirements such as rigidity.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS DAVID R. FRONK

NDMS/USPS-T32-21

In today's automated environment, including remote barcoding, please explain the type of letters that routinely would receive manual processing.

Response:

The types of letters that routinely would receive manual processing throughout the system or at certain locations are listed below.

(1) Non Machinable.

(2) Remote Barcoding System Rejects.

(3) Letters destined for zones that have fewer than five carriers.

(4) Letters that originated and/or destinated in the same non-automated facility.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS DAVID R. FRONK

NDMS/USPS-T32-23

a. Can two-ounce letters be processed on the Postal Service's automation equipment?

Response:

Yes, assuming all other machinability requirements are also met.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS DAVID R. FRONK

NDMS/USPS-T32-23

a. Can two-ounce letters be processed on the Postal Service's automation equipment?

Response:

Yes, assuming all other machinability requirements are also met.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NASHUA PHOTO INC., DISTRICT PHOTO INC.
REDIRECTED FROM WITNESS SHARKEY

NDMS/USPS-T33-31.

The current rate for an 11 ounce piece of First Class Mail is $2.62, and the minimum rate for Priority Mail is $3.00. As a hypothetical, suppose that someone deposited in a collection box an 11.5 ounce package with postage affixed of $2.85 ($2.62 plus an additional 23 cents), and the contents were in an envelope with a preprinted inscription "First-Class Mail."

e. Would the Postal Service return it to sender for an additional 15 cents postage so that it could go as Priority Mail?

f. Would the Postal Service handle it as Priority Mail and attempt to collect 15 cents postage due from the addressee?

g. Would the Postal Service handle it as First-Class Mail and attempt to collect 15 cents postage due from the addressee?

h. Would the Postal Service handle it as First-Class Mail and deliver it without any attempt to collect postage due?

Response:

The above interrogatories were originally labeled as letters e-h. They have been revised in this section to a-d respectively.

a. No.

b. Yes. Provided the misidentification and short paid is detected.

c. No. See my response to b.

d. If it is undetected, yes.

RESPONSE OF POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF NATIONAL ASSOCIATION OF PRESORT MAILERS

NAPM/USPS-T4-1: At page 10 of your testimony you set forth the percentage of all non-carrier route flats which were barcoded in Fiscal Year 1995, Fiscal Year 1996 and through AP9 Fiscal Year 1997. Please break out these percentages by First-Class flats and Standard Flats.

Response:

See response to MPA/USPS-T4-5.

NAPM/USPS-T4-2: Please confirm that the USPS does want to increase the percentage of First-Class flats which are delivered to the USPS with a barcode. If you do not so confirm, reconcile your answer with the testimony of USPS witness Daniel, who at Exhibit USPS-29C, page 1 of 6, estimated first-class unit costs of automated 3/5 digit flats at 17.8857cents as compared to single piece flats at 40.9560 cents.

Response:

Confirmed.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NATIONAL NEWSPAPER ASSOCIATION

NNA/USPS-T4-1. Please provide data indicating by piece, weight and total volume the amount of within-county mail sorted by flat-sorting machines during the base year.

Response:

Piece characteristics, including class and/or subclass of mail, are not recorded for mail that is processed on the flat sorting machines. Consequently, I am unable to provide you with the information you requested.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NATIONAL NEWSPAPER ASSOCIATION

NNA/USPS-T4-2. Please provide data indicating by piece, weight and total volume the projected amount of with-county periodicals volume projected for flat-sorting during the test year.

Response:

See response to NAA/USPS-T4-1.

NNA/USPS-T4-3. Please provide data indicating what proportion of within-county mail volumes was letter-shaped as opposed to flat-shaped during the base year. If you cannot provide data, please confirm that the subclass is heavily dominated by flat-shaped mail.

Response:

The proportion of in county mail volumes that were letter shaped as opposed to flat shaped during the base year is unknown. However, I am told that proportion of mail volumes for all Periodicals that were letter shaped as opposed to flat shaped during the base year can be found on page I-4 of library reference H-129. That information reflects that 90% of all Periodical mail is flat shaped. Based on that information and my personal experience, I confirm that the subclass is heavily dominated by flat-shaped mail.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NATIONAL NEWSPAPER ASSOCIATION

NNA/USPS-T4-4. Please provide data indicating by piece, weight and total volume of the amount of within-county mail sorted by letter-sorting machines during the base year.

Response:

See the response to NNA/USPS-T4-1. The same is also applicable to letter sorting machines.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NATIONAL NEWSPAPER ASSOCIATION

NNA/USPS-T4-5. Please confirm that MPFSM 1000 machines were not in use during the base year and that within-county mail that appeared within the machinable sorts for flats during that year would have been sorted by MPFSM 881 machines. If you cannot confirm, please explain.

Response:

The first part of your statement is not confirmed. I have been told that the first FSM 1000 was deployed in Tampa, Florida on July 12, 1996. The second part of your statement is confirmed in that, with the exception of mail sorted in Tampa, in-county mail that appeared within the machinable sorts for flats during the base year would have been sorted by MPFSM 881 machines.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF NATIONAL NEWSPAPER ASSOCIATION

NNA/USPS-T4-6. Please confirm that MPFSM 881 machines are unable to sort periodicals printed on newsprint. If you are unable to confirm, please explain the circumstances in which a periodical printed on newsprint would be sortable by an MPFSM 881.

Response:

Not confirmed. MPFSM 881 machines are able to sort pieces that meet the automation compatibility requirements specified in section C820 of the DMM. A periodical printed on newsprint, such as one contained in a wrapper, could be processed on the FSM 881 if the flat also met the other automation compatibility requirements.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO INTERROGATORIES OF THE NNA REDIRECTED FROM WITNESS PAFFORD

NNA/USPS T1-2. Please refer to Library Reference H220, report on Case No. 034-1177491, page 8.

a. Please explain how end-of-run data are collected. Please confirm that end-of-run data apply only to automated mail. If you cannot confirm, please explain.

b. Do you agree that end-of-run data would be more reliable than MODS data? If so, please explain why. If not, explain why not.

Response.

a. End-of run data is collected after running a batch of mail through a mail processing machine equipped with counters. On a modern computer controlled machine, the counter readings may be collected through a computer network. On older equipment, dials and mechanical counters will be read and the values transcribed to a form. To the best of my knowledge, every USPS machine for processing individual mail pieces has some type of piece counter.

b. It is my understanding that MODS Total Piece Handling (TPH) volumes are used for cost and volume variation computations in this case, and these volumes for machine processed mail <u>are</u> from end-of-run data. Specifically, MODS TPH data on machine-based operations is collected from machine counters and is defined as Pieces Fed less Pieces Rejected, both from machine counters (with a few minor modifications such as the stray letter belt under the MPLSM). An actual count of pieces processed is certainly more accurate than an estimate, and that is the reason end-of-run data is used where available in calculating TPH. The comments in LR-H-220, page 8,

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE NNA
REDIRECTED FROM WITNESS PAFFORD

refer to First Handling Pieces (FHP) which are counts of pieces sorted in a plant for the first time.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-1. Please refer to your direct testimony at page 5, lines 6-13.

a. What percent of the 88 percent of FY98 barcoded letters are estimated to be barcoded by mailers?

b. What percent of the 88 percent of FY98 barcoded letters are estimated to be barcoded by MLOCRs?

c. What percent of the 88 percent of FY98 barcoded letters are estimated to be barcoded by RBCs?

Response:

a. 50.6%

b. 24.5%

c. 24.9%

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-2. Please refer to your direct testimony at page 5, lines 22-25 and page 6, lines 1-3.

By how much are the planned enhancements to the MLOCRs expected to improve the overall encode rate of the equipment.

Response:

At the time of the last printing of the Corporate Automation Plan, it was anticipated that enhancements to the OCRs, including the ones mentioned in my testimony, would yield an additional 966 million barcodes annually.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-3. Please refer to your direct testimony at page 6, lines 7-9.

a. How many Single Line OCRs (SLOCRs) will remain in service during FY98?

b. When are these SLOCRs scheduled for replacement?

Response:

a. Plans are to phase out nearly all single line OCRs sometime during FY 98. However, as I mentioned in my response to DFC/USPS-T4-3, it is possible that some SLOCRs will remain in service to be used in small facilities for limited applications.

b. See 3(a).

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-4. Please refer to your direct testimony at pate 8, lines 7-9.

a. What percentage of routes currently receive DPS mail?

b. At the end of FY98, what percentage of routes are expected to received DPS mail?

c. By the end of FY98, what is the expected volume of DPS mail?

Response:

a. As of AP 11, FY 1997, 61.5% were receiving DPS mail.

b. At the end of FY 1998, approximately 69 percent of all routes are expected to receive DPS.

c. The expected volume of DPS mail at the end of FY 1998 is approximately 98 billion letters.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-5. Please refer to your direct testimony at page 8, lines 16-19.

a. Are non-barcoded ECR high density letters ever identified and barcoded at the plant to eliminate the need for manual casing? If no, why not?

b. Are non-barcoded ECR saturation letters ever identified and barcoded at the plant to eliminate the need for manual casing? If no, why not?

c. Do any mailers barcode ECR high density letters? If yes, why?

d. Do any mailers barcode ECR saturation letters? If yes, why?

e. Are there any advantages to the Postal Service (e.g., flexibility in processing, reduced costs, improved level of service) in having mailers barcode ECR high density letters? Please explain.

f. Are there any advantages to the Postal Service in having mailers barcode ECR saturation letters? Please explain.

Response:

a. Yes.

b. Yes.

c. Yes. I do not know the reasons why mailers choose to apply barcodes to ECR mail.

d. See 5(c).

e. Yes. ECR high density letters are cased by the carrier, so a barcode would be advantageous because we would avoid having to run the ECR high density pieces through an OCR at the plant in order to apply a barcode. Barcoding this mail could allow us to avoid casing in automated zones.

f. Yes, but only when certain zones determine it is cost effective to merge their ECR saturation mail with their DPS mail. Even within the zones that may merge their ECR saturation mail with their DPS mail, there is limited value to having the barcode and the saturation presort. For CSBCS zones, the barcode would be advantageous because we would avoid having to run the ECR saturation pieces through an OCR at the plant in order to apply a barcode. In these instances, the barcode would be of value, but there would no longer be any value to the saturation sortation since the mail would receive sequencing during processing on the CSBCS. Similar, the barcode would have value to DBCS zones, but there would no longer be any value to the saturation sortation or even the carrier route sortation for that matter. This lack of value of the carrier route sortation for DBCS zones is already reflected today in that these zones are not eligible for the automated Carrier Route rate. The barcode would not be of value to manual zones, because these zones do not receive automated processing.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-7. Please refer to your direct testimony at page 9, lines 22-26.

a. What percentage of total zones have 10 or more city routes and/or rural routes with city style addressing?

b. What percentage of total zones have 5 to 9 routes?

c. How many zones with fewer than 10 routes are expected to receive DPS as a result of local decisions?

Response:

a. 19.1%

b. 20.5%

c. Since these decisions are made on a local basis, I do not have a projection of how many zones with fewer than 10 routes are expected to receive DPS. However, I can tell you that as of Accounting Period 11, 1997, there were 1,183 zones, with fewer than 10 routes, receiving DPS.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-8. Setting aside the desirability of doing so, can all Standard A letter mail be entered as Standard A non-letter mail? If no, please explain which letters cannot be entered as non-letters and why.

Response:

No. Pieces meeting the letter-size dimensions in DMM C050.2.0 must always be mailed as letters with two exceptions. The first exception is that a piece meeting both the letter-size dimensions in C050.2.0 and the dimensions for an automation flat in DMM C820, may be mailed as an automation flat (non-letter). The second related exception is in DMM M820.1.6, which states that pieces that meet both the letter dimensions and the automation flat dimensions may be prepared as a palletized mailing according to the rules for placing flats on pallets under the following conditions: 1) a portion of the mailing job qualifies for and is mailed at the automation flats rates, 2) the number of non-carrier route nonautomation rate pieces in the mailing job does not exceed 10% of the total number of pieces in the entire mailing job, and 3) the nonletter rates are paid for palletized mail that qualifies for Enhanced Carrier Route rates and for nonautomation rates.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-9. Please refer to your direct testimony at page 11, lines 12-14. Please explain all the reasons why, in your opinion, mailer participation in flats barcoding lags expectations.

Response:

Mailer participation in flats barcoding was below expectations up until the implementation of Classification Reform. However, as I mentioned at page 14, lines 6 through 7 of my testimony, we have realized a significant increase in barcoded flats since the implementation of Classification Reform. Accordingly, mailer participation in flats barcoding is now back on track to achieving levels that were originally anticipated.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-10. Please refer to your direct testimony at page 13, line 10. Please explain why the OCR on the FSM 881 is not equipped to spray a barcode on the piece.

Response:

Given the numerous layouts and designs of flat sized mailpieces and the lack of a barcode clear zone, it is not practical for us to try and spray barcodes on flats. Also, many of the presorted flats are sorted to a 5-digit level and only one handling is necessary to sort the mail to carrier route, so spraying a barcode has no advantage over the OCR since there are no subsequent sortations.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-11. Please refer to your direct testimony at page 19, lines 21-28. Assume for a given amount of expected volume that 17 letter sorting machine (LSM) employees are required. Now assume that the expected mail volume doubles with no change in the type or mix of mail to be sorted.

a. How many LSM employees will be needed to handle the new expected volume of mail?

b. Please explain how this staffing level is determined.

Response:

a. Between 17 and 34.

b. If there is sufficient time before dispatch, a single machine with a 17-person crew would be needed for somewhat less than twice as long. If not, a second machine would be added, but perhaps with less than a 17-person crew if fewer than 12 consoles are required to process the mail. Although the LSM is machine paced, I expect that less than twice the workhours would be required because, with twice the volume, there would be labor economies in obtaining mail for the operation, there will be a steadier inventory of mail to be processed at the machine(s), and there should be fewer instances when a console might momentarily run out of mail. Of course, if the mail volume doubled suddenly, there would be an initial period of high workhour requirements, perhaps even double, but if the increase is sustained the workhour requirement will decline as the system adjusts to these economies of scale.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-12. Please refer to your direct testimony at page 20, lines 23-30 and page 21, lines 1-5. If you were measuring how workhours vary over the long-term with volume, would you recommend excluding data during these "adjustment periods" which do not reflect "optimal productivity" at a facility?

If yes, please explain why. If no, why not?

Response:

Yes, if you are referring to measuring productivity in a specific operation that is directly impacted by an unusual event. For example, OCR operations might be new to a facility or, perhaps, rearranged and moved to a different floor. A new or substantially modified operation may have unusually high productivity because only the highest quality mail is fed, or unusually low productivity as personnel gain experience in operating and managing the new equipment. The net effect is hard to predict and may well vary from facility to facility, but these temporary effects will disappear in time and the long range impact on productivity can be observed.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-13. Please refer to your direct testimony at page 21, lines 7-14.

a. Are manual cases staffed before the "late surges" in volume or do staff arrive at the same time as these volume surges? Please explain your response.

b. If volume doubles, will the number of employees staffing manual cases during these volume surges also double? Please explain why or why not.

c. If less than double the employees are needed in the event of a doubling in volume, please provide an estimate of the number of employees needed to staff manual cases. Please explain how this staffing level is determined.

Response:

a. Supervisors plan for staff to ramp-up coincident with a ramp-up in volume, or slightly later than the ramp-up to avoid instances when employees momentarily run out of mail to process. As indicated in my testimony, it is necessary to staff these operations in order to meet service commitments.

b. The minimum staffing required is constrained by the time available to process the mail. The maximum staffing that can be applied is limited by the number of cases available. If the volume doubled suddenly, then the immediate effect might be a doubling of workhours as employees are moved into the operation to get the mail out by dispatch. However, if the doubling is sustained, I would expect less than a doubling of workhours since people generally work faster when there is a steady inventory of mail waiting to be processed and, in any case, the time required to obtain mail and sweep cases would not double.

c. A common practice in local workhour budgeting is to review the MODS records of fluctuations in volume and workload in a group of operations to

observe the demonstrated performance in a work unit. If experience warrants, the budget will disallow a proportion of the workhours that would otherwise be planned to accommodate an increase in manual volume. On a day-to-day basis, supervisors depend on their experience and knowledge of an operation to move personnel in response to workload requirements. I do not have any data on this matter and cannot provide a quantitative estimate.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-14. Please refer to your direct testimony at page 21, lines 15-17.

a. What do manual parcel employees do while waiting for parcels to process? Are they simply idle or are they employed in other operations while waiting for the parcels?

b. If parcel volumes were expected to double, would the number of employees assigned to manual parcel operations double? Please explain why or why not.

c. If less than double the employees are needed in the event of a doubling in volume, please provide an estimate of the number of employees needed to staff manual parcel operations. Please explain how this staffing level is determined.

Response:

a. They may be assigned to other operations temporarily if work with appropriate skill requirements is available. Alternately, they may be busy with various "overhead" activities as described in the next few sentences of my testimony (page 21, lines 17 to 22).

b. I would not expect the number of employees to double either because, dispatch time permitting, the operation is active for longer, or, failing that, because the overhead activities described above that are partially independent of volume.

c. It is a common practice in local workhour budgeting to review the MODS records of fluctuations in volume and workload in a group of operations to observe the demonstrated performance in a work unit. If experience warrants, the budget will disallow a proportion of the workhours that would otherwise be planned to accommodate an increase in manual volume. On a day-to-day basis, supervisors depend on their experience and knowledge of

an operation to move personnel in response to workload requirements. I do not have any data on this matter and cannot provide a quantitative estimate.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-15. Please refer to your direct testimony at page 22, lines 3-15.

a. Are these "gateway activities" staffed to meet the expected volume of mail or is excess capacity planned to ensure that higher than expected volumes can be processed "as expeditiously as possible"? Please explain your response.

b. Are any mail processing operations staffed to handle higher than expected mail volumes? If not, please note which mail operations are staffed in this manner and why.

Response:

a. Activities are generally staffed to meet the expected volume. Employees can be shifted to meet unexpected volumes. However, because "gateway" activities are the first activities to process mail, they have an increased risk of momentary periods of idleness caused by insufficient mail due to inaccurate volume forecasts or transportation problems.

b. No. However, the minimum staffing required to handle the expected volume of mail may, in fact, be able to handle additional mail with little impact on workhours. The classic example of this is Registry operations which are conducted in a closed area where, for security reasons, continuous staffing with minimum personnel movement is required.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN
TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-16. Please refer to your direct testimony at page 22, lines 17-23.

a. If smaller facilities have a steady flow of mail to manual letters and flats operations, is productivity higher for these operation in these facilities? Please explain your response.

b. Please provide all studies and analyses of the productivity of manual sorting operations by size of facility.

Response:

a. Yes. If smaller facilities have a steady flow of mail to manual letters and flats they will have fewer periods of momentary idleness than if the flow is less steady.

b. I am not aware of any studies of manual productivity by size of facility. However, I am told that we have developed different productivities for manual operations given the degree of automation/mechanization for purposes of letter and flat mail processing cost models as used by witnesses Daniel (USPS-T-29), Hatfield (USPS-T-25), and Seckar (USPS-T-26). For letters see Docket No. MC95-1, USPS LR-MCR-2, page D-2 and the testimony of witness Smith (USPS-T-10) at pages 21-23. For flats see USPS LR-H-113, page 102. This is discussed in Docket No. MC96-2 by witness Seckar (USPS-T-4) at pages 8-9.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-17.

a. What percentage of Standard ECR basic letters cannot qualify for Standard Other 5-digit Automation rates because the mailing lacks sufficient density to meet the required 150 pieces per 5-digit area? Please explain how you derived this percentage and provide the source of the data.

RESPONSE:

a. I am told that the percentages of Standard (A) ECR basic letters that cannot meet the Standard (A) 5-digit Automation rates are contained in Table 16 of LR-H195 and Table 16 of LR-H-105. I am also told that their derivation is explained in the Survey Summary section of each library reference.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE NEWSPAPER ASSOCIATION OF AMERICA

NAA/USPS-T4-18. Please refer to your response to NAA/USPS-T4-5. Please provide the following figures. (If you cannot provide an exact percentage, an estimate will be adequate.)

a. What percentage of ECR high density letters are barcoded by the mailer?

b. What percentage of ECR saturation letters are barcoded by the mailer?

c. What percentage of ECR high density letters are barcoded by the Postal Service?

d. What percentage of ECR saturation letters are barcoded by the Postal Service?

Response:

a. I am told that the information is not available and I have no basis on which to make an estimate.

b. I am told that the information is not available and I have no basis on which to make an estimate.

c. I am told that the information is not available. Any decision to barcode ECR High Density and/or Saturation letters is made at the local level, so it is impractical for me to formulate an estimate on how many ECR high density and/or saturation letters are barcoded by the Postal Service. I can tell you, however, that plants concentrate the majority of their efforts on barcoding the ECR basic letters as opposed to the ECR High Density and/or Saturation letters.

d. See response to (c).

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NAA/USPS-T4-19. Please refer to your response to NAA/USPS-T4-5(f). You state that mailer barcoding of ECR saturation letter mail is advantageous for zones where it is cost effective to merge ECR saturation letters with their DPS mail.

a. Please explain how the Postal Service determines whether it is cost effective to merge ECR saturation mail with DPS mail within a zone. What factors determine whether it is cost effective to merge this mail?

b. Please provide the number of total zones within the Postal Service.

c. What percentage of total zones are CSBCS zones?

d. What percentage of total zones are DBCS zones?

e. What percentage of total zones are manual zones?

Response:

a. As mentioned in NAA/USPS-T4-18(c), any decision to barcode ECR High Density and/or Saturation letters is made at the local level. See Library Reference MCR-64 in Docket MC95-1 for the factors that are used to determine whether it is cost effective to merge ECR mail with DPS mail within a zone.

b. 42,997

c. Approximately 6 percent.

d. Approximately 22 percent.

e. Approximately 53 percent.

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NAA/USPS-T4-21. Is it a goal of the Postal Service to have as much letter mail barcoded as possible? Please explain why or why not.

Response:

As mentioned at page 5, lines six through seven, of my testimony, the goal is to barcode 88% of all letters in FY 1998 in order to maximize the savings potential of the automation program.

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NAA/USPS-T4-22. Please refer to your response to NAA/USPS-T4-13 (b). You note that a doubling of mail volumes results in less than a doubling in workhours since ..people generally work faster when there is a steady inventory of mail waiting to be processed..."

a. Do managers take this tendency for people to work faster when there is a steady inventory of mail waiting to be processed into account when scheduling staff for a given shift? If yes, please explain how they calculate the needed staff for a given increase in mail volume.

b. Do mail processors slow down as mail volumes begin to dwindle during their shift? Please explain.

Response:

a. Yes, when calculating staff for manual operations due to volume increases they commonly reduce the estimated additional staffing by an "absorption factor" based on local historical experience. This experience is driven both by the cited tendency and by the component activities of manual operations that do not increase proportionately with volume (e.g. obtaining mail, sweeping, hanging sacks, etc.).

b. Activity in mail processing normally peaks near the end of a tour when sorting must be completed to meet schedule transportation departures. To the extent that mail volume dwindled in any operation, personnel would be moved to help meet peak processing requirements in other operations or clocked out.

OCA/USPS-T4-1. Please provide a list of all mechanized and automated mail processing equipment in use during FY 1996. This list should include equipment specifically referred to in your testimony (LSMs, MLOCR, Low Cost MLOCR, MLOCR-ISS, AFCS, AFCS-ISS, IPSS, DPBC-OSS, DBCS, etc.) as well as any mail processing equipment not specifically mentioned in your testimony.

Response:

Below is a listing of all mechanized and automated mail processing equipment in use during FY 1996. Some of the items that you referenced in your question are actually modifications to existing pieces of equipment and are not stand-alone pieces. I have listed those types of modifications under the appropriate piece of equipment.

Letter Distribution

1. Multiline Optical Character Reader (MLOCR)
    - Co-directory
    - Gray scale camera
    - Hand Written Address Interpretation (HWAI)
2. Single Line Optical Character Reader (SLOCR)
3. Mail Processing Barcode Sorter (MPBCS)
    - Wide Area Barcode Reader (WABCR)
4. Delivery Barcode Sorter (DBCS)
    - Wide Area Barcode Reader (WABCR)
5. Carrier Sequence Barcode Sorter (CSBCS)
    - Wide Area Barcode Reader (WABCR)
6. Remote Bar Coding System (RBCS)
    - Image Processing Sub System (IPSS)

- AFCS-ISS (Input Sub System modification)
- MLOCR-ISS (Input Sub System modification)
- MPBCS-OSS (Output Sub System modification)
- DBCS-OSS (Output Sub System modification)
- Letter Mail Labeling Machine (LMLM)

7. Multi-Position Letter Sorting Machine (MPLSM)
    - Expanded ZIP II Retrofit (EZR II)

Flat Distribution

1. Multi-Position Flats Sorting Machine (MPFSM) 881
    - Flat Mail Barcode Reader (FMBCR)
2. Multi-Position Flats Sorting Machine (MPFSM) 1000

Canceling Operations

1. Dual Pass Rough Cull System (DPRCS)
2. Mark II Facer Canceller/Edger Feeder
3. Advanced Facer Canceller System (AFCS)
4. Model 15 Flats Canceller

Miscellaneous Processing Equipment

1. Computerized Forwarding System II (CFS II)
2. Small Parcel and Bundle Sorter (SPBS)

3. BMC Parcel Sorter
    - Package Bar Code Sorting (PBCS) System
4. BMC Sack Sorter
    - Sack Bar Code Label Scanner System
5. Linear Integrated Package Sorter (LIPS)
6. Integrated Mail Handling System (IMHS)

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OCA/USPS-T4-2. For each type of mechanized or automated mail processing equipment in use during FY 1996, please provide:

a. The number currently installed by CAG of office.
b. The number currently installed by type (MODS, Non-MODS, or BMC) of office.
c. The number currently installed by CAG by type of office.

Response:

The information as specified in your request is not available.

OCA/USPS-T4-3. Please provide a list of each type of mechanized or automated mail processing equipment in use for each year that the MODS system was operational.

Response:

This information is not available.

OCA/USPS-T4-4. For each year that the MODS system was operational, please provide the following for each type of mail processing equipment listed in response to OCA/USPS-T4-3:

a. The number installed by CAG of office.
b. The number installed by type (MODS, Non-MODS, or BMC) of office.
d. The number installed by CAG by type of office.

Response:

This information is not available.

OCA/USPS-T4-5. Please provide a list of all mechanized and automated mail processing equipment planned for deployment by the end of FY 1999. This list should include equipment specifically referred to in your testimony (OCR for FSM 881s, HSFF on FSM 881s, BCR for FSM 1000s, etc.) as well as any mail processing equipment not specifically mentioned in your testimony.

Response:

Below is a list of planned deployments for FY 1998 through FY 1999.

Letter Distribution

1. Mail Cartridge Systems
2. Postal ID Code Readers
3. RCR/HW Mod Kits
4. DBCS/OCRs MOD Kits (Low Cost OCR)
5. DBCS/OSS MOD Kits
6. MMC Stacker MOD Kits
7. AFCS/ISS

Flat Distribution

1. Flat Mail OCR (FMOCR) for FSM 881s
2. Flat Mail WABCR for FSM 1000
3. Additional FSM 1000s
4. New Design Flat Sorting Machines

Canceling Operations

Automatic Facer Cancellers

Miscellaneous Processing Equipment

1. WABCR for CFS work stations
2. Upgraded computer systems for CFS sites
3. Mechanized work stations for CFS sites
4. Material Handling Robots
5. Tray Management Systems (TMS)
6. Small Parcel and Bundle Sorters (SPBS)
7. SPBS Feed Systems

OCA/USPS-T4-6. For each type of mechanized or automated mail processing equipment listed in response to OCA/USPS-T4-5, please provide:

a. The planned deployment by CAG of office by year (as of the end of FY 1997, 1998, and 1999).
b. The planned deployment by type (MODS, Non-MODS, or BMC) of office by year.
c. The planned deployment by CAG by type of office by year.

Response:

Many of our deployment schedules have not been finalized, so I am unable to provide you with all of the information specified in your request. However, where available, a listing of various deployment schedules by equipment by site is being filed as Library Reference H-244. Additionally, the reference also contains a list of processing facilities that includes the MODS code and CAG.

OCA/USPS-T4-7. Please refer to the National Coordination Audit of Mail Volume Measurement and Reporting Systems included in library reference H-220. Page 8 of this document states, "Management's lack of confidence in daily MODS data diminished the usefulness of the MODS system as a management tool." Please provide all documents relating to the reliability of MODS data and that of any predecessors to the current MODS system.

Response:

The only other relevant document that I am aware of is the National Coordination Audit on Allied Workhours provided to the OCA in LR-H-236.

OCA/USPS-T4-8. Your testimony states that "the equipment and mailflows [at smaller facilities not covered by MODS] are similar to those at facilities reporting to MODS, and the factors accounting for volume variability would thus be much the same regardless of facility size."(page 22, lines 20-23).

a. Please confirm that the equipment and mailflows are not identical at MODS and Non-MODS facilities. Please provide all documents relating to comparisons of the use of mail processing equipment and mailflows by facility type (MODS, Non-MODS, BMC).

b. Please confirm that the equipment and mailflows are not identical at facilities of different sizes. Please provide all documents relating to comparisons of the use of mail processing equipment and mailflows by facility size (i.e., CAG, employee complement, square footage, etc.).

c. Please confirm that the factors accounting for volume variability are not identical for facilities of different types. Please provide all documents relating to comparisons of volume variability for mail processing equipment by facility type.

d. Please confirm that the factors accounting for volume variability are not identical for facilities of different sizes. Please provide all documents relating to comparisons of volume variability for mail processing equipment by facility size.

Response:

a. Confirmed. Equipment and mailflows are not "identical" among MODS facilities or between MODS and Non-MODS facilities. I am not aware of any documents relating to comparisons of the use of mail processing equipment and mailflows by facility type (MODS, Non-MODS, BMC).

b. Confirmed. Equipment and mail flows are not likely to be "identical" even among facilities of the same size. I am not aware of any documents relating to comparisons of the use of mail processing equipment and mailflows by facility size (e.g. CAG, employee complement)

c. Redirected to witness Bradley

d. Redirected to witness Bradley

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OCA/USPS-T4-9. Please refer to the description of MODS beginning at page 15 of your testimony.

a. Please confirm that MODS is not a sampling system. If you confirm, please confirm that MODS estimates are not subject to sampling error. If you do not confirm, please describe in detail the sampling plan and estimation procedures used for MODS.

b. Please confirm that MODS data are subject to nonsampling error. If you confirm, please describe the types of nonsampling error affecting MODS data and provide any studies relating to the magnitude of this nonsampling error. If you do not confirm, please provide any studies or documents used to establish the absence of nonsampling error.

c. Please provide a comparison of nonsampling error for MODS relative to nonsampling error in the major statistical sampling systems (IOCS, RPW, TRACS, and the City/Rural Carrier Systems).

RESPONSE:

a. Confirmed. MODS is not a sampling system and as such is not subject to sampling error.

b. Confirmed that MODS is subject to non-sampling error. The MODS data in general are subject to error associated with the entry of the data or malfunctions of the communications between systems. For MODS workhour quantities, these should be minimal because the MODS workhours are derived from the payroll system. However, at the three-digit operation level, MODS hours data may be recorded against the wrong operation because workers may be clocked into an operation different from the one in which they are actually working. The MODS TPH data are subject to non-sampling error from conversion factors used to estimate TPH from weight, container counts, or feet of mail in manual operations. The only studies of non-sampling errors of which I am aware are library references H-220 and H-236 These studies are of limited relevance. H-220 discusses FHP while TPH is used n

this case. H-236 involves only 25 facilities, possibly selected to maximize the chance of finding problems. For example, just one of these facilities – Baltimore, a multi-floor facility served by elevators – accounted for over a third of instances where personnel were clocked into allied operations but working elsewhere.

c. I am not able to compare non-sampling errors for MODS to other major data systems because I am not aware of any studies related to non-sampling error other than those mentioned in part b above. MODS data is important in operations management. In my experience, field personnel exercise considerable care to ensure accuracy and, I have been told, witness Bradley's models suggest that the data set is indeed accurate.

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OCA/USPS-T4-10. Please refer to page 2 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220. This states:

> Our audit of MODS scale transactions at 20 P&DSs revealed large variances between the mail pieces projected from MODS and actual pieces run for FHP volume. MODS low level of accuracy as an indicator of mail volume resulted from inadequate conversion factors, improper data input by employees, and scales out of tolerance. Management's lack of confidence in daily MODS data diminished the usefulness of the MODS system as a management tool. We recommended the elimination of the MODS scale weight system for volume data collection.

a. Would the types of errors summarized in this National Coordination Audit be considered as nonsampling errors? Please explain.
b. Please confirm that the MODS data used by witness Bradley to develop cost pool variability estimates relied on data subject to the problems noted above. If you do not confirm, please explain all steps taken to remove inaccuracies from the historical MODS data used by witness Bradley.
c. If management lacks confidence in MODS data, then how can confidence be placed in the use of MODS data to develop cost pool variability estimates? Please explain.
d. Over the past nine fiscal years, has the level of management confidence in MODS data increased or decreased? Please provide any documents or studies related to your response.
e. Over the past nine fiscal years, has the overall level of reliability of MODS data increased or decreased? Please provide any documents or studies related to your response.
f. The Postal Inspection Service conducted this audit at 20 MODS sites. These sites are listed on page 4 of the audit report. Please explain whether the sites chosen by the Postal Inspection Service are representative of activities at other MODS sites.

RESPONSE:

a. Yes. MODS is not a sampling system so that any error would, of necessity, be a non-sampling error.

b. Redirected to witness Bradley.

c. MODS is a key operational data system for the USPS and the data is used by all levels of operational management. Therefor I do not agree that management lacks

confidence in the data. The fact that the Inspection Service chose to conduct a major field audit is, in my estimation, evidence of the system's importance and management's reliance on it. The remainder of this question is redirected to witness Bradley.

d. I have not noticed any significant change in management's confidence in MODS data over the last 9 years. I am not aware of any documentation other than library references H-220 and H-236.

e. I am not aware of any studies of the overall reliability of MODS data other than those I have referenced above in my answer to part d. Although the MOD system includes data in addition to hours and TPH, I understand that the testimonies of witnesses Bradley and Degen only rely on these two variables. Hours data have been based on the same clocking system that is used for payroll for the entire nine-year period. I am not aware of any changes in clocking reliability over the period. The TPH data are primarily based on machine counts. There has been an increase in the use of machine counts over this period due to increased automation, which would improve the overall reliability of workload data. I understand that incorrect but consistent conversion factors in non-machine operations would preserve the pattern that the econometric model seeks to estimate.

f. The "activities" performed at those sites are generally representative of the activities performed at other MODS sites. There may, however, be specific differences depending on a particular site's network responsibilities. For example, some sites are ADCs, AADCs, or concentration centers while others do not perform those functions.

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OCA/USPS-T4-11. Please refer to page 8 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220. This states:

> Observations at all 20 sites were made to determine the methods used by employees weighing mail into the SWS. Our review disclosed a number of inconsistencies regarding the application of tare weights at over half the sites audited.

a. Please describe the various possible (correct and incorrect) applications of "tare weights" in the mail weighing process.
b. Over the nine fiscal years' worth of MODS data used by witness Bradley to produce cost pool variabilities, has the proportion of MODS sites that improperly use tare weight data increased or decreased? Please explain and provide any documents or studies related to your response.

RESPONSE:

a. Tare weights are the weights of the containers themselves that must be subtracted from the total weight when mail is weighed in a container. I assume that correct application of tare weights means subtracting the correct tare weight and incorrect application means subtracting the incorrect tare weight or not subtracting the tare weight at all.

b. I am not aware of any studies of the application of tare weights upon which an answer could be based.

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OCA/USPS-T4-12. Please refer to page 8 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220. This states that at one of the 20 audited sites, the Scale · Weight System (SWS) was not used to determine FHP volumes. Instead, FHP volumes were computed by counting the number of trays and multiplying by 534 pieces.

a. Please confirm that this procedure overstates FHP volume by 66 percent. If you do not confirm, please explain.
b. Please provide an estimate of the number of MODS sites that currently use this procedure (i.e., multiplying by 534). Please provide any documents or studies related to your response. If the answer is not known, then please confirm that the best available information is that one in twenty sites uses this procedure.
c. Over the nine fiscal years' worth of MODS data used by witness Bradley to produce cost pool variabilities, has the proportion of MODS sites that use this procedure (i.e., multiplying by 534 instead of using SWS) increased or decreased? Please explain and provide any documents or studies related to your response.

RESPONSE:

a. I can confirm that the audit found, for that one site on that one day, the site's improper procedure overstated FHP by 66%.

b. It is impossible to generalize from an anecdote regarding a single facility and I am not aware of any other studies related to this response. In my judgment, the procedure is rare and, indeed, was highlighted in the audit report because it is so unusual.

c. I am not aware of any information regarding changes in the number of sites that use the described method over the nine-year period.

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OCA/USPS-T4-13. Please refer to page 8 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220. This states that plant productivity based on actual machine count data would be more reliable than First Handling Piece (FHP) data. Management indicated that a Last Handling Piece (LHP) indicator could be an alternative to FHP.

a. Please provide copies of any studies or documents related to the choice of FHP over LHP or actual machine count data.

b. Please confirm that FHP was used in each of the nine fiscal years of MODS data that witness Bradley uses to estimate variabilities. If you do not confirm, please list how volumes were determined for each of those nine years.

RESPONSE:

a. The interest in LHP reported in the audit was apparently stated by a field manager. I am not aware of any serious consideration of LHP in Headquarters, nor of any studies or documents relating to the choice of FHP over LHP.

b. Redirected to witness Bradley.

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OCA/USPS-T4-14. Please refer to page 9 of the December 1996 National Coordination Audit of Mail Volume Measurement and Reporting Systems, included in library reference H-220. This states, "The conversion rates listed in the MODS Handbook, M-32, have not been updated since the 1980's."

a. Please state the year that the M-32 conversion rates were last updated.

b. Please confirm that to the extent that mail composition and density changes over time, the most accurate volumes would be computed from the M-32 conversion factors in the year they were updated and that use of dated conversion factors would reduce the accuracy of computed volumes in each subsequent year. If you do not confirm, please explain.

RESPONSE:

a. I am informed they were last updated in 1986.

b. I can confirm that to the extent that mail composition and density change over time, the most accurate volumes at a national level would be computed from the M-32 national conversion factors in the year they were updated. However, accuracy need not decline in each subsequent year if composition and density shift back towards the base year. Also, changes in mail composition and density at any one facility could move their composition and density closer to the base year national average, thus improving accuracy at that facility.

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OCA/USPS-T4-15. Please refer to page 2 of the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236. This report states, "The lack of supervisory control and review of employee clockrings resulted in improperly charged workhours to LDC 17. Our review disclosed Management Operating Data System (MODS) workhours reported for opening unit operations were in error approximately 31 percent of the time."

a. Would these workhour reporting errors be considered as an example of nonsampling error for MODS? Please explain.
b. This audit examined opening unit operations at the 25 P&DCs listed in Exhibit 1 of the report. Please explain whether the sites chosen by the Postal Inspection Service are representative of activities at other MODS sites.
c. Over the nine fiscal years' worth of MODS data used by witness Bradley to produce cost pool variabilities, has the error rate in recording workhours increased to the 31 percent level or decreased to that level? Please explain and provide any documents or studies related to your response.

RESPONSE:

a. Yes. MODS is not a sampling system so any errors would, by definition, be non-sampling errors.

b. See my answer to 10f. above.

c. Note that LDC 17 represents only a portion of MODS costs, the opening unit is only a portion of LDC 17, and the LR-H-236 study covers a portion of LDC 17 costs at 25 sites that may well have been chosen to maximize the chance of finding management problems. It is improper to conclude from this that the overall MODS clocking error rate is 31 percent, or even that errors in opening unit workhours are 31%. The 31% figure in the audit appears to include both employees clocked into opening units but working elsewhere and employees working in opening units but clocked elsewhere. I would expect the clocking error rate to be much lower for other MODS operations defined for witness Bradley's variability study because allied labor, by it's very nature, commonly interacts with several other operations

while personnel in distribution assignments have a more stable work location. Also, any mis-clocking within a cost pool would be an error in the audit, but, by definition, summarized out of the cost pools used in this case. As to how this has changed, I have no knowledge and I am not aware of any studies that would have addressed this issue.

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OCA/USPS-T4-16. Please refer to page 10 of the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236. Out of a total of 25 P&DCs visited, "Several plants had employees who were performing direct distribution functions, but were clocked into LDC 17 operations. This allowed the productivities of direct distribution operations, with specific benchmarks and perceived higher priorities, to be artificially higher." Footnote omitted.

a. What is the proportion of MODS sites at which employees clock into LDC 17 operations, but perform direct distribution functions?
b. What is the proportion of employee hours clocked into LDC 17 operations but actually performing direct distribution functions?
c. Please refer to pages 21 and 25 of library reference H-89. These pages describe data recoding that was performed for the city and rural carrier systems because of implementation of MC95-1 rate categories on July 1, 1996. Some third-class single piece mail was randomly recoded as third-class bulk rate to achieve consistency between PQ 4 volumes for FY 1995 and FY 1996. Did you randomly recode some of the LDC 17 operations workhours as direct distribution operations to account for the fact that some of these employees are really performing direct distribution operations? If not, why not. If so, please describe the recoding process.
d. Over the nine fiscal years' worth of MODS data used by witness Bradley to produce cost pool variabilities, has the proportion of time that employees were clocked into LDC 17 operations but actually performing direct distribution operations increased or decreased to the current level? Please explain and provide any documents or studies related to your response.

RESPONSE:

a. I am not aware of any other studies on this issue.

b. I am not aware of any other studies on this issue.

c. Redirected to witness Degen.

d. I am not aware of any other studies on this issue.

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OCA/USPS-T4-17. Please refer to page 18 of the December 1996 National Coordination Audit of Allied Workhours contained in library reference H-236. At the 25 selected P&DCs, employees were checked for clockring accuracy. Of the 2,412 employees checked, 128 were working in opening unit operations but clocked into other MODS operations and 616 were clocked into opening unit operations but were found working elsewhere.

a. Are these clocking error rates typical of the errors that do not involve LDC 17 operations? If not, please explain how prevalent the clocking error rates are for other MODS operations.
b. Please refer to Exhibit 3 of this audit report. At four of the 25 P&DCs, the number of employees clocked into the opening unit but working in another operation exceeded the number of employees clocked into and working in the same opening unit operation. Would MODS data from these facilities be present in the MODS data sets provided to witness Bradley for variability estimation?
c. In addition to the four P&DCs referred to in part b of this interrogatory, are there any others in the MODS data sets provided to witness Bradley at which more employees are clocked into an opening unit but working elsewhere than are clocked into and working in the same opening unit operation? Please explain.

RESPONSE:

a. I am not aware of any studies that could provide an answer to this question. However, "errors" as defined in this audit would be less likely in other operations. If allied labor is serving several operations, they are properly charged to LDC 17, but might have been found by the Inspectors while in only one of their operations and charged as an "error". For example, if allied labor is bringing mail to manual and mechanized flats operations, the Inspectors could have observed them loading flats on the ledges at the flats cases.

b. Yes. It is my understanding that witness Bradley did not perform any data scrubs to specifically address the mis-clocking problem raised in the audit, however the observations for those sites would have had to pass the scrubs described in USPS-

T-14 at pages 25-33. I do not know if witness Bradley's scrubs eliminated data for these sites..

c. I do not know and I am not aware of any studies that could answer that question. It is my understanding that the statistical strength of witness Bradley's results indicate this could not be a serious problem.

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OCA/USPS-T4-18. There is a Business Wire story, dated September 2, 1997, from Menlo Park, California, reporting a program to enhance the Postal Service's multi-line optical character recognition (MLOCR) system at 250 sites by September of this year with a co-processor program developed at SRI International.

a. Is this the same program listed in Library Reference H-10, Exhibits B and C as MLOCR Co-Directory/Co-Processor with costs for FY 1998 above the prior year of $2.458 million (LR-H-10, Exhibit B, page 3) and cost reductions for the test year after rates of $27.945 million? (LR-H-10, Exhibit C, p.2). If you do not confirm, please explain.

b. Please explain if this is the same program discussed in your testimony (T-4, pages 5-6) regarding the enhancement of the MLOCRs to improve the overall encode rate of the OCR and which you stated in response to an interrogatory (DMA/USPS-T4-2d) costs $23,000 for a Co-Processor and $18,000 for a Co-Directory to retrofit each MLOCR.

Response:

a. I have not seen the Business Wire story dated September 2, 1997, so I cannot absolutely confirm that the story is about the same programs listed in Library Reference H-10. However, the Co-Directory and Co-Processor programs listed in Library Reference H-10 are the same programs that were mentioned in my testimony and in the response to DMA/USPS-T4-2(d).

b. See 18(a).

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OCA/USPS-T4-20. According to page 20-2 of library reference H-1, depreciation is determined for each of the 21 mail processing equipment categories listed in Appendix F of H-1.

a. For each of the types of equipment listed in your response to OCA/USPS-T4-1, please indicate the mail processing equipment category to which it belongs. If an equipment type does not fit precisely into one of the Appendix F categories, please indicate all categories it might be associated with or explain why it does not fit in any of the categories.

b. For each Appendix F equipment category, please provide the number of pieces of each equipment type in that category currently installed by CAG of office.

c. For each Appendix F equipment category, please provide the number of pieces of each equipment type in that category currently installed by type (MODS, Non-MODS, or BMC) of office.

d. For each Appendix F equipment category, please provide the number of pieces of each equipment type in that category currently installed by CAG by type of office.

Response:

a. I am told that the mail processing equipment category for the majority of the types of equipment that I listed in response to OCA/USPS-T4-1 can be found in Library Reference H-127, pages IV9 to IV-12. Also, as indicated in that response, some of the items included in that list were modifications to the equipment and therefore should not be considered as types of equipment. Integrated Materials Handling System (IMHS) components are categorized as indicated in LR-H-127 on the cited pages. In addition, the Linear Integrated Package Sorter (LIPS) has been constructed locally, rather than procured, from available parts and supplies in recent years. As a result, this equipment may not be capitalized. Depreciation and maintenance expense records do not separately track the costs for this equipment

so it is not known what category the cost for this equipment is contained. Most likely it is in the General and Logistics categories. In any event, the costs for this equipment are likely to be relatively small.

b. Redirected to the Postal Service.

c. Redirected to the Postal Service.

d. Redirected to the Postal Service.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE

OCA/USPS-T4-24. Please refer to your response to OCA/USPS-T4-6 and library reference H-244.

a. Please confirm that the deployment sites listed at pages 1-5 of H-244 are all CAG A MODS offices. If you do not confirm, please explain.
b. Please confirm that the deployment schedules in H-244 are only for CAG A MODS offices. If you do not confirm, please explain and show where the schedules indicate Non-MODS or lower CAG offices.
c. Please refer to your response to OCA/USPS-T4-2. Please explain how these deployment schedules of H-244 can be developed without the availability of current mail processing equipment levels at individual offices.
d. Please confirm that new automated mail processing equipment is only scheduled for deployment to MODS offices, BMCs, and RECs. If you do not confirm, please provide a citation to pages of H-244 that show deployment schedules for Non-MODS offices.

Response:

a. Not confirmed. The deployment sites listed at pages 1-5 of H-244 are CAG A offices. However, the list also included BMCs which are non-MODS locations (designated on the report as MODS code 3).

b. Not confirmed. There are some offices listed in the deployment schedules contained in H-244 that were not listed in pages 1 through 5. Although the deployment schedules do not explicitly indicate non-MODS or lower CAG offices, cross referencing the deployments with the list of offices on pages 1 through 5 reveals that there are deployments to offices in small to medium size locales that are not contained on the list of facilities at pages 1 through 5. For instance, the CSBCS schedule (page 8) reflects a deployment to the Falls Church, Virginia Post Office. As mentioned in 20 (b) the list of locations on pages 1 through 5 of H-244 are where the majority of our equipment is located and are all CAG A offices. Also,

a list of current MODS facilities was provided in response to TW/USPS-T4-1(c). If an office is not included on that list, then it is a non-MODS office.

c. Deployment schedules are determined through requirements calls with the Area offices and field offices. The requirements call is a process to validate the need for a given type of equipment. As a part of the requirements calls, field sites provide the number of existing units that they have for a given piece of equipment along with the number of additional units that are needed as well as any other pertinent information.

d. Not confirmed. See 24 (b).

OCA/USPS-T4-25. Please refer to the attachment to your response to DFC/USPS-T4-8. For each entry in this table, please provide:

a. The CAG designation of the office.

b. The type (MODS, non-MODS, or BMC) of office.

Response:

a. See response to OCA/USPS-T4-20b.

b. See response to OCA/USPS-T4-20b.

OCA/USPS-T4-26. Please refer to the attachment to your response to DFC/USPS-T4-10. For each entry in this table, please provide:

a. The CAG designation of the office.

b. The type (MODS, non-MODS, or BMC) of office.

Response:

a. See response to OCA/USPS-T4-20b.

b. See response to OCA/USPS-T4-20b.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE

OCA/USPS-T4-27. This interrogatory follows up on your response to interrogatory DMA/USPS-T4-42b, in particular, to your statement: "[M]ail with a window of requested in-home dates may be curtailed consecutive days."

a. Is it plausible to expect that some Postal Service costs are higher when mail is curtailed for the benefit of the mailer (so that mail delivery can be timed for a particular "window"), e.g., storage or space-related costs? Please explain.

b. Is it possible that such curtailment (i.e., for the benefit of the mailer), can even add to labor costs? Please explain.

Response:

a. No. I am not aware of any additional costs to the Postal Service as a result of mail being curtailed for the benefit of the mailer. For instance, there are no storage or space-related costs since the mail is staged within the existing floor space in postal facilities.

b. No. Curtailment, whether it is for the benefit of the mailer or the Postal Service, provides managers with flexibility to level the workload and plan accordingly.

OCA/USPS-T4-28. Does the Postal Service ever "curtail" delivery of First-Class Mail at the request of the mailer?

a. If so, under what circumstances? Please relate anecdotal descriptions of instances in which First-Class mailers have requested or might wish to request curtailment so that a delivery window can be met.

b. If not, why not?

c. What is the Postal Service's policy when a request for curtailment by a First-Class mailer is submitted? If any documentation of such a policy exists, please provide it.

d. For purposes of comparison, what is the Postal Service's policy when a request for curtailment by a Standard A mailer is submitted? If any documentation of this policy exists, please provide it.

Response:

Yes.

a. Generally, mailers of First Class mail do not request curtailment of their mail. An anecdotal scenario in which First Class mail may be "curtailed" is when government issued checks (e.g., Social Security checks) sometimes arrive early to delivery units, so the mail is held for delivery until the appropriate day.

b. Not applicable.

c. As I mentioned in 28(a), mailers of First Class mail generally do not request curtailment of their mail. Accordingly, I am not aware of a national policy regarding the handling of a request for curtailment by a First Class mailer.

d. See 28(c) regarding a policy on First Class mail. See section 472 in the Postal Operations Manual (POM 7) for the policy on accommodating a mailer's requested in-home dates window for Standard (A) mail.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
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REDIRECTED FROM WITNESS DAVID R. FRONK

OCA/USPS-T32-38. Please describe fully how, under the current state of automation in letter processing, processing equipment detects that First-Class mail does not bear sufficient postage.

a. Are stamps encoded to signify their postage to automation equipment used by the Postal Service? Explain.

b. Will the Postal Service implement any new procedures in mail processing if their PRM and QBRM proposals are adopted? Explain.

c. Witness Potter in Docket No. MC95-1 stated in his rebuttal testimony that "the automated facer/canceler equipment is designed to identify mail that has little or no postage, but cannot necessarily identify the precise level of postage applied." Rebuttal Testimony at 13, n.8, Tr.16220. Is this statement still true? Please discuss.

RESPONSE:

a. No. Stamps, with the exception of low denominations, only contain an invisible phosphorescence coating. The coating is used by canceling equipment to detect if postage has been applied to the mailpiece.

b. No. There are no new procedures anticipated in mail processing if the PRM and QBRM proposals are adopted.

c. Yes. The Automated Facer Canceler System (AFCS) looks for the phosphorescence coating on a stamp to determine if there is postage on a mailpiece, but the AFCS is unable to identify if the precise level of postage is applied. The AFCS is able to identify that the mail has little or no postage applied because low denomination stamps do not have the phosphorescence coating.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE
REDIRECTED FROM WITNESS DAVID R. FRONK

OCA/USPS-T32-39. Please discuss how, under the current state of automation in letter processing, the Postal Service delivers mail with underpayment of postage, and how it collects postage due. Please compare how the Postal Service handles short-paid First-Class mail versus non-paid First-Class Mail.

RESPONSE:

Procedures and guidelines for handling mail that does not bear the proper amount of postage are covered in section P011 of DMM 52. In brief, short-paid First-Class mail is marked to show the total deficiency of postage and is delivered to the addressee on payment of the charges marked on the mail. In contrast, non-paid First-Class mail is endorsed "Returned for Postage" and is returned to the sender without an attempt at delivery.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE
REDIRECTED FROM WITNESS DAVID R. FRONK

OCA/USPS-T32-40. Referring to the previous interrogatory, does the Postal Service maintain any policies whereby it decides to forego collection of underpayment or nonpayment of postage? If so, please describe.

RESPONSE:

I am not aware of any policies that instruct offices to forego collection of underpayment or nonpayment of postage.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF THE OFFICE OF THE CONSUMER ADVOCATE
REDIRECTED FROM WITNESS DAVID R. FRONK

OCA/USPS-T32-51. Has the Postal Service surveyed or analyzed the automation compatibility of courtesy reply envelopes of the type frequently sent by business concerns to households (e.g., utility companies that send prebarcoded envelopes to customers)? Please describe any results or analysis. If such results or analysis are contained in a report, submit that report. If there exists more than one report, submit the most recent version. If no survey or analysis has been conducted, please explain why.

RESPONSE:

No. Generally, courtesy reply envelopes meet the automation compatibility requirements, so there has not been a need for formal survey or analysis. Moreover, many courtesy reply envelopes bear a facing identification mark (FIM) and barcode as a result of proactive steps taken with mailers prior to the printing of the envelopes. For instance, Mailpiece Design Analysts (MDAs) work with these businesses to help them design their courtesy reply pieces to be automation compatible. Part of this work includes providing the mailer with a camera-ready positives that can be given to the envelope printer, so a FIM and barcode can be printed on the envelope. Likewise, should quantities of reply mail begin to reject on our barcode sorting equipment, that information is forwarded to the MDAs so that follow-up corrective action can be taken with the envelope provider.

RESPONSE OF POSTAL SERVICE WITNESS MODEN TO
INTERROGATORIES OF OCA REDIRECTED FROM WITNESS FRONK

OCA/USPS-T-32-56. The Postal Service response to AMMA states: "We have not gathered data and have no plans to compile data identifying customers or geographic areas producing unreadable barcodes. The evaluation process will notify customers when errors occur and encourage those mailers to correct the problem. We see no value in pointing out such incidences of specific customer or geographically."

c. Please describe what happens to mail in the mailstream once a barcoding error is detected, include additional sortations that must take place.

RESPONSE:

c. When a mailpiece with an unreadable barcode is found, there are a couple of factors that determine how the piece may be handled. For instance, there are considerations such as the placement of the barcode on the mailpiece. If the barcoding error is in the barcode clear zone (see DMA/USPS-T4-19(b) for a description of the barcode clear zone), the mailpiece may be processed through the Letter Mail Labeling Machine which can apply a blank label over the barcode error. The blank label, in essence, creates a new barcode clear zone, and the mailpiece can then be processed through any of the barcode application equipment mentioned on pages 5 through 7 of my testimony. If the barcoding error is an address block barcode and the mailpiece has a proper barcode clear zone, the piece can also be processed through the aforementioned barcode application equipment but would not require processing on the LMLM. The mailer applied barcoding error could be corrected by just applying a new barcode with USPS equipment since a USPS barcode in the barcode clear zone has precedence.

Other factors such as the volume of mailpieces with barcoding errors and machine availability can also affect how the pieces will be handled. For instance, if there are not many pieces that have barcode errors, it is often more practical and efficient to obliterate the barcode with a marker and sort the mailpiece in a manual case.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE PRESIDING OFFICERS INFORMATION REQUEST

POIR/USPS-29. Please discuss the instances in which local facility managers can customize the MODS codes to their own management needs and the distortion that this has on the aggregation of data for national purposes. In particular, what is the extent of the customization, does the customization isolate hours and pieces handled data into pools that are not captured in the 46 cost pools created by witnesses Degen , and how is this effect accounted for by witnesses Degen and Bradley in their analyses?

Response:

In the definitions of MODS operations found in the MODS Handbook, M-32, LR-H-147, some operations are defined for a sequence of operation numbers without any subsequent detailed definition of individual numbers within the series. For example, "Platform Operations – Loading and Unloading" is the only definition for the series 210-229. Local facility managers can define platform sub-operations to match their unique arrangement of docks, doors, elevators, etc., but these sub-operations must conform to the overall M-32 definition of Platform 210-229. This does not distort any national aggregations since the data is always combined nationally for 210-229 and reported as 210C ("combined") or just 210 for short. Opening units and pouching provide other examples. The remainder of this information request is referred to witnesses Degen and Bradley.

RESPONSE OF THE UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE PRESIDING OFFICERS INFORMATION REQUEST

POIR/USPS-30. Please provide additional descriptive information on the "fundamental restructuring of the Postal Service operations in FY 1993" that led to the use of the segmented time trend in witness Bradley's econometric analysis of mail processing. In particular, describe the specific changes that constituted the "potentially material restructuring of mail processing at that time" referred to in the response to DMA/USPS-T14-24 and the "reorganization of the workroom floor that occurred in FY 1993" referred to in UPS/USPS-T14-19. Also, discuss how these changes impacted the time trend so significantly.

Response:

In 1992-1993 there was a restructuring of the Postal Service in which 23,000 overhead positions were eliminated. Industrial Engineering and Quality Control positions were reduced significantly and there was significant movement of personnel in other technical, supervisory, and management positions. Due to retirement incentives, expertise was temporarily lost on the workroom floor as many senior craft personnel retired and craft positions were rebid. Capital spending was frozen while the automation plan was re-evaluated, entire levels of management were eliminated, and Mail Processing was split from Retail and Delivery with no common management below Headquarters. The remainder of this inquiry is referred to witness Bradley.

INTERROGATORIES TO WITNESS MODEN (USPS-T-4)

TW/USPS-T4-1

a Please explain the difference between MODS I and MODS 2 facilities and the MODS data collected in the two types of facilities. Additionally, please state whether the MODS facilities referred to by you and other witnesses include (1) only MODS 1 facilities; (2) all MODS 1&2 facilities; or (3) MODS 1 and some MODS 2 facilities.

b. What are the current numbers of MODS 1 and MODS 2 facilities?

c Please provide a list of the MODS facilities referred to by you and other USPS witnesses in this docket. Also, please indicate for each of these facilities:

(1) if it is an SCF;

(2) if it is an ADC;

(3) whether it is MODS I or MODS 2;

(4) the number of MPFSM 881's installed; and

(5) the number of MPFSM 1000's installed.

d. How many SCF's are non-MODS facilities? Please provide a list of all such facilities.

e. Do the volume and manhour data reported by a MODS facility include data from the stations and branches of that facility?

f. Are there any MPFSM's in non-MODS facilities? If yes, please state the number of MPFSM 881 and MPFSM 1000 machines in non-MODS facilities and provide a list of those facilities.

g. How many of the postal facilities in New York city are MODS facilities? Please list them.

h. Are there plans to extend the MODS system to more facilities? If yes, please describe those plans.

Response:

a. MOD 1 and MOD 2 sites have the same reporting requirements. The only difference is that MOD 1 sites report through a mainframe based reporting system while MOD 2 sites use a PC based system. As detailed in c. below, there are currently 419 MODS sites of which 257 are Processing and Distribution Facilities or Centers, which I refer to collectively as MODS facilities. Other witnesses should be queried directly on their use of terminology.

b. There are 257 as discussed in answer a. above.

c. A listing of current MODS sites is attached with a cross reference to SCF. The MODS code for each is also indicated. To determine ADC status, this list can be compared to the appropriate Domestic Mail Manual Labeling List - L004, L102, L603, or L604 - depending on the type of mail involved. A site inventory for the MPFSM 881 is attached. A deployment listing for the MPFSM 1000 was provided for MC97-2 in response to NDMS/USPS-T7-7.

d. SCF list L005 should be compared to the MODS site list provided in c. above to determine which SCFs do not correspond to a MODS site or facility.

e. Only in a few limited cases, particularly in New York City.

f. One MPFSM 881 is located in each of the following: Calvert DDC Station, Lutherville Oks MD, Magothy Bridge, Mansfield, Bryan, Concord, and San Ramon. Two are in South Anne Arundel. All MPFSM 1000s are in MODS facilities.

g. MODS sites in and near New York City are shown in the MODS site list provided in c. above beginning at SCF 100.

h. Not to my knowledge, except to the extent that sites open or close, or gain or loose mail processing functions.

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
SAN JUAN P&DC	2	1	006	SAN JUAN PR
SAN JUAN AMF	2		006	SAN JUAN PR
SPRINGFIELD P&DC	1	1	010	SPRINGFIELD MA
SPRINGFIELD BMC	3		010	SPRINGFIELD MA
WORCESTER P&DC	2	1	015	WORCESTER MA
NORTHERN NASP FAC	2		015	WORCESTER MA
MIDDLESEX-ESSEX P&DC	1	1	018	MIDDLESEX ESSE
BOSTON P&DC	1	1	021	BOSTON MA
NORTHWEST BOSTON P&DC	1	0	021	BOSTON MA
BOSTON AMC	1		021	BOSTON MA
MAIL BAG BOSTON	3		021	BOSTON MA
BROCKTON P&DC	2	1	023	BROCKTON MA
MANSFIELD PROTY ANNEX	1	0	023	BROCKTON MA
CAPE COD P&DF	2	1	025	BUZZARDS BAY M
PROVIDENCE P&DC	1	1	028	PROVIDENCE RI
MANCHESTER P&DC	2	1	030	MANCHESTER NH
NASHUA NH REC	2	0	030	MANCHESTER NH
PORTSMOUTH P&DF	2	1	038	PORTSMOUTH NH
PORTLAND P&DC	1	1	040	PORTLAND ME
BANGOR P&DF	2	1	044	BANGOR ME
WHITE RIVER JUNC P&DC	2	1	050	WHITE RIVER JU
BURLINGTON P&DF	2	1	054	BURLINGTON VT
HARTFORD P&DC	1	1	060	HARTFORD CT
HARTFORD PMPC	1	0	060	HARTFORD CT
ENFIELD NTE	2	0	060	HARTFORD CT
BRADLEY AMF	1		060	HARTFORD CT
SOUTHERN CT P&DC	1	1	064	NEW HAVEN CT
BRIDGEPORT P&DF	1		066	BRIDGEPORT CT
WATERBURY P&DF	2	1	067	WATERBURY CT
STAMFORD P&DC	2	1	068	STAMFORD CT
NEWARK P&DC	1	1	070	NEWARK NJ
NJ INTL & BMC	3	0	070	NEWARK NJ
NEWARK AMC	1	0	070	NEWARK NJ
NO JERSEY PMPC	2	0	070	NEWARK NJ
NORTH JERSEY PMPC #2	2	0	070	NEWARK NJ
DVD BLDG P&DC	1	0	070	NEWARK NJ
KEARNY NJ REC	2		070	NEWARK NJ
MTEC	3		070	NEWARK NJ
PATERSON P&DC	1	1	074	PATERSON NJ
HACKENSACK P&DC	1	1	076	HACKENSACK NJ
MONMOUTH P&DC	2	1	077	MONMOUTH NJ
WEST JERSEY P&DC	2	1	079	WEST JERSEY NJ
SO JERSEY P&DC	1	1	080	SOUTH JERSEY N
TRENTON P&DC	1	1	085	TRENTON NJ
PRINCETON NJ REC	2	0	085	TRENTON NJ
KILMER P&DC	2	1	088	KILMER NJ
NEW YORK MORGAN P&DC	1	1	100	NEW YORK NY
J A FARLEY P&DC	1	0	100	NEW YORK NY
CHURCH ST P&DC	1	0	100	NEW YORK NY
STATEN ISLAND P&DF	2	1	103	STATEN ISLAND
BRONX P&DC	1	1	104	BRONX NY
NY METRO PMPC #2	1	0	104	BRONX NY

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
METRO NY PMPC	1	0	104	BRONX NY
WESTCHESTER P&DC	1	1	105	WESTCHESTER CO
QUEENS P&DC	1	1	110	QUEENS NY
KENNEDY AMC	1	0	110	QUEENS NY
HALMAR AMF	2		110	QUEENS NY
LA GUARDIA AMF	1		110	QUEENS NY
BROOKLYN P&DC	1	1	112	BROOKLYN NY
WEST NASSAU P&DC	1	1	115	WESTERN NASSAU
WESTERN NASSAU NY REC	2	0	115	WESTERN NASSAU
MID-ISLAND P&DC	1	1	117	HICKSVILLE NY
ALBANY P&DC	1	1	120	ALBANY NY
ALBANY NY REC	2		120	ALBANY NY
MID-HUDSON P&DC	2	1	125	MID-HUDSON NY
FISHKILL NY REC	2	0	125	MID-HUDSON NY
SYRACUSE P&DC	1	1	130	SYRACUSE NY
SYRACUSE NY REC	2		130	SYRACUSE NY
UTICA P&DF	2	1	133	UTICA NY
BINGHAMTON P&DF	2	1	137	BINGHAMTON NY
BUFFALO P&DC	1	1	140	BUFFALO NY
BUFFALO AMF	1		140	BUFFALO NY
ROCHESTER P&DC	1	1	144	ROCHESTER NY
ELMIRA P&DF	2	1	149	ELMIRA NY
PITTSBURGH P&DC	1	1	150	PITTSBURGH PA
PITTSBURGH BMF	3	0	150	PITTSBURGH PA
PITTSBURGH PA REC	2	0	150	PITTSBURGH PA
PITTSBURGH AMF	1		150	PITTSBURGH PA
HARRISBURG P&DC	1	1	170	HARRISBURG PA
EQUIP DIST FAC (EDF)	2	0	170	HARRISBURG PA
KEYSTONE P&DF	1		170	HARRISBURG PA
LANCASTER P&DC	2	1	175	LANCASTER PA
YORK PA REC	2	0	175	LANCASTER PA
LEHIGH VALLEY P&DC	2	1	180	LEHIGH VALLEY
LEHIGH VALLEY PA REC	2		180	LEHIGH VALLEY
PHILADELPHIA P&DC	1	1	190	PHILADELPHIA P
PHILADELPHIA BMF	3		190	PHILADELPHIA P
PHILADELPHIA AMF	1		190	PHILADELPHIA P
MTEC-PHILADELPHIA	3		190	PHILADELPHIA P
SOUTHEASTERN P&DC	2	1	194	SOUTHEASTERN P
READING P&DF	2	1	195	READING PA
DELAWARE P&DF	1	1	197	WILMINGTON DE
WASHINGTON P&DC	1	1	200	WASHINGTON DC
WASHINGTON, DC AMC	1		200	WASHINGTON DC
CENTRAL FLORIDA PMPC	1		200	WASHINGTON DC
JACKSONVILLE PMPC	1		200	WASHINGTON DC
MIAMI PMPC	1		200	WASHINGTON DC
BOSTON PMPC	1		200	WASHINGTON DC
ROCHESTER PMPC	1		200	WASHINGTON DC
PHILADELPHIA PMPC	1		200	WASHINGTON DC
PITTSBURGH PMPC	1		200	WASHINGTON DC
SO MARYLAND P&DC	1	1	207	SOUTHERN MARYL
CPTL BLTWY HUB&SPOKE	4	0	207	SOUTHERN MARYL
MAIL TRANSPORT EQ CTR	3	0	207	SOUTHERN MARYL

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
WASHINGTON BMC	3		207	SOUTHERN MARYL
SUBURBAN MD P&DC	1	1	208	SUBURBAN MD
BALTIMORE P&DC	1	1	210	BALTIMORE MD
BALT INC MAIL P&DF	2	0	210	BALTIMORE MD
BALTIMORE AMC	1		210	BALTIMORE MD
EASTON P&DF	2	1	216	EASTON MD
FREDERICK P&DF	2	1	217	FREDERICK MD
NORTHERN VA P&DC	1	1	220	NORTHERN VIRGI
WASHINGTON-DULLES AMC	1	0	220	NORTHERN VIRGI
DULLES P&DC	1		220	NORTHERN VIRGI
CHARLOTTESVILLE P&DF	2	1	229	CHARLOTTESVILL
RICHMOND P&DC	1	1	230	RICHMOND VA
RICHMOND AMF	1		230	RICHMOND VA
NORFOLK P&DC	1	1	233	NORFOLK VA
NORFOLK AMF	1	0	233	NORFOLK VA
NEWPORT NEWS VA REC	2	0	233	NORFOLK VA
ROANOKE P&DC	2	1	240	ROANOKE VA
SALEM VA REC	2	0	240	ROANOKE VA
LYNCHBURG P&DF	2	1	245	LYNCHBURG VA
LYNCHBURG VA REC	2	0	245	LYNCHBURG VA
CHARLESTON P&DC	1	1	250	CHARLESTON WV
CHARLESTON WV REC	2	0	250	CHARLESTON WV
FALLING WATERS WV REC	2	0	254	MARTINSBURG WV
HUNTINGTON P&DF	2	1	255	HUNTINGTON WV
CLARKSBURG P&DF	2	1	263	CLARKSBURG WV
GREENSBORO P&DC	1	1	270	GREENSBORO NC
GREENSBORO BMC	3	0	270	GREENSBORO NC
GREENSBORO NC REC	2		270	GREENSBORO NC
GREENSBORO AMC	1		270	GREENSBORO NC
RALEIGH P&DC	1	1	275	RALEIGH NC
RALEIGH AMC	1		275	RALEIGH NC
ROCKY MOUNT P&DF	2	1	278	ROCKY MOUNT NC
CHARLOTTE P&DC	1	1	280	CHARLOTTE NC
CHARLOTTE AMC	1		280	CHARLOTTE NC
FAYETTEVILLE P&DC	2	1	283	FAYETTEVILLE N
LUMBERTON NC REC	2	0	283	FAYETTEVILLE N
FAYETTEVILLE NC REC	2	0	283	FAYETTEVILLE N
KINSTON P&DF	2	1	285	KINSTON NC
HICKORY P&DF	2	1	286	HICKORY NC
ASHEVILLE P&DF	2	1	287	ASHEVILLE NC
COLUMBIA P&DC	1	1	290	COLUMBIA SC
COLUMBIA AMF	1		290	COLUMBIA SC
CHARLESTON P&DF	2	1	294	CHARLESTON SC
CHARLESTON SC REC	2	0	294	CHARLESTON SC
FLORENCE P&DF	2	1	295	FLORENCE SC
GREENVILLE P&DC	2	1	296	GREENVILLE SC
GREENVILLE AMF	2		296	GREENVILLE SC
N ATLANTA METRO P&DC	1	1	301	NORTH METRO GA
ATLANTA P&DC	1	1	303	ATLANTA GA
ATLANTA BMC	3	0	303	ATLANTA GA
ATLANTA AMC	1		303	ATLANTA GA
AUGUSTA P&DF	2	1	308	AUGUSTA GA

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
MACON P&DC	2	1	310	MACON GA
SAVANNAH P&DF	2	1	313	SAVANNAH GA
JACKSONVILLE P&DC	1	1	320	JACKSONVILLE F
JACKSONVILLE BMC	3	0	320	JACKSONVILLE F
JACKSONVILLE FL REC	2	0	320	JACKSONVILLE F
JACKSONVILLE FL AMF	1		320	JACKSONVILLE F
DAYTONA BCH P&DF	2	1	321	DAYTONA BEACH
TALLAHASSE P&DF	2	1	323	TALLAHASSEE FL
PANAMA CITY P&DF	2	1	324	PANAMA CITY FL
PENSACOLA P&DC	2	1	325	PENSACOLA FL
GAINESVILLE P&DF	2	1	326	GAINESVILLE FL
MID FLORIDA P&DC	1	1	327	MID-FLORIDA FL
ORLANDO P&DC	1	1	328	ORLANDO FL
SOUTH FLORIDA P&DC	1	1	330	SOUTH FLORIDA
MIAMI P&DC	1	1	331	MIAMI FL
MIAMI AMC	1		331	MIAMI FL
FORT LAUDERDALE P&DC	1	1	333	FT LAUDERDALE
WEST PALM BEACH P&DC	1	1	334	WEST PALM BEAC
TAMPA P&DC	1	1	335	TAMPA FL
TAMPA FL REC	2	0	335	TAMPA FL
ST PETERSBURG P&DC	1	1	337	ST PETERSBURG
LAKELAND P&DC	2	1	338	LAKELAND FL
FT MYERS P&DC	2	1	339	FT MYERS FL
MANASOTA P&DC	1	1	342	TAMPA FL
BIRMINGHAM P&DC	2	1	350	BIRMINGHAM AL
BIRMINGHAM AMF	2	0	350	BIRMINGHAM AL
BIRMINGHAM AL REC	2		350	BIRMINGHAM AL
HUNTSVILLE P&DF	2	1	357	HUNTSVILLE AL
MONTGOMERY P&DC	2	1	360	MONTGOMERY AL
MOBILE P&DC	2	1	365	MOBILE AL
NASHVILLE P&DC	2	1	370	NASHVILLE TN
NASHVILLE AMC	2	0	370	NASHVILLE TN
ANTIOCH TN REC	2	0	370	NASHVILLE TN
CHATTANOOGA P&DC	2	1	373	CHATTANOOGA TN
CHATTANOOGA TN REC	2	0	373	CHATTANOOGA TN
KNOXVILLE P&DC	1	1	377	KNOXVILLE TN
SOUTHEAST AREA HASP	2	0	377	KNOXVILLE TN
KNOXVILLE TN REC	2	0	377	KNOXVILLE TN
MEMPHIS P&DC	1	1	380	MEMPHIS TN
MEMPHIS BMC	3	0	380	MEMPHIS TN
MEMPHIS AMC	1		380	MEMPHIS TN
MEMPHIS SUP & REP FAC	2		380	MEMPHIS TN
JACKSON P&DC	2	1	390	JACKSON MS
GULFPORT P&DF	2	1	395	GULFPORT MS
LOUISVILLE P&DC	1	1	400	LOUISVILLE KY
LOUISVILLE KY REC	2	0	400	LOUISVILLE KY
LOUISVILLE AMF	1		400	LOUISVILLE KY
LEXINGTON P&DC	1	1	403	LEXINGTON KY
LONDON P&DF	2	1	407	LONDON KY
ASHLAND P&DF	2	1	411	ASHLAND KY
PADUCAH P&DF	2	1	420	PADUCAH KY
BOWLING GREEN P&DF	2	1	421	BOWLING GREEN

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
BOWLING GREEN KY REC	2	0	421	BOWLING GREEN
COLUMBUS P&DC	1	1	430	COLUMBUS OH
COLUMBUS AMF	1		430	COLUMBUS OH
TOLEDO P&DF	1	1	434	TOLEDO OH
CLEVELAND P&DC	1	1	440	CLEVELAND OH
CLEVELAND AMF	1		440	CLEVELAND OH
AKRON P&DC	1	1	442	AKRON OH
AKRON OH REC	2		442	AKRON OH
CINCINNATI P&DC	1	1	450	CINCINNATI OH
CINCINNATI BMF	3		450	CINCINNATI OH
CINCINNATI AMF	1		450	CINCINNATI OH
MTEC CINCINNATI	3		450	CINCINNATI OH
DAYTON P&DF	1	1	453	DAYTON OH
DAYTON OH REC	2	0	453	DAYTON OH
DAYTON AMF	1		453	DAYTON OH
INDIANAPOLIS P&DC	1	1	460	INDIANAPOLIS I
INDIANAPOLIS AMC	1	0	460	INDIANAPOLIS I
GARY P&DC	2	1	463	GARY IN
GARY IN REC	2	0	463	GARY IN
SOUTH BEND P&DC	2	1	465	SOUTH BEND IN
FT WAYNE P&DC	1	1	467	FORT WAYNE IN
FORT WAYNE IN REC	2	0	467	FORT WAYNE IN
KOKOMO P&DF	2	1	469	KOKOMO IN
MUNCIE P&DF	2	1	473	MUNCIE IN
EVANSVILLE P&DF	2	1	476	EVANSVILLE IN
MADISONVILLE KY REC	2	0	476	EVANSVILLE IN
TERRE HAUTE P&DF	2	1	478	TERRE HAUTE IN
LAFAYETTE P&DF	2	1	479	LAFAYETTE IN
ROYAL OAK P&DC	1	1	480	ROYAL OAK MI
DETROIT P&DC	1	1	481	DETROIT MI
DETROIT BMC	3	0	481	DETROIT MI
DETROIT AMC	1	0	481	DETROIT MI
FLINT P&DC	1	1	484	FLINT MI
SAGINAW P&DC	2	1	486	SAGINAW MI
LANSING P&DC	2	1	488	LANSING MI
KALAMAZOO P&DC	2	1	490	KALAMAZOO MI
KALAMAZOO MI REC	2	0	490	KALAMAZOO MI
GRAND RAPIDS P&DC	1	1	493	GRAND RAPIDS M
GRAND RAPIDS AMF	1	0	493	GRAND RAPIDS M
TRAVERSE CITY P&DF	2	1	496	TRAVERSE CITY
DES MOINES P&DC	1	1	500	DES MOINES IA
DES MOINES BMC	3	0	500	DES MOINES IA
DES MOINES IA REC	2		500	DES MOINES IA
CEDAR RAPIDS P&DC	2	1	522	CEDAR RAPIDS I
MILWAUKEE P&DC	1	1	530	MILWAUKEE WI
MILW PRIORITY ANNEX	1		530	MILWAUKEE WI
MILWAUKEE WI AMC	1		530	MILWAUKEE WI
MADISON P&DC	1	1	535	MADISON WI
GREEN BAY P&DC	2	1	541	GREEN BAY WI
WAUSAU P&DF	2	1	544	WAUSAU WI
EAU CLAIRE P&DF	2	1	547	EAU CLAIRE WI
OSHKOSH P&DF	2	1	549	OSHKOSH WI

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
SAINT PAUL P&DC	1	1	550	SAINT PAUL MN
MINN-SAINT PAUL BMC	3		550	SAINT PAUL MN
TWIN CITIES MN AMC	1		550	SAINT PAUL MN
MTEC SAINT PAUL	3		550	SAINT PAUL MN
MINNEAPOLIS P&DC	1	1	553	MINNEAPOLIS MN
DULUTH P&DF	2	1	556	DULUTH MN
DULUTH MN REC	2	0	556	DULUTH MN
BILLINGS P&DC	2	1	590	BILLINGS MT
PALATINE P&DC	1	1	600	PALATINE IL IM
BUSSE SURFACE HUB	2	0	600	PALATINE IL IM
CAROL STREAM P&DC	1	1	601	CAROL STREAM I
CHICAGO OHARE AMC ANX	1	0	601	CAROL STREAM I
CHICAGO BMC	3	0	601	CAROL STREAM I
CHICAGO MTEC	3	0	601	CAROL STREAM I
SOUTH SUBURBAN P&DC	1	1	604	SOUTH SUBURBAN
FOX VALLEY P&DC	1	1	605	FOX VALLEY IL
CHICAGO P&DC	1	1	606	CHICAGO IL
O'HARE AMC	1	0	606	CHICAGO IL
CHICAGO ACTIVATION	1	0	606	CHICAGO IL
SGR HOUSE/CHICAGOP&DC	1	0	606	CHICAGO IL
IRVING PARK RD P&DC	1		606	CHICAGO IL
ROCKFORD P&DC	2	1	610	ROCKFORD IL
ROCK ISLAND P&DF	2	1	612	ROCK ISLAND IL
DAVENPORT IA REC	2	0	612	ROCK ISLAND IL
PEORIA P&DF	1	1	615	PEORIA IL
PEORIA IL REC	2	0	615	PEORIA IL
BLOOMINGTON P&DF	2	1	617	BLOOMINGTON IL
CHAMPAIGN P&DF	2	1	618	CHAMPAIGN IL
SPRINGFIELD P&DC	1	1	625	SPRINGFIELD IL
ST LOUIS MO P&DC	1	1	630	SAINT LOUIS MO
ST LOUIS BMC	3	0	630	SAINT LOUIS MO
MTEC ST LOUIS	3	0	630	SAINT LOUIS MO
ST LOUIS MO AMC	1		630	SAINT LOUIS MO
CAPE GIRARDEAU P&DF	2	1	637	CAPE GIRARDEAU
KANSAS CITY MO P&DC	1	1	640	KANSAS CITY MO
KANSAS CITY MO AMC	1		640	KANSAS CITY MO
COLUMBIA MO P&DF	2	1	652	MID-MO FACILIT
KANSAS CITY KS P&DC	2	1	660	KANSAS CITY KS
KANSAS CITY KS BMC	3		660	KANSAS CITY KS
TOPEKA P&DF	2	1	664	TOPEKA KS
WICHITA P&DC	1	1	670	WICHITA KS
WICHITA KS REC	2	0	670	WICHITA KS
OMAHA P&DC	1	1	680	OMAHA NE
OMAHA AMF	1		680	OMAHA NE
LINCOLN P&DF	2	1	683	LINCOLN NE
NORFOLK P&DF	2	1	687	NORFOLK NE
GRAND ISLAND P&DF	2	1	688	GRAND ISLAND N
NEW ORLEANS P&DC	1	1	700	NEW ORLEANS LA
NEW ORLEANS AMC	1		700	NEW ORLEANS LA
BATON ROUGE P&DC	1	1	707	BATON ROUGE LA
BATON ROUGE LA REC	2	0	707	BATON ROUGE LA
SHREVEPORT P&DC	2	1	710	SHREVEPORT LA

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
LITTLE ROCK P&DC	1	1	720	LITTLE ROCK AR
SHERWOOD AR REC	2	0	720	LITTLE ROCK AR
OKLAHOMA CITY P&DC	1	1	730	OKLAHOMA CITY
OKLAHOMA AMF	1	0	730	OKLAHOMA CITY
TULSA P&DC	1	1	740	TULSA OK
TULSA OK REC	2	0	740	TULSA OK
TULSA AMF	1		740	TULSA OK
NORTH TEXAS P&DC	1	1	750	NORTH TEXAS TX
INTL & EXPED SVC CTR	2	0	750	NORTH TEXAS TX
DALLAS P&DC	1	1	752	DALLAS TX
DALLAS AMC	1	0	752	DALLAS TX
DALLAS BMC	3	0	752	DALLAS TX
TYLER P&DC	2	1	757	TYLER TX
FT WORTH P&DC	1	1	760	FORT WORTH TX
WACO P&DF	2	1	766	WACO TX
HOUSTON P&DC	1	1	770	HOUSTON TX
HOUSTON AMC	1		770	HOUSTON TX
N HOUSTON P&DC	1	1	773	NORTH HOUSTON
BEAUMONT P&DF	2	1	776	BEAUMONT TX
BEAUMONT TX REC	2	0	776	BEAUMONT TX
SAN ANTONIO P&DC	1	1	780	SAN ANTONIO TX
LAREDO TX REC	2	0	780	SAN ANTONIO TX
SAN ANTONIO AMF	1		780	SAN ANTONIO TX
CORPUS CHRISTI P&DC	2	1	783	CORPUS CHRISTI
MCALLEN TX REC	2	0	785	MCALLEN TX
AUSTIN P&DC	1	1	786	AUSTIN TX
AMARILLO P&DF	2	1	790	AMARILLO TX
LUBBOCK P&DF	2	1	793	LUBBOCK TX
ABILENE TX REC	2	0	795	ABILENE TX
EL PASO P&DC	2		798	EL PASO TX
DENVER P&DC	1	1	800	DENVER CO
DENVER BMC	3	0	800	DENVER CO
WESTERN AREA REC 1	2	0	800	DENVER CO
PORTLAND OR REC	2	0	800	DENVER CO
DENVER AMC	1		800	DENVER CO
COLORADO SPRINGS P&DC	2	1	808	COLORADO SPRIN
CHEYENNE P&DC	2	1	820	CHEYENNE WY
TWINS FALLS ID REC	2	0	833	TWIN FALLS ID
BOISE P&DC	2	1	836	BOISE ID
BOISE AMF	2		836	BOISE ID
SALT LAKE CITY P&DC	1	1	840	SALT LAKE CITY
SALT LAKE CITY AMC	1	0	840	SALT LAKE CITY
SALT LAKE CITY UT REC	2		840	SALT LAKE CITY
PHOENIX P&DC	1	1	852	PHOENIX AZ
PHOENIX AMC	1	0	852	PHOENIX AZ
GLENDALE AZ REC	2	0	852	PHOENIX AZ
TUCSON P&DC	2		856	TUCSON AZ
ALBUQUERQUE P&DC	2	1	870	ALBUQUERQUE NM
ALBUQUERQUE AMF	2		870	ALBUQUERQUE NM
LAS VEGAS P&DC	2	1	890	LAS VEGAS NV
LAS VEGAS NV AMC	2	0	890	LAS VEGAS NV
RENO P&DC	2	1	894	RENO NV

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FINAME	HODS_CODE	SCFID	SCF	SCFNAME
RENO AMF	2		894	RENO NV
LOS ANGELES P&DC	1	1	900	LOS ANGELES CA
WORLDWAY AMC	1		900	LOS ANGELES CA
MARINA P&DC	1	1	902	INGLEWOOD CA
MTEC - LOS ANGELES	3	0	902	INGLEWOOD CA
LOS ANGELES BMC	3		902	INGLEWOOD CA
LONG BEACH P&DC	1	1	907	LONG BEACH CA
PASADENA P&DC	1	1	910	PASADENA CA
VAN NUYS P&DC	1	1	913	VAN NUYS CA
INDUSTRY P&DC	1	1	917	ALHAMBRA CA
ONTARIO INTL AIRPORT	1		917	ALHAMBRA CA
MARGARET SELLERS P&DC	1	1	920	SAN DIEGO CA
CHULA VISTA CA REC	2	0	920	SAN DIEGO CA
MIDWAY P&DF	1		920	SAN DIEGO CA
SAN DIEGO AMF	1		920	SAN DIEGO CA
SAN BERNARDINO P&DC	1	1	923	SAN BERNARDINO
SAN BERNARDINO CA REC	2	0	923	SAN BERNARDINO
RIVERSIDE CA REC	2	0	923	SAN BERNARDINO
SANTA ANA P&DC	1	1	926	SANTA ANA CA
ANAHEIM P&DF	2		926	SANTA ANA CA
OXNARD P&DF	2	1	930	OXNARD CA
SANTA BARBARA P&DC	2	1	931	SANTA BARBARA
BAKERSFIELD P&DC	2	1	932	BAKERSFIELD CA
FRESNO P&DC	2	1	936	FRESNO CA
SELMA CA REC	2	0	936	FRESNO CA
SALINAS P&DF	2	1	939	SALINAS CA
SAN FRANCISCO P&DC	1	1	940	SAN FRANCISCO
SAN FRANCISCO AMC	1	0	940	SAN FRANCISCO
OAKLAND P&DC	1	1	945	OAKLAND CA
MTEC RICHMOND	3	0	945	OAKLAND CA
HAYWARD CA REC	2	0	945	OAKLAND CA
OAKLAND AMF	1		945	OAKLAND CA
SAN FRANCISCO BMC	3		945	OAKLAND CA
NORTH BAY P&DC	2	1	949	NORTH BAY CA
SAN JOSE P&DC	1	1	950	SAN JOSE CA
STOCKTON P&DC	2	1	952	STOCKTON CA
MODESTO CA REC	2	0	952	STOCKTON CA
SACRAMENTO P&DC	2	1	956	SACRAMENTO CA
SACRAMENTO AMF	2	0	956	SACRAMENTO CA
MARYSVILLE P&DF	2	1	959	MARYSVILLE CA
HONOLULU P&DC	2	1	967	HONOLULU HI
PORTLAND P&DC	1	1	970	PORTLAND OR
PORTLAND AMF	1	0	970	PORTLAND OR
SALEM P&DF	2	1	973	SALEM OR
EUGENE P&DF	2	1	974	EUGENE OR
SEATTLE P&DC	1	1	980	SEATTLE WA
SEATTLE BMC	3		980	SEATTLE WA
SEATTLE AMC	1		980	SEATTLE WA
EVERETT P&DF	2	1	982	EVERETT WA
TACOMA P&DC	1	1	983	TACOMA WA
OLYMPIA P&DF	2	1	985	OLYMPIA WA
SPOKANE P&DC	1	1	990	SPOKANE WA

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FINAME	MODS_CODE	SCFID	SCF	SCFNAME
PASCO P&DF	2	1	993	PASCO WA
ANCHORAGE P&DC	2	1	995	ANCHORAGE AK
ANCHORAGE AMF	2		995	ANCHORAGE AK

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
1	006-009	00936-9997	SAN JUAN P&DC	3
2	011	01101-9998	SPRINGFIELD MAIN OFFICE	1
3	010-013	01152-9700	SPRINGFIELD P&DC	4
4	012	01201-9998	PITTSFIELD	1
5	014-017	01546-9997	CENTRAL MA MPC	4
6	018,019,055	01889-9997	MIDDLESEX-ESSEX P&DC	2
7	021,022	02205-9998	BOSTON P&DC	10
8	020,023,024	02401-9997	BROCKTON P&DC	2
9	027-029	02904-9997	PROVIDENCE P&DC	3
10	030-034	03103-9997	MANCHESTER P&DC	3
11	038,039	03801-9997	PORTSMOUTH P&DF	1
12	040-043,045,048	04101-9997	PORTLAND P&DC	2
13	041	04103-9997	NORTHWEST ANNEX ME	1
14	044,046,047,049	04444-9997	EASTERN MAINE P&DF	1
15	035-037,050-053,057-059	05001-9997	WHITE RIVER JUN P&DC	2
16	054,056	05452-9997	BURLINGTON P&DF	1
17	060-062	06101-9997	HARTFORD P&DC	5
18	063-065	06511-9997	SOUTHERN CT P&DC	4
19	066	06602-9997	BRIDGEPORT P&DF	1
20	067	06701-9997	WATERBURY P&DF	1
21	068,069	06910-9997	STAMFORD P&DC	3
22	070-073	07097-9997	NJI & BMC	2
23	070-073	07099-9997	DVD BLDG P&DC	5
24	070-073	07102-9997	NEWARK P&DC	3
25	074,075	07510-9997	PATERSON NJ	2
26	076	07606-9997	HACKENSACK P&DC	2
27	077	07799-1799	MONMOUTH PDC	2
28	078,079	07999-9997	WEST JERSEY P&DC	3
29	080-084	08031-9997	SO JERSEY P&DC	5
30	085-087	08650-9997	TRENTON P&DC	3
31	088,089	08901-9997	KILMER P&DC	4
32	100,101	10001-9997	NEW YORK MORGAN P&DC	17
33	102	10007-9997	CHURCH STREET	5
34	100	10017-9997	GRAND CENTRAL STA	1
35	100	10022-9997	F.D.R. STATION	1
36	101	10199-9997	JAMES A FARLEY	2
37	103	10314-9770	STATEN ISLAND P&DF	1
38	104	10451-9997	BRONX P&DC	2
39	104	10499-9997	PRIORITY MAIL CENTER	1
40	004,105-109	10610-9700	WESTCHESTER P&DC	5
41	111,112	11256-9997	BROOKLYN P&DC	4
42	110,113,114,116	11351-9700	QUEENS P&DC	4
43	114	11430-9997	KENNEDY AMC	2
44	115	11599-9997	WEST NASSAU P&DC	2
45	005,117-119	11747-9997	MID-ISLAND NY	6

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
46	120-123,128	12288-9997	ALBANY P&DC	4
47	124-127	12555-9997	MID-HUDSON P&DC	2
48	130-132	13220-9997	SYRACUSE P&DC	3
49	133-135	13504-9997	UTICA P&DF	2
50	137-139	13902-9997	BINGHAMTON P&DF	1
51	140-143,147	14240-9997	BUFFALO P&DC	6
52	144-146	14692-9997	ROCHESTER P&DC	5
53	148,149	14901-9997	ELMIRA P&DF	1
54	150-154	15290-9997	PITTSBURGH P&DC	8
55	155,157,159	15901-9997	JOHNSTOWN P&DF	1
56	160-162	16108-9997	NEW CASTLE P&DF	1
57	164,165	16515-9997	ERIE P&DC	1
58	166,168	16601-9998	ALTOONA	1
59	170-172,178	17107-9997	HARRISBURG P&DC	5
60	174	17405-9998	YORK	1
61	173-176	17604-9997	LANCASTER P&DC	2
62	169,177	17701-9997	WILLIAMSPORT	1
63	180,181,183	18002-9997	LEHIGH VALLEY P&DC	3
64	184,185,188	18505-9997	SCRANTON P&DF	2
65	182,186,187	18701-9997	WILKES-BARRE P&DF	2
66	190-192	19104-9997	PHILADELPHIA P&DC	15
67	189,193,194	19399-9997	SE PENNSYLVANIA	4
68	179,195,196	19612-9997	READING P&DF	2
69	197-199	19850-9997	WILMINGTON P&DC	3
70	200,202-205	20066-9997	WASHINGTON P&DC	12
71	201	20101-9997	DULLES IMF	5
72	206	20601-9998	WALDORF MD	1
73	207	20782-1177	CALVERT DDC STATION	1
74	206,207	20790-9997	SO. MARYLAND P&DC	5
75	208,209	20898-9997	SUBURBAN MARYLAND	7
76	210,211,219	21090-2238	BALTIMORE IMF	4
77	210	21093-9998	LUTHERVILLE OKS MD	1
78	211	21146-9998	MAGOTHY BRIDGE	1
79	212,214	21233-9997	BALTIMORE P&DC	8
80	214	21401-9998	SOUTH ANNE ARUNDEL	2
81	216	21601-9997	EASTON	1
82	217	21701-9997	FREDERICK P&DF	1
83	220-223,227	22081-9997	NORTHERN VA P&DC	8
84	228,229,244	22906-9997	CHARLOTTESVILLE P&DF	1
85	224,225,230-232,238	23232-9997	RICHMOND P&DC	6
86	233-237	23501-9997	NORFOLK P&DC	5
87	240,241,243	24022-9997	ROANOKE P&DC	2
88	239,245	24506-9997	LYNCHBURG P&DF	1
89	250-253	25350-9997	CHARLESTON P&DC	2
90	262-266	26301-9997	CLARKSBURG P&DF	1

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
91	271	27102-9998	WINSTON SALEM	1
92	270-274	27498-9997	GREENSBORO P&DC	5
93	275-277	27611-9997	RALEIGH P&DC	4
94	278-279	27801-9997	ROCKY MOUNT P&DF	1
95	280-282,297	28228-9997	CHARLOTTE P&DC	6
96	283-284	28302-9997	FAYETTEVILLE P&DC	2
97	286	28603-9997	HICKORY P&DF	1
98	287-289	28810-9997	ASHVILLE P&DF	1
99	290-292	29201-9997	COLUMBIA P&DC	3
100	294	29423-9997	CHARLESTON P&DF	1
101	295	29501-9997	FLORENCE P&DF	1
102	293,296	29602-9997	GREENVILLE P&DC	2
103	300-302	30159-9997	N ATLANTA METRO P&DC	8
104	303,311,399	30304-9997	ATLANTA P&DC	8
105	298,308,309	30901-9997	AUGUSTA P&DF	1
106	304,310,312,316	31213-9997	MACON P&DC	1
107	299,313,314	31401-9997	SAVANNAH P&DF	1
108	317	31702-9998	ALBANY	1
109	321	32114-9997	DAYTONA BCH P&DF	1
110	315,320,322	32203-9997	JACKSONVILLE P&DC	4
111	323	32301-9997	TALLAHASSE P&DF	1
112	324,363	32401-9997	PANAMA CITY P&DF	1
113	325	32501-9997	PENSACOLA P&DC	1
114	326,344	32608-9997	GAINESVILLE P&DF	1
115	327	32799-9997	MID-FLORIDA P&DC	2
116	328,329	32862-9997	ORLANDO P&DC	4
117	330	33082-9997	SOUTH FLORIDA P&DC	3
118	331,332,340	33152-9997	MIAMI P&DC	6
119	333	33310-9997	FORT LAUDERDALE P&DC	3
120	334,349	33406-9997	WEST PALM BEACH P&DC	4
121	335,336,346	33630-9997	TAMPA P&DC	5
122	337	33730-9997	ST PETERSBURG P&DC	2
123	338	33802-9997	LAKELAND P&DC	1
124	339,341	33913-9997	FT MYERS P&DC	3
125	342	34260-9997	MANASOTA	2
126	350-352,354,355,359,362	35203-9997	BIRMINGHAM P&DC	4
127	356-358	35813-9997	HUNTSVILLE P&DF	1
128	360,361,364,367,368	36119-9997	MONTGOMERY P&DC	2
129	365,366	36601-9997	MOBILE P&DC	1
130	370-372,384,385	37229-9997	NASHVILLE P&DC	4
131	307,373,374	37401-9997	CHATTANOOGA P&DC	2
132	377-379	37950-9997	KNOXVILLE P&DC	2
133	375,380,381,386,723	38101-9997	MEMPHIS P&DC	4
134	369,390-393	39205-9997	JACKSON P&DC	2
135	394-396	39503-9997	GULFPORT P&DF	1

Attachment to TW/USPS-T4-1-10 - Question 1c. (page 4 of 6)

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
136	400-402,471	40231-9997	LOUISVILLE P&DC	6
137	403-406	40511-9997	LEXINGTON P&DC	2
138	430-433,456,457	43216-9997	COLUMBUS P&DC	9
139	434-436	43601-9997	TOLEDO P&DC	2
140	440-441	44101-9997	CLEVELAND P&DC	7
141	440-441	44181-9997	CLEVELAND AMF	2
142	442,443	44309-9997	AKRON P&DC	3
143	444,445	44501-9997	YOUNGSTOWN P&DC	2
144	446,447	44711-9997	CANTON P&DC	2
145	449	44901-9998	MANSFIELD	1
146	410,450-452,459,470	45234-9997	CINCINNATI P&DC	7
147	453-455	45401-9997	DAYTON P&DC	3
148	460-462	46206-9997	INDIANAPOLIS P&DC	7
149	463-464	46401-9997	GARY P&DC	2
150	465-466	46624-9997	SOUTH BEND P&DC	2
151	467-468	46802-9997	FT WAYNE P&DC	2
152	469	46902-9997	KOKOMO P&DF	1
153	473	47302-9997	MUNCIE P&DF	1
154	476,477	47708-9997	EVANSVILLE P&DF	1
155	479	47901-9997	LAFAYETTE P&DF	1
156	480,483	48068-9997	ROYAL OAK P&DC	4
157	481,482	48233-9997	DETROIT P&DC	8
158	484,485	48502-9997	FLINT P&DC	2
159	486,487	48605-9997	SAGINAW P&DC	2
160	488,489	48924-9997	LANSING P&DC	3
161	490,491	49009-9997	KALAMAZOO P&DC	3
162	493-495	49599-5000	GRAND RAPIDS P&DC	4
163	496	49684-9998	TRAVERSE CITY MI	1
164	500-503,509,525	50318-9997	DES MOINES P&DC	4
165	520,522-524	52401-9997	CEDAR RAPIDS P&DC	1
166	530-532,534	53201-9997	MILWAUKEE P&DC	7
167	535,537,538	53714-9997	MADISON P&DC	2
168	541-543	54307-7003	GREEN BAY P&DC	1
169	544	54401-9997	WAUSAU P&DF	1
170	549	54901-9997	OSHKOSH P&DF	1
171	540,550,551	55101-9997	SAINT PAUL P&DC	5
172	553-555	55401-9997	MINNEAPOLIS P&DC	7
173	570,571	57101-9997	SIOUX FALLS P&DC	1
174	565,580,581	58102-9997	FARGO P&DC	2
175	590,591,821	59101-9997	BILLINGS P&DC	1
176	600,602	60095-9997	PALATINE	5
177	601,603	60199-9997	CAROL STREAM P&DC	4
178	604	60499-9997	SOUTH SUBURBAN P&DC	3
179	605	60599-9997	FOX VALLEY P&DC	3
180	606,608	60607-9997	CHICAGO P&DC	8

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
181	606	60666-9997	OHARE AMC	1
182	607	60701-9997	IRVING PARK ROAD P&DC	4
183	610,611	61125-9997	ROCKFORD P&DC	1
184	527,528,612	61201-9997	ROCK ISLAND P&DF	1
185	615,616	61601-9997	PEORIA P&DF	2
186	617	61701-9997	BLOOMINGTON P&DF	1
187	618,619	61821-9997	CHAMPAIGN P&DF	2
188	625-627	62703-9997	SPRINGFIELD P&DC	2
189	620,622,630,631,633	63155-9997	SAINT LOUIS P&DC	7
190	640,641,649	64108-9997	KANSAS CITY P&DC	5
191	650-653	65299-0001	MID MISSOURI GMF	1
192	648,654-658	65801-9997	SPRINGFIELD P&DC	1
193	660-662	66106-9724	KANSAS CITY	2
194	664-666,668	66675-9997	TOPEKA P&DF	1
195	670-672	67276-9997	WICHITA P&DC	2
196	515,516,680,681	68108-9997	OMAHA P&DC	3
197	683-685	68501-9997	LINCOLN P&DF	1
198	700,701,703,704	70113-9997	NEW ORLEANS P&DC	6
199	707,708	70821-9997	BATON ROUGE P&DC	2
200	710-712	71102-9997	SHREVEPORT P&DC	2
201	720-722	72231-9997	LITTLE ROCK P&DC	2
202	727	72701-9997	FAYETTEVILLE	1
203	730,731	73125-9997	OKLAHOMA CITY P&DC	3
204	740,741,743	74101-9997	TULSA P&DC	3
205	750	75099-9997	NORTH TEXAS IMPC	7
206	751-753	75260-9997	DALLAS P&DC	8
207	760-762,764	76161-9997	FT WORTH P&DC	5
208	765-767	76702-9997	WACO P&DF	1
209	770-772	77201-9997	HOUSTON P&DC	7
210	773-775	77315-9997	NORTH HOUSTON MPC	7
211	776,777	77704-9997	BEAUMONT P&DF	1
212	778	77801-9998	BRYAN	1
213	780-782,788	78284-9997	SAN ANTONIO P&DC	4
214	783,784	78408-9997	CORPUS CHRISTI P&DC	1
215	785	78501-9997	MCALLEN P&DF	1
216	733,786,787,789	78710-9997	AUSTIN P&DC	4
217	790,791	79120-9997	AMARILLO P&DF	1
218	793,794	79402-9997	LUBBOCK P&DF	1
219	769,797	79711-9997	MIDLAND P&DF	1
220	798,799,885	79910-9997	EL PASO P&DC	1
221	800-807	80266-9997	DENVER P&DC	7
222	808-810	80910-9998	COLORADO SPRINGS PO	1
223	820	82009-9997	CHEYENNE P&DC	1
224	836,837,979	83708-9997	BOISE P&DC	1
225	840-844	84199-9997	SALT LAKE CITY P&DC	3

FSM (MODEL 775/881) SITES (AS OF AP 7 WK 1)

NO.	SCF RANGE	ZIP CODE	FACILITY NAME	FSM QTY
226	850	85034-9998	RIO SALADO AZ	7
227	856,857	85726-9997	TUCSON P&DC	2
228	870-872,875	87101-9997	ALBUQUERQUE P&DC	2
229	864,889-891	89199-9997	LAS VEGAS P&DC	4
230	894,895,897,961	89510-9997	RENO P&DC	2
231	900-928	90009-9997	WORLDWAY AMC	1
232	900,901	90052-9997	LOS ANGELES P&DC	14
233	902-905	90311-9997	MARINA P&DC	3
234	906-908	90809-8998	LONG BEACH P&DC	3
235	910-912	91109-9997	PASADENA P&DC	2
236	913-916	91383-9997	SANTA CLARITA P&DC	5
237	917,918	91715-9997	INDUSTRY P&DC	4
238	919-921	92199-9997	M.L. SELLERS P&DC	8
239	922-925	92403-9997	SAN BERNARDINO P&DC	4
240	926,927	92799-9997	SANTA ANA P&DC	6
241	928	92803-9997	ANAHEIM P&DF	1
242	930	93030-9997	OXNARD P&DF	1
243	931,934	93102-9997	SANTA BARBARA P&DC	2
244	932,933	93380-8000	BAKERSFIELD P&DC	1
245	936-938	93706-8000	FRESNO P&DC	2
246	940,941,943,944,962-966	94188-9997	SAN FRANCISCO P&DC	10
247	945	94520-9998	CONCORD	1
248	945	94583-9998	SAN RAMON	1
249	945-948	94615-9997	OAKLAND P&DC	5
250	949,954	94952-9997	NORTH BAY P&DC	3
251	950,951	95101-8000	SAN JOSE P&DC	5
252	952,953	95213-9997	STOCKTON P&DC	3
253	942,956-958	95799-9997	SACRAMENTO P&DC	5
254	967,968	96820-9997	HONOLULU P&DC	4
255	970-972,986	97208-9997	PORTLAND P&DC	5
256	973	97301-9997	SALEM P&DF	1
257	974	97401-9997	EUGENE P&DF	1
258	980	98032-9997	SEATTLE DDC-SOUTH	1
259	981	98111-9997	SEATTLE DDC-EAST	1
260	980,981	98134-9997	SEATTLE P&DC	6
261	980,981	98159-9997	SEATTLE AMC	1
262	982	98203-9997	EVERETT P&DF	1
263	983,984	98413-9997	TACOMA P&DC	2
264	838,990-992	99202-9997	SPOKANE P&DC	2
265	995,996	99503-9997	ANCHORAGE P&DC	2
TOTAL				805
BOB FRISCH'S AREA ROLLUP				809
MONTHLY ENGR. TECH. REPORT				808

TW/USPS-T4-2 Please answer the following with the best estimates available to the Postal Service.

a. How many non-carrier route flats did the Postal Service handle in FY96? Please provide a breakdown by class of mail.

b. How many of the non-carrier route flats in FY96 received incoming secondary sortation on an MPFSM and how many received manual incoming secondary sortation? If possible, please specify by class of mail.

c. How many manual, MPFSM mechanized and MPFSM automated incoming secondary flats piece handlings are indicated by the FY96 national MODS data?

d. How many non-carrier route flats received incoming secondary sort at the delivery unit in FY96?

e. What proportion of the non-carrier route flats mailstream destines to zones with less than ten carrier routes?

f. What proportion of the non-carrier route flats mailstream destines to zones not served by MODS facilities?

Response

a. Below is a breakdown, by class, of the non-carrier route flats handled in FY 96.

NON-CR FLATS - FY96 (000s)

CLASS	PIECES
FIRST	5,427,354
PERIODICALS	5,237,542
STANDARD (A)	11,776,419
TOTAL	22,441,315

b. The Postal Service does not have data to show how many non-carrier route flats received incoming secondary sortation on a FSM or in manual operations. Distribution workload in operations is measured in handlings.

c. Total Piece Handlings (000's) for Incoming Secondary Flats operations as indicated by the FY96 national MODS data are 9,174,525.

Manual = 4,452,653
Keyed = 2,647,136
Barcode = 2,074,736

d. As indicated in 2B, the Postal Service does not have data to show how many non-carrier route flats received incoming secondary processing on an FSM or in manual operations. Consequently, we are also unable to provide how many non-carrier route flats received incoming secondary sort in delivery units in FY96.

e. In developing coverage factors for use in the models of witness Seckar, I am told the following information is available. Page 23 of LR-H-128 shows the percentage of flat mail destinating at SCFs with FSM 881s in zones with 10 or more routes for the categories of mail shown. Based on this information, we can say for SCFs with FSM 881s, 24 % of First-Class flats, 26.4 % of Periodicals flats, 27 % of Standard A Regular, non-carrier route presort flats and 24 % of Standard A Nonprofit non-carrier route presort flats destinate in zones with less than 10 routes.

f. This is not available. The available information is shown in LR-H-128, pages 22 and 23.

TW/USPS-T4-3 You state at page 11, line 21, of your testimony:

> "I have been advised that there are a couple of peculiar outputs from the cost models that do not reflect the aforementioned value of barcoding to operations. In both Periodicals and Standard (A) Nonprofit flats, the cost model outputs do not appear to adequately reflect the inherent differences in processing efficiencies between barcoded and non-barcoded mail. This circumstance is enigmatic, and we are determined to identify the factors that may have led to these results."

a. Which "cost models" does this statement refer to? Please describe and provide references to all cost models that produce such "peculiar outputs".

b. Who advised you of the "peculiar outputs" you refer to and when did you first become aware of this problem?

c. Please describe in detail these peculiar outputs, both with numbers and a narrative explaining why they are peculiar.

d. How much are these enigmatic conditions adding to the annual costs of processing (1) Periodicals; and (2) Standard (A) Nonprofit flats?

e. Have you or anyone else in the Postal Service considered the possibility that these peculiar results might occur because many periodicals (and Standard (A) nonprofit) flats are still being sorted manually even though they have been barcoded by the mailers? If yes, please describe your conclusions and what led to those conclusions. Also, please provide any data the Postal Service may have regarding the percentage of periodicals flats that are given automated sorting on flat sorting machines.

Response

a. The models that underline the cost results described below.

b. Witness Paul Seckar (T-26) advised us in June, 1997.

c. Witness Seckar's (T-26) testimony includes tables that reflect a lower processing cost for non-automation flats than for automation flats. All of these peculiar outputs are listed under the Actual Mail Makeup approach. Table III-2 shows a lower cost for non-automation flats at the 3-digit and Basic levels; Table III-3 shows a lower cost for non-automation flats at the 3-digit presort level; and Table III-5 shows a

lower cost for non-automation flats at the 3/5 presort level. These outputs are peculiar in the sense that they do not adequately reflect the value of barcoding to operations.

d. Redirected to witness Paul Seckar (T-26).

e. As I mentioned in my testimony, the circumstance is enigmatic. As of this date, we have not drawn any conclusions and do not expect to reach any until we have researched the matter further. The Postal Service does not have data to indicate the percentage of Periodical flats that are given automated sorting on FSMs.

TW/USPS-T4-4 At page 12, line 3 through page 13, line 4, you indicate that mailers of non-barcoded periodicals may have a stronger incentive to prepare 5-digit sacks with only a few pieces, and refer to this as a potential explanation for cost models not showing the expected cost difference between barcoded and non-barcoded mail.

a. Are you suggesting that the behavior described (entering 5-digit sacks with only a few pieces) leads to lower overall costs?

b. If the behavior you describe leads to higher costs, would not that have the effect of producing a larger differential between barcoded and non-barcoded mail in your cost models? Please explain your answer.

c. Please confirm that the behavior you describe does not affect palletized mail. If you cannot confirm, please explain.

d. Please provide an estimate of the percentage of periodicals mail that currently is entered by mailers on pallets, and describe the source of this estimate.

e. In your opinion, does the Postal Service receive more or fewer sacks with periodicals mail today than it did in 1986? Please explain your answer.

Response

a. No. In trying to understand the cause of the peculiar outputs we will look at ways in which the two mailstreams are different. One difference is the preparation requirements and rate eligibility between barcoded and non-barcoded periodicals. The behavior in my testimony was provided only as an example of how they differ.

b. I do not know how the cost model results would change if the behavior described in my testimony lead to higher costs.

c. Confirmed.

d. There is no estimate available for all Periodicals mail. However, LR-H-134, Section 2, page 43 shows 4.020 billion out of 7.223 billion Regular pieces is provided by mailers on pallets and LR-H-134, Section 3, page 43 shows 1.094 billion out of 2.148 billion pieces for Nonprofit is provided on pallets. See LR-H-190 for additional information on the sources of this data.

e. Fewer due to increased use of pallets.

TW/USPS-T4-5. In recent years the Postal Service has been certifying types of poly wrap materials that when used to enclose periodicals or other flats will not cause operational problems in sorting on the FSM'S.

a. Please provide a list of the currently certified materials.

b. In your opinion, will flats enclosed in these certified materials behave satisfactorily when processed on an FSM? If no, please explain why not.

c. In your opinion, do facility managers in facilities with FSM's generally use the FSM's to process flats enclosed in these materials rather than sort them manually? If no, please explain and provide an estimate of how many flats may be sorted manually when they could be sorted by FSM'S.

d. If in your opinion extra costs are being incurred because flats that could be sorted by FSM are instead sorted manually, please explain what the Postal Service is currently doing to address this problem.

e. What percentage of flats entered on FSM's are rejected by the machines? If possible, please provide separate estimates by class of mail and by whether the FSM's are used for manual keying or automated sorting.

f. What, if any, types of flats would are rejected by the FSM 1000 machines?

Response

a. See attached list.

b. Yes

c. Yes.

d. If this question is referring to polywrapped flats, see answer to part c above. In a broader context, local management has incentives to make use of the most efficient processing alternatives available. FSM processing is more efficient than manual distribution. Therefore, I do not believe that extra costs are being unnecessarily incurred. There are however, circumstances under which flats that are machinable on the FSM equipment are processed manually. For example flats which destinate at locations where flats sorting machines are not located and flats destined for zones with less than ten carrier routes, are sorted manually.

e. Through Accounting Period 11, 1997, the overall FSM reject rate is approximately 2%. It is not possible to provide separate estimates by class. See LR-H-134, Section 1, page 11 for rejects by processing method.

f. Pieces that do not meet the following dimensions:

Minimum Height 3.94"	Maximum Height 12"
Minimum Length 3.94"	Maximum Length 15.75"
Minimum Thickness .007"	Maximum Thickness 1.25"

Attachment to TW/USPS-T4-1-10 - Question 5a. (page 1 of 2)

Product Name	Polywrap Type	Approved for Use With		Mail Type	Manufacturer or Distributor	Contact	Telephone
		Weight	Trim Size				
AdPak EZ	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	direct mailpieces	Admiral Packaging	Ann B. Pare	401-276-8414
AdPak HC	polypropylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	Admiral Packaging	Ann B. Pare	401-276-8414
AdPak N125	polypropylene	3-12 oz.	6.5 x 11	direct mailpieces	Admiral Packaging	Ann B. Pare	401-276-8414
AdPak 125	polyethylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	Admiral Packaging	Ann B. Pare	401-276-8414
AdPak 150	polyethylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	Admiral Packaging	Ann B. Pare	401-276-8414
Allied Signal RL-22	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	John Edwards Co.	Larry Mead	704-821-6244
Amtopp C1150	polypropylene	2-9 oz.	8 x 11	magazines	Amtopp Corporation	Ron Silen	201-740-8220
Amtopp C1160	polypropylene	2-9 oz.	8 x 11	magazines	Amtopp Corporation	Ron Silen	201-740-8220
Armin PS1	polyethylene	12-16 oz.	8 x 11	direct mailpieces	Armin Company	Richard A. Kula	847-680-0407
Armin 272	polyethylene	8-12 oz.	7 x 10	direct mailpieces	Armin Company	Richard A. Kula	847-680-0407
Armin 2402	polyethylene	12-16 oz.	8 x 11	direct mailpieces	Armin Company	Richard A. Kula	847-680-0407
Armin 2501	polyethylene	12-16 oz.	8 x 11	direct mailpieces	Armin Company	Richard A. Kula	847-680-0407
Bemis CO6-9150	polyethylene	4.5-16 oz.	8 x 11	direct mailpieces	Bemis Company, Inc.	Brian Silvers	815-544-4598
Clysar EZ	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	DuPont Company	Suzanne Riley	302-773-2289
Clysar ABL	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	DuPont Company	Suzanne Riley	302-773-2289
Cryovac D940	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	W R Grace & Co	Fred Calmes	800-845-FILM
Cryovac D955	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	W R Grace & Co	Fred Calmes	800-845-FILM
Cryovac MPD2055	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	W R Grace & Co	Fred Calmes	800-845-FILM
Cryovac MPD2100	shrinkwrap	2-7 oz.	6 x 7 to 8 x 11	card packs, direct mailpieces	W R Grace & Co	Fred Calmes	800-845-FILM
EZ Bag	polyethylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	Sharp Packaging	Greg Knaebe	414-246-8815
InteTopp-222AA35	polypropylene	2-14 oz.	6 x 7 to 8 x 11	card packs	Amtopp Corporation	Ron Silen	201-740-8220
JR 106	polyethylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	James River Corp.	Joe Gleisinger	513-576-7108
MAILRAP WC-725	polyethylene	up to 6 oz.	8 x 11	direct mailpieces, magazines	Innovative Packaging	Bruce Hollander	914-762-5404
MAILRAP WC-732	polyethylene	up to 6 oz.	8 x 11	direct mailpieces, magazines	Innovative Packaging	Bruce Hollander	914-762-5404
NEX 3015	polyethylene	3-12 oz.	6.5 x 11	direct mailpieces	New England Extrusions	Jeff Brandenberg	800-537-3180
PE 1020	polyethylene	12.6-16 oz.	7-8.5 x 11	direct mailpieces	Rexene Resins	Jim Leech	214-450-9000
SORTERAP MDC 1000	polyethylene	up to 6 oz.	6 x 9 to 8 x 11	direct mailpieces	PolyFlex Corporation	Bruce Hollander	914-762-5100
WC-802	coextrud-poly	3-16 oz.	8 x 11	catalogs, magazines	Innovative Packaging	Bruce Hollander	914-762-5404
WC-803	coextrud-poly	3-16 oz.	8 x 11	catalogs, magazines	Innovative Packaging	Bruce Hollander	914-762-5404

Attachment to TW/USPS-T4-1-10 - Question 5a. (Page 2 of 2)

Additional poly wrap certifications not listed in Postal Bulletin 21930 (10-10-96)

Product Name	Manufacturer
942	Deerfield Plastics
Mobile Bicor 140 BSR-ONE	Mobile Chemical Company, Films Division
Armin Film Paper II Series	Armin Plastics
Armin Film Postal II Series	Armin Plastics
Exlfilm	Intertape Polymer Group

TW/USPS-T4-6. *Your testimony refers several times (e.g. page 10 at line 28) to* Processing & Distribution plants.

a. How many postal facilities, excluding BMC'S, are Processing & Distribution plants, as you use the term?

b. Are all Processing & Distribution plants, excluding BMC'S, MODS offices? If no, please list the exceptions.

c. You state at page 10, line 28, that: "Through AP 9, Fiscal Year 1997, Processing & Distribution plants processed 28 percent of their total incoming secondary flat volume using barcode readers on flat sorters, a six point increase over the same period last year (SPLY)." Is the 28 percent relative to all flats destined to zones in the service area of these plants, or just to the flats that these facilities currently process in-house?

Response

a. 257

b. Yes

c. The 28% is relative to the total incoming secondary piece handlings (TPH) of flats in the plants

TW/USPS-T4-7 At page 21, line 11, in describing manual sorting operations in the automated environment, you state:

"Manual cases become the method-of-last-resort, especially late in the evening as rejects from automated operations appear in quantity. To meet service commitments, manual cases must be staffed to handle these late surges."

a. Does this comment also apply to manual sorting in the early morning, as the postal facility prepares to dispatch sorted mail to its associate offices, stations and branches? Please explain your answer.

b. Does your comment apply both to manual letter and manual flat sorting?

c. Is it not also true that in staffing its manual sorting operations a postal facility needs to prepare for eventualities such as (1) breakdown of the automated sorting equipment; (2) insufficient capacity to meet service standards with the automated equipment due to later than usual mail arrivals (because of traffic, bad weather, etc.); and (3) insufficient capacity to meet service standards with the automated equipment due to heavier than usual mail volume? Please explain your answer.

d. Does your comment imply that in periods between the surges you describe, manual sorting operations are often over-staffed relative to the volume that is available for manual processing? Please explain your answer.

e. In your observation, experience and knowledge, do facility managers sometimes divert mail that could have been sorted by automation to manual sorting in order to keep the manual sorting clerks occupied in between surges?

f. Are you aware of any national or regional guidelines regarding how much an automated facility needs to "over-staff" its manual sorting operations in order to be prepared for the types of surges you describe? If yes, please describe those guidelines and provide a copy.

g. In your observation, experience and knowledge, to what extent will management in an automated facility staff its manual letter and flats sorting operations with more employees than is normally required in order to be prepared for surges of the type you describe?

h. Do postal facility managers use computerized tools in order to staff and schedule their mail processing operations? If yes, describe all such tools used in postal facilities, the extent to which each tool is used, and provide any available documentation.

Response:

a. Yes. In general, activity increases in manual cases as outgoing mail is prepared for dispatch near the end of Tour 3, and again as local mail is prepared for dispatch near the end of Tour 1.

b. Yes.

c. No, we do not staff in anticipation of these events. We staff to workload. Work rules provide sufficient flexibility to match the work force to the work load in manual cases. Mandatory overtime is available. Part time personnel can be scheduled and, when circumstances warrant, called in early. When sorting equipment breaks down, personnel can be shifted to manual cases.

d. No. See answer to c. above.

e. No.

f. No.

g. Not at all. See answer to c. above.

h. Yes. The Site Methods for the Evaluation of Technology Alternatives (META) system is the nationally approved system. It was required for RBCS activation and is required for the activation of new facilities. It is used at local discretion to adjust local staffing. A Site META Users Manual is being filed as Library Reference H-221.

TW/USPS-T4-8. At page 18, lines 17-21, you refer to opening units and pouching operations as main support activities.

a. Does the term "pouching operations", as used by you and other witnesses, refer only to the operation of putting mail in hanging sacks or pouches, or could it also include entering mail for dispatch in rolling containers?

b. If a bundle that will be sorted at another facility (e.g. outgoing bundle) is thrown directly from an opening belt into a sack or pouch that later will be dispatched, would that operation be referred to as an opening unit or a pouching operation? Please explain your answer.

c. Please confirm that MODS numbers 110-129 and 180-189 may be used with somewhat different meaning in different facilities. If not confirmed, please explain.

d. According to LR-H-146, preferential opening units are represented by MODS numbers 110-114 and 180-184, nonpreferential (BBM) opening units are represented by MODS numbers 115-117 and 185-189 and pouching operations are represented by MODS numbers 120-129 and 208-209. Are you, as an operations expert, convinced that this is consistent with the use of MODS numbers in all MODS facilities?

e. Please describe the conditions under which the Postal Service today puts mail with a domestic destination in pouches prior to dispatch. Particularly, under what conditions will periodicals mail be pouched prior to dispatch?

f. Please confirm that MODS numbers 110-129 generally refer to outgoing operations, while numbers 180-189 refer to incoming operations.

g. What MODS number(s) are normally used for SCF opening units?

Response:

a. Pouching operations can put mail in any variety of container for dispatch. See LR-H-147 Appendix A, Sections 120C for details.

b. Opening Unit. See LR-H-147 Appendix A, Section 110C and 180C for details.

c. As defined in Sections 110C and 180C cited above, they always mean Opening Unit. The activities and areas used to accomplish the function will vary with local circumstances, and individual numbers within the series will be assigned at local discretion to track the areas and activities actually used.

d. Yes, except that 208-209 is scan-where-you-band – but see answer to question c. above.

e. I assume your question applies to pouches or sacks. They are avoided except for parcels and irregular pieces that cannot be trayed. Periodicals might be sacked at a very small SCF without flat sorting machines.

f. Operations 110-117 are outgoing, operations 120-129 are pouching, and operations 180-189 are incoming. See Sections 110C, 120C, and 180C cited above.

g. Operations 110-117 and 180-189.

TW/USPS-T4-9 Please describe the instructions given to mail processing employees in MODS facilities regarding the use of time-clocks, and provide a written copy of those instructions. Additionally, please answer the following and explain your answer to each question..

a. Regardless of what may be the actual practice, are mail processing employees supposed to clock out of one operation and into another each time their assignment changes to a different operations If no, please explain.

b. Please explain, based on your observation, experience and knowledge, to what extent instructions regarding clocking in and out are followed in practice.

c. When an employee goes on a break, is he assumed to clock out of the operation he was assigned to prior to going on the break?

d. Is there a MODS number to be used by employees when they are not assigned to any specific processing operation? If yes, what number?

e. Witness Degen describes a situation where an employee may be clocked into a MODS mail processing operation but is observed by an IOCS clerk as doing something else, e.g. window service or administrative work. In such situations, should the employee have clocked out of the mail processing operation before commencing the other activity?

f. Could it happen that an employee is assigned to a 180 (incoming opening unit) operation at one point and then later in his shift is reassigned to manual letter or flat sorting but forgets to clock out of one operation and into another?

g. Could it happen that an employee is assigned to a manual flats case but later is told to move over to a manual letter case because of an unexpected heavy surge of letters that must be sorted prior to dispatch time? Could it also happen that, given the urgency, the employee in that situation forgets to clock out of one operation into another?

h. What procedures does management in MODS facilities normally apply in order to assure that employees are always clocked onto the operations where they are actually working?

i. In your observation, experience and knowledge, is assuring that employees are clocked into the correct MODS operation numbers high on the list of priorities for facility managers and supervisors?

Response:

Handbook F-22, Time and Attendance, Section 113.333, provides instructions on the use of the Employee Badge Reader. An extract containing Section 113.333 is attached. At orientation a supervisor will show a new employee how to use the Employee Badge Reader in accordance with these instructions.

a. Yes, unless they are moving frequently between operations or engaged in two activities almost simultaneously. See LR-H-147 Section 312.12 for details.

b. They are widely followed.

c. No.

d. Operation 340. It is little used since employees are properly engaged in productive operations with rare exceptions (e.g. power failure).

e. See a. above.

f. Yes.

g. Yes.

h. Section 213 of Handbook F-22 prescribes procedures for badge handling. An extract containing Section 213 is attached. Additionally, the Time and Attendance system provides for queries to determine which operation an employee is clocked-on, and to list all employees clocked onto an operation.

i. Yes.

113.23 Off-Line System. The off-line system is that portion of the host computer which receives correct and complete sets of transactions from the on-line system, calculates the total hours and pay credits for each employee, and produces summarized management reports based on these calculated hours.

113.3 Field Equipment

113.31 Equipment Type. The PSD System uses the following types of field equipment:

a. Main facility device controller (MFDC)

b. Employee badge readers

c. Transactors

d. Alphanumeric devices

e. High speed line printers

f. Platform and other scales

g. Badge Preparation Equipment

113.32 Main Facility Device Controller. The MFDC is an AT&T computer, Model 3B2. This computer controls all devices within a PSDS office, time stamps transactions, stores transactions on magnetic disk, and forwards the transactions to the host computer.

113.33 Employee Badge Reader

113.331 The employee badge reader (EBR) is a data collection terminal that records clock rings. It consists of a keyboard, message display, external clock, and a magnetic stripe reader. The external clock records time in a 24-hour format, using hours and hundredths.

113.332 The EBR visual display shows its status (READY, ON-LINE) and the status of a transaction (ACCEPT, REJECT) visual display. It also produces a loud tone when a transaction is accepted or rejected.

113.333 Employees should follow these procedures when using the EBR.

a. Select a clock ring type, for example, a BT (begin tour) or a MV (move). Once a clock ring type is selected, the EBR prompts the employee through the transaction by displaying messages on the message display.

b. When the EBR is ready to accept clock rings, the two status indicators marked READY and ON-LINE will be lighted.

c. When a clock ring is made, the READY status indicator will go off while the transaction is being processed.

d. When the computer in the DCS accepts the transaction, the yellow status indicator marked ACCEPT lights momentarily and the EBR will beep to indicate completion of the transaction.

e. If the DCS computer rejects the transaction, the red status indicator marked REJECT lights momentarily and the EBR boops to indicate rejection.

f. When the transaction is complete, either accepted or rejected, the green READY status indicator again indicates readiness for the next clock ring.

g. If the DCS computer is down, or the communications path is inoperative, the ON-LINE status indicator will be off, and the EBR will not accept transactions. The time display will also reflect four dashes.

113.34 Transactor and Alphanumeric Device

113.341 Description. Both the transactor and the alphanumeric device are AT&T PC 6300 desktop computers. The PC 6300 is equipped with a 20 megabyte hard disk and 640 kilobytes of random access memory. Internally, it is equipped with expansion boards that provide security, terminal emulation and communications. The distinction between a transactor and an alphanumeric device is a function of software and the configuration of the lower communications network. The transactor is connected to the DCS computer through a communication line; the alphanumeric device is connected directly to a port in the DCS computer.

113.342 Operation. In order to use the transactor or the alphanumeric device, an authorizer must have a logon ID and password for the DCS computer.

a. The application software is a menu driven system. An authorized user logs on to the DCS computer and makes a selection from the menu provided. The selections available will depend upon the authorizer's level of access, determined by DCS management.

b. After making a selection from the main menu, the authorizer will see a sub-menu detailing further selections available. The transaction screen will appear, allowing the user to enter the information into the system.

c. When the transaction is completed, press the transmit key to send the transaction to the DCS computer. The DCS computer will return an

213 Badge Handling

213.1 Employee Obtaining Badge

213.11 PSDS management will develop and implement local badge control procedures to insure that employee badges are not available for clocking purposes more than .08 hours before each employee's scheduled reporting time.

213.12 Management will evaluate individual work locations to determine if the full .08 hours of leeway is necessary to get employees on the clock by their scheduled reporting time.

213.13 Badges are to be made available for all scheduled employees, except those for whom a Form 3971, *Request for or Notification of Absence*, has been completed in advance.

213.14 Badges must be secured when not in use.

213.2 Employee Reporting For Duty. The employee must clock into the correct operation number at the scheduled reporting time, ready and able to begin work, and must report immediately to the work location. The employee must store any personal belongings and take care of any personal business before clocking in. An employee must not clock in more than .08 hours before the scheduled reporting time or more than .09 hours after the scheduled reporting time. All the employee's clock rings added together may not deviate more than .08 hours from the scheduled tour without specific supervisor approval to do so. The supervisor must enforce this procedure.

213.3 Removing Badges After Beginning of Tour. The supervisor must ensure that the unclaimed badges of employees who have not clocked-in are withdrawn from the rack .09 hours after the employee's scheduled begin tour time. These badges are to be retained at the appropriate control center or returned to the DCS.

213.4 Employee Clocking, Lunch Periods. The employee must clock out to, and in from, lunch at the authorized time, making certain not to exceed or reduce the scheduled lunch period by more than .08 hours, except that the total deviation of clock rings taken together, from the employee's scheduled tour, is not more than .08 hours for the day. After clocking out to lunch, the employee must leave the badge in the designated rack and not remove it from the work location without specific supervisory approval. The supervisor is responsible for disallowing any time resulting from an employee who clocked in early from lunch if the employee did not work. (See subchapter 720 for rules regarding the disallowance of time).

213.5 Employee Clocking, Moves to Another Operation. The employee must take her badge with her to any new work location. At the new work location, the employee must clock into the operation number of the new work location by making an EBR "move" transaction. (The supervisor may make such move rings especially when many employees move at one time).

213.6 Employee Clocking, End Tour. The employee must clock out at the scheduled ending time and leave the badge in the designated area. An employee must not clock out more than .08 hours before or after the scheduled end tour time without specific supervisory approval, except that the total deviation of all his clock rings taken together, from his scheduled tour, is not more than .08 hours for the day.

213.7 Removing Badges at the End of the Tour

213.71 The supervisor must ensure that badges of all employees who have not clocked out will be withdrawn from the rack .09 hours after the employees' scheduled end tour time and returned to the designated timekeeper or control center. Badges of employees remaining in an approved overtime status must not be picked up.

213.72 If a timekeeper is unavailable to pick up the badges, a supervisor must perform this procedure.

214 Tardiness

214.1 Employee Badge Handling. Employees who report to work .09 hours or more after their scheduled Begin Time are considered tardy. The supervisor or timekeeper is to collect all unclaimed badges at .09 hours after the scheduled tour start time.

214.2 Tardiness up to .50 hours (30 minutes)

214.21 When the employees report to work after .09 hours but before .50 hours of the scheduled Begin Time, they report directly to the designated timekeeper or control center to obtain a Form 3971. They must complete Form 3971 and have their supervisor sign the notified block.

214.22 Employees may be required or permitted to make up the period of tardiness by revising their scheduled tour for the day, providing the period of tardiness is without pay. Work that extends beyond

TW/USPS-T4-10 You indicate at page 13, line 7, that the Postal Service eventually will equip all its FSM 881 machines with OCR capability.

a. Will these OCR's permit automated incoming secondary flat sorting?

b. Please explain what value mailer-provided barcodes on flats will have once this deployment is completed.

Response

a. Yes.

b. Even after the Flat Mail OCR is deployed, barcoded flats will continue to have value to operations because of the address quality requirements of automation rate mail. Addresses on barcoded flats must be matched against CASS certified software thus ensuring their (and the associated barcodes) accuracy. Addresses on flats that will be read by OCRs are not required to be matched against CASS software. Also, the read rate of non-barcoded flats by the Flat Mail OCR is not expected to be comparable to the read rate of barcoded flats that is achieved by the Flat Mail barcode reader. Both of these factors equate to fewer rejects of barcoded flats.

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TW/USPS-T4-11 Please list and describe as completely as possible the various activities engaged in by clerks working at a manual flats case, including the actual sorting of flats into the case as well as the various "allied labor" functions performed. Please include all activities that a clerk would perform while clocked into a MODS number corresponding to manual flat sorting (e.g. 060, 073, 170, etc.). If any written documentation describing these activities exists, please provide it. In addition, please answer the following.

a. Please identify and describe separately the activities where a clerk at a manual flats case is:

(1) handling individual flats;

(2) handling bundles of flats to be sorted;

(3) handling bundles already sorted;

(4) handling trays of flats to be sorted;

(5) handling trays of already sorted flats;

(6) handling sacks of flats to be sorted;

(7) handling sacks of already sorted flats;

(8) handling rolling containers of flats to be sorted;

(9) handling rolling containers of flats already sorted;

(10) handling empty equipment; and

(11) not handling mail or empty equipment.

b. Are there industrial engineering standards that describe the productivity to be expected in the individual activities that employees at a flats case engage in? If yes, please provide those standards along with any explanation needed for a layman to understand them.

c. Please assume that at a given manual flats case there is enough mail available to assure that the employees will be kept fully occupied. Based on your observation, experience and knowledge, what percentage of their total time would you expect clerks at this operation to spend on each required activity? In particular, what percentage of employee time would you expect to be spent on:

(1) sorting flats into flats cases;

(2) sweeping or other handling of already sorted bundles, trays or sacks;

(3) handling bundles, trays or sacks of flats to be sorted;

(4) other handling where employees touch the mail or bundles, trays, sacks

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or other containers with mail;

(5) handling empty equipment; and

(6) other activities where mail is not handled?

d. Based on your observation, experience and knowledge, please describe the extent to which productivity in manual flat sorting and the associated allied labor functions is affected by flats characteristics such as:

(1) weight;

(2) dimensions;

(3) machinability; and

(4) other characteristics (please describe).

e. Based on your observation, experience and knowledge, please describe the extent to which productivity in manual flat sorting and the various allied labor functions at a manual flats case are affected by local conditions and describe the types of local conditions that might affect flat case productivity.

f. Please describe technological or methodological changes that have affected productivity at manual flats cases over the last ten years. Please also describe any further changes expected to impact flats case productivity in the test year of the current rate case.

g. Please describe any effects that you expect the IMHS to have on the activities performed by clerks at manual flats cases and on flats case productivity.

Response:

Clerks at flats cases sort flats into individual separations or "pigeonholes". They may also obtain flats to be sorted, break bundles (i.e. remove straps, ties, etc.), sweep cases, (i.e., remove cased mail from individual separations) and handle equipment incidental to these tasks, all depending on local practice. See the attached Standard Position Description for a Distribution Clerk, PS-05 Descriptions of individual flat sorting operations are contained in Library

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Reference H-147.

a.

(1) Handling individual flats: a clerk at a manual flats case will hold a quantity of unsorted flats in one hand and sort individual flats with the other.

(2) Handling Bundles of flats to be sorted: depending upon local practice, a clerk at a manual flats case may retrieve flats to be sorted. Those flats may be in bundles which have to have strings/bands removed so that the individual pieces can be distributed.

(3) Handling bundles already sorted: depending upon local practice, a clerk at a manual flats case may remove flats they have sorted and "tie" them out for dispatch, i.e., band the grouping of flats in a particular separation to create a bundle. The bundle is then placed in a container.

(4) Handling trays of flats to be sorted: depending upon local practice, a clerk at a manual flats case may retrieve flats to be sorted which could be in flats trays, necessitating the movement of the tray from a central location within the operation to the individual case where the clerk will distribute those flats.

(5) Handling trays of already sorted flats: depending upon local practice, a clerk at a manual flats case may remove flats they have sorted and place them in trays for dispatch or movement to a subsequent operation.

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(6) Handling sacks of flats to sorted: depending upon local practice, a clerk at a manual flats case may retrieve flats to be sorted which could be in sacks, necessitating the movement of the sack from a central location within the operation to the individual case where the clerk will distribute those flats.

(7) Handling sacks of already sorted flats: depending upon local practice, a clerk at a manual flats case may have to close out sacks to meet dispatches or when they are otherwise full.

(8) Handling rolling containers of flats to be sorted: depending upon local practice, a clerk at a manual flats case may push rolling containers of flats to be sorted within the manual flats operation for subsequent distribution.

(9) Handling rolling containers of flats already sorted: depending upon local practice, a clerk at a manual flats case may push rolling containers of flats already sorted.

(10) Handling empty equipment: depending upon local practice, a clerk at a manual flat case may move empty equipment (i.e., sacks, trays, rolling containers, etc.) incidental to the activities described above.

(11) Not handling mail or empty equipment: a clerk assigned to a manual flats case could be moving between the case and the area where flats to be sorted are retrieved, they could be returning to the case after having placed sorted flats into a container, they could be away from the area for personal needs, etc.

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b. No

c. Clerks at flats cases sort flats into individual separations or pigeonholes. Other activities performed vary depending on local practice. Additionally, the characteristics of the mail being distributed can have an effect. For example, thick pieces fill flat separations faster than thin ones thereby necessitating more sweeping. I am therefore unable to provide estimates of the time spent on these activities.

d. Each listed factor can have an impact on productivity. For example, heavier/thicker pieces will fill flat separations more quickly thereby necessitating more sweeping. Oversize pieces may have to be folded before they can be placed in a separation. Pieces with slick coverings may be difficult to handle etc. I am unable to describe the extent of the impact any one of these factors may have on productivity.

e. The act of physically distributing flats at a manual case is common across facilities. Differences may include the number of separations being made, and, in some cases, the size of the separations. Layouts of the manual operations can vary by facility due to space constraints or local preference, which may in turn have some impact on productivity. For example, if the local practice is for clerks to retrieve mail to be sorted or to remove sorted mail and place it in a container, the distances involved can have an impact. See pages 21 and 22 of my direct testimony (USPS-T4) for additional information.

I am unable to describe the extent of the impact any of these factors may have on productivity.

f. I am not aware of any technological or methodological changes that have affected flat case productivities in the last ten years. I am unaware of any technological or methodological changes planned for the future. However, the continuing shift of machinable, easier to handle, flats to mechanized and automated handling should affect manual flats case productivity.

g. I do not expect IMHS to have any effect on the actual sorting of flats at manual cases. The effect , if any, of IMHS on the clerks activities incidental to sorting will depend on local practice.

STD POSITION DESCRIPTION U. S. Postal Service

DISTRIBUTION CLERK, PS-05

FUNCTIONAL PURPOSE

Separates mail in a post office, terminal, airport mail facility or other postal facility in accordance with established schemes, including incoming or outgoing mail or both.

DUTIES AND RESPONSIBILITIES

1. Makes primary and one or more secondary distributions of incoming mail by delivery point, (for example, classified or contract station or branch or other delivery unit, general delivery, lockboxes, rural, highway contract route, or city carrier route) based on a knowledge of the distribution scheme.

2. Makes primary and one or more secondary distributions of outgoing mail for dispatch (for example, by city, state, or region) based on a knowledge of the distribution scheme.

3. In addition, may perform any of the following duties: maintain records of mails; examine balances in advance deposit accounts; face and cancel mail; tie mail and insert facing slips; open and dump pouches and sacks; operate cancelling machines; record and bill mail (for example, c.o.d., registered, etc.) requiring special service; and provide service at public windows.

SUPERVISION

Supervisor, Distribution Operations, or other designated supervisor.

SELECTION METHOD

Senior Qualified

BARGAINING UNIT

CLERK

KEY POSITION REFERENCE

KP-0012

(End of Document)

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
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TW/USPS-T4-12 Please answer the following questions regarding current and future use of flat sorting machines.

a. Can an FSM 881 without OCR be used simultaneously both in the BCR and manual keying mode? If yes, explain how this is done, if no, explain why not and what is involved in switching from one mode to another.

b. On OCR equipped FSM 881's, will barcoded and non-barcoded flats sometimes be fed at the same time? If yes, please discuss any problems that might result from mixing barcoded and non-barcoded flats in the output stream.

c. Will OCR equipped FSM's sometimes be used with OCR reading of some flats while others are keyed manually, at the same time?

d. When an FSM 881 has been equipped with an OCR, will that FSM still be used in a manual keying mode? If yes, describe the conditions under which this is expected to occur.

e. If a mixture of barcoded and non-barcoded flats are fed to an FSM-OCR, will it automatically use the OCR on the non-barcoded flats and the BCR on the barcoded flats, or will the operator need to select one mode or the other? Please explain.

Response:

a. Yes. The FSM 881 has four consoles. Operators pick up flats from a feed table belt and induct them onto an induction belt. Each console functions independently of the other three and can be set up for either keyed or BCR mode.

b. Yes. No problems are expected in the output stream.

c. Yes.

d. Yes. The FSM could be used to process OCR read rejects.

e. As I mentioned on page 14, lines 14 through 18, of my testimony, the Flat Mail OCR (FMOCR) will work in conjunction with the existing barcode reader. If a barcode is found, the piece will be sorted based on the barcode. If a barcode is not found, the piece will be sorted based on the address information read by the FMOCR. The operator will not have to select OCR versus BCR mode.

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TW/USPS-T4-13 In LR-H-134, Section 2, page 12, the acceptance rate for non-barcoded flats on an FSM-OCR is given as 60%, except that there is also reference to a "Second Pass acceptance rate" of 70%.

a. When non-barcoded flats are rejected from an FSM/OCR, please describe the subsequent processing steps. Will the rejected flats be: (1) fed for a second pass on the same machine; (2) manually keyed on the same FSM; (3) manually keyed on an FSM-1000 (when available); (4) sorted manually; or (5) any other (please describe)?

b. Does the 70% "Second Pass acceptance rate" mean that of non-barcoded flats successfully sorted on an FSM in the OCR mode in the first pass, only 70% will be accepted in a later FSM-OCR sort? If no, please describe what it means.

c. Please describe the characteristics of machinable non-barcoded flats that are believed to affect acceptance rates on FSM-OCR's.

d. Does the Postal Service today have any recorded experience with FSM-OCR sorting of live mail? If yes, please provide all written reports pertaining to the results of this experience and indicate the measured acceptance rates and productivity rates.

e. How many FSM's will be sorting live mail with OCR's: (1) at the start of FY98; and (2) at the end of FY98?

f. Has the Postal Service conducted any analysis to see whether FSM-OCR sorting, despite the low acceptance rate, will save costs relative to continued use of manual keying for non-barcoded, machinable flats? If yes, please describe the results of any such study and provide a copy.

Response:

a. Depending on the processing needs within a given plant, rejects could be either fed for a second pass on the same machine (or perhaps a different machine), keyed on the same FSM, keyed on an FSM 1000, or sorted manually. A primary consideration that will determine the appropriate handling will be the volume of OCR read rejects. Also, a high volume of

barcoded flats could influence the decision to process the OCR read rejects on the FSM 1000 in order to have the FSM 881 available to process barcoded flats.

b. Yes.

c. A complete list of characteristics of machinable non-barcoded flats that will affect acceptance rates on FSM-OCRs has yet to be finalized. However, it is likely that many of the standards, that are already published in DMM C830 for letters, such as font type, reflectance, and print quality will also be applicable for flats.

d. Yes. The FMOCR on the FSM 881 has been tested in Palatine, Illinois. A copy of the final test report, which includes the measured acceptance rates, is attached to this response. Productivity is not covered in the report.

e. The deployment schedule is currently being finalized, so I am unable to tell you how many FSMs will be sorting mail with OCRs at the start or end of FY 1998. As I mentioned on page 13, lines 11-13 of my testimony, deployment is scheduled to begin in early Fiscal Year 1998 and continue through the remainder of calendar year 1998. I am told that page 34, lines 6 and 7, of witness Seckar's (USPS-T-26) testimony cites the average test year deployment for the FSM-OCR at approximately 40 percent of the FSM-881s currently in the field.

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f. I am told that Library Reference USPS LR-H-134 reflects the costs relative to processing flats with an OCR as compared to keying the flats.

FINAL REPORT

FLATS OCR TEST
05/27/97 - 06/20/97

Final Report Flats OCR Test

Definition of Terms Used in Summary Tables

Mail Categories

O/G Prime:	A: O/G Primary
I/C Prime1:	B: I/C Primary 1
I/C Prim2:	C: I/C Primary 2
I/C SEC 1:	D: I/C Secondary 1
I/C SEC 2:	E: I/C Secondary 2

Performance Parameters

GAR: Gross Accept Rate: (Total accepts)/(total pieces fed)100

Non-chargeables: Mailpieces with sorting errors or mailpieces in the reject bins which are removed from the performance and cost model calculations. They include mailpieces with sorting errors and rejects *brought about by doubles, unreadable, illegible, incomplete, blocked or non-visible addresses, addresses* not in the directory, mis-faced mailpieces, and USPS caused errors or rejects.

The following parameters are exclusive of all non-chargeables:

AR:	(Total mpcs accepted)/(total mpcs fed)100
AR BARCODED:	(Total barcoded mailpieces accepted)/(total barcoded mpcs fed)100
AR OCR:	(Total mpcs accepted without a bar code)/(total mpcs without a bar code fed)100
% OCR Mail:	(Total mpcs without a bar code)/(Total mpcs fed) 100
AR SCRIPT:	(Total mpcs with handwritten addresses accepted)/(total mpcs with handwritten addresses fed)100
% SCRIPT:	(Total mpcs with handwritten addresses)/(total mpcs fed)100
ERR R TOT:	(Total mpcs with sorting errors)/(Total mpcs accepted)100
ERR R TOT BC:	(Total bar coded mpcs with sorting errors)/(total barcoded mpcs accepted)100
ERR R TOT OCR:	(Total non-barcoded mpcs with sorting errors)/(total non-barcoded mpcs accepted)100
ERR R 5 D:	(Total mpcs with 5 digit sorting erors)/total mpcs accepted)100
ERR R 5D BC:	(Total barcoded mpcs with 5 digit sorting errors)/(total barcoded mpcs accepted)100
ERR R 5D OCR:	(Total non-barcoded mpcs with 5 digit sorting errors) /(total non-barcoded mpcs accepted)100
ERR R 9D :	(Total mpcs with 9 digit sorting errors)/(total mailpieces accepted)100
ERR R 9D BC:	(Total barcoded mailpieces with 9 digit sorting errors)/(total barcoded mpcs accepted)100
ERR R 9D OCR:	(Total non-barcoded mpcs with 9 digit sorting errors)/(total non-barcoded mpcs accepted)100
COST/KL:	Cost per 1000 mailpieces to process the mailpieces according to the cost model
Weighted Cost:	The average cost per 1000 mailpieces with the categories of mail weighted according to the cost model.
CUM:	The cumulative results of the 19 day test by consolidating the data as if it were one large sample.

FINAL REPORT FLATS OCR TEST

		CUM	05/27/97	05/28/97	05/29/97	05/30/97	06/02/97	06/03/97	06/04/97	06/05/97	06/06/97	06/09/97	06/10/97	06/11/97	06/12/97	06/13/97	06/16/97	06/17/97	06/18/97	06/19/97	06/20/97
O/G PRIM	GAR	83.07%	77.87%	84.71%	78.72%	82.49%	81.63%	80.37%	80.25%	85.83%	82.48%	84.17%	85.64%	81.57%	83.78%	90.28%	80.81%	83.42%	85.37%	86.30%	78.70%
	AR	84.02%	78.18%	84.86%	80.28%	89.97%	82.27%	80.55%	80.68%	86.16%	82.79%	84.87%	87.37%	82.00%	84.11%	90.48%	81.52%	84.08%	87.12%	87.00%	80.18%
	AR BARCODED	100.00%	100.00%	100.00%	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	100.00%
	AR OCR	83.99%	77.94%	84.86%	80.18%	89.97%	82.25%	80.55%	80.83%	86.15%	82.79%	84.83%	87.37%	82.00%	84.11%	90.48%	81.42%	84.08%	87.00%	86.98%	80.14%
	%OCR Mail	99.83%														100.00%	99.41%	99.90%	99.80%	99.90%	99.80%
	AR SCRIPT	51.04%	39.16%	52.86%	50.23%	55.20%	50.00%	52.48%	44.05%	58.09%	49.71%	43.44%	42.86%	80.31%	51.80%	55.17%	45.10%	58.46%	55.47%	50.89%	53.25%
	% SCRIPT	18.41%	20.15%	18.82%	21.52%	13.34%	17.63%	23.11%	24.71%	10.78%	17.31%	14.42%	9.90%	20.19%	13.72%	11.41%	14.86%	19.40%	13.09%	14.52%	15.34%
	ERR R TOT	1.41%	2.02%	1.52%	1.12%	1.30%	1.78%	1.42%	1.09%	1.14%	1.67%	2.37%	1.16%	1.65%	1.06%	1.09%	1.26%	1.18%	2.00%	1.16%	1.12%
	ERR R TOT BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R TOT OCR	1.42%	2.04%	1.53%	1.13%	1.30%	1.78%	1.42%	1.09%	1.14%	1.67%	2.37%	1.16%	1.65%	1.06%	1.09%	1.27%	1.18%	2.00%	1.16%	1.12%
	ERR R SD	1.41%	2.02%	1.52%	1.12%	1.30%	1.78%	1.42%	1.09%	1.14%	1.67%	2.37%	1.16%	1.65%	1.06%	1.09%	1.26%	1.18%	2.00%	1.16%	1.12%
	ERR R SD BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R SD OCR	1.42%	2.04%	1.53%	1.13%	1.30%	1.78%	1.42%	1.09%	1.14%	1.67%	2.37%	1.16%	1.65%	1.06%	1.09%	1.27%	1.18%	2.00%	1.16%	1.12%
	ERR R 90	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 OCR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	COST/KL	$101.45	$108.64	$101.08	$103.50	$97.10	$103.39	$103.87	$103.01	$99.41	$102.81	$102.78	$98.80	$103.31	$100.89	$96.30	$102.89	$100.98	$100.51	$98.87	$103.56
I/C PRIM 1	GAR	92.88%	90.14%	93.47%	90.94%	93.50%	93.72%	92.35%	91.81%	93.81%	90.46%	93.12%	93.45%	92.51%	93.81%	97.53%	92.55%	90.83%	94.12%	94.10%	93.36%
	AR	93.17%	90.14%	93.42%	90.70%	93.47%	93.72%	92.33%	92.86%	93.82%	91.87%	93.10%	95.08%	92.48%	93.81%	97.52%	92.55%	90.25%	94.34%	94.09%	93.35%
	AR BARCODED	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%	100.00%
	AR OCR	93.18%	90.14%	93.42%	90.70%	93.47%	93.68%	92.31%	92.86%	93.82%	91.87%	93.10%	95.04%	92.48%	93.58%	97.52%	92.51%	90.25%	94.33%	94.08%	93.32%
	%OCR Mail	99.81%														100.00%	99.47%	100.00%	99.78%	99.51%	99.52%
	AR SCRIPT	77.08%	72.73%	81.54%	87.92%	80.85%	71.43%	73.81%	77.22%	89.47%	80.00%	82.50%	78.31%	77.22%	86.05%	86.21%	77.27%	77.94%	85.00%	80.00%	73.53%
	% SCRIPT	12.19%	8.30%	10.46%	14.93%	10.55%	11.48%	10.41%	20.84%	8.39%	10.39%	8.00%	7.16%	10.17%	11.00%	8.53%	5.85%	17.00%	9.43%	12.32%	8.06%
	ERR R TOT	1.54%	1.88%	1.08%	1.24%	1.61%	1.48%	3.05%	2.56%	0.84%	2.41%	0.82%	0.52%	1.31%	1.84%	0.48%	2.59%	1.88%	2.50%	0.79%	1.27%
	ERR R TOT BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R TOT OCR	1.54%	1.88%	1.08%	1.24%	1.61%	1.47%	3.08%	2.56%	0.84%	2.41%	0.82%	0.52%	1.31%	1.84%	0.48%	2.80%	1.88%	2.51%	0.79%	1.28%
	ERR R SD	1.54%	1.88%	1.08%	1.24%	1.61%	1.48%	3.05%	2.56%	0.84%	2.41%	0.82%	0.52%	1.31%	1.84%	0.48%	2.59%	1.88%	2.50%	0.79%	1.27%
	ERR R SD BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R SD OCR	1.54%	1.88%	1.08%	1.24%	1.61%	1.47%	3.08%	2.56%	0.84%	2.41%	0.82%	0.52%	1.31%	1.84%	0.48%	2.80%	1.88%	2.51%	0.79%	1.28%
	ERR R 90	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 OCR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	COST/KL	$68.50	$70.68	$67.78	$69.57	$68.43	$68.06	$70.91	$69.97	$67.36	$70.30	$67.37	$66.06	$68.62	$68.36	$64.55	$70.19	$70.35	$69.07	$67.00	$66.08
I/C PRIM 2	GAR	94.81%	92.81%	93.07%	94.78%	96.00%	96.90%	95.00%	95.49%	97.00%	95.33%	96.04%	96.34%	96.51%	97.59%	97.51%	91.81%	93.52%	93.35%	96.21%	94.83%
	AR	95.34%	93.18%	93.23%	95.40%	96.87%	97.09%	96.15%	96.07%	97.88%	95.90%	96.45%	96.53%	96.50%	97.86%	97.51%	92.10%	94.48%	93.71%	97.57%	95.30%
	AR BARCODED	96.81%	97.71%	96.78%	97.18%	96.79%	96.03%	99.18%	100.00%	100.00%	99.20%	97.83%	98.79%	100.00%	96.88%	99.04%	96.88%	96.85%	99.18%	97.56%	96.52%
	AR OCR	88.85%	85.38%	88.71%	90.42%	91.13%	91.94%	87.45%	90.35%	91.63%	83.19%	92.46%	93.58%	91.84%	95.64%	93.38%	83.77%	88.36%	88.03%	87.81%	88.27%
	%OCR Mail	35.18%														27.12%	35.48%	34.15%	51.72%	29.38%	37.46%
	AR SCRIPT	58.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	54.55%	72.73%	0.00%	0.00%	0.00%	0.00%
	% SCIPT	0.13%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.10%	0.00%	0.00%	0.10%	0.00%	0.00%	1.10%	1.47%	0.00%	0.00%	0.00%	0.00%
	ERR R TOT	0.54%	0.22%	1.09%	0.52%	0.52%	0.10%	0.21%	1.28%	0.41%	0.50%	0.45%	0.31%	1.04%	1.24%	0.81%	0.15%	0.47%	0.43%	0.31%	0.21%
	ERR R TOT BC	0.20%	0.17%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%	0.00%	0.00%	0.00%	1.41%	0.28%	0.00%	0.34%	0.00%	0.28%	0.32%
	ERR R TOT OCR	1.22%	0.33%	2.38%	0.85%	2.21%	0.40%	0.90%	3.29%	1.74%	0.71%	1.72%	0.60%	2.54%	0.78%	1.57%	0.45%	0.75%	0.84%	0.41%	0.00%
	ERR R SD	0.54%	0.22%	1.09%	0.52%	0.52%	0.10%	0.21%	1.28%	0.41%	0.50%	0.45%	0.31%	1.04%	1.24%	0.81%	0.15%	0.47%	0.43%	0.31%	0.21%
	ERR R SD BC	0.20%	0.17%	0.00%	0.42%	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%	0.00%	0.00%	0.00%	1.41%	0.28%	0.00%	0.34%	0.00%	0.28%	0.32%
	ERR R SD OCR	1.22%	0.33%	2.38%	0.85%	2.21%	0.40%	0.90%	3.29%	1.74%	0.71%	1.72%	0.60%	2.54%	0.78%	1.57%	0.45%	0.75%	0.84%	0.41%	0.00%
	ERR R 90	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R 90 OCR	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	COST/KL	$65.94	$66.62	$73.75	$65.89	$65.01	$64.32	$65.03	$66.46	$64.27	$65.56	$65.10	$64.93	$65.91	$65.31	$64.76	$67.37	$66.36	$66.77	$64.31	$65.53
I/C SEC 1	GAR	96.06%	97.06%	82.25%	96.54%	96.00%	96.56%	96.85%	96.40%	96.80%	83.23%	95.82%	94.56%	95.56%	96.07%	96.50%	92.80%	96.81%		96.32%	96.56%
	AR	96.71%	97.06%	88.11%	96.76%	97.64%	96.76%	96.30%	96.39%	100.00%	83.49%	96.84%	96.16%	96.40%	96.13%	96.50%	92.80%	96.86%		96.74%	96.77%
	AR BARCODED	99.05%	96.15%	96.47%	96.76%	97.82%	96.69%	99.27%	100.00%	100.00%	96.48%	96.81%	96.53%	100.00%	96.34%	96.75%	95.78%	96.35%		96.73%	96.20%
	AR OCR	85.64%	90.91%	72.86%	100.00%	100.00%	100.00%	100.00%	86.51%	100.00%	73.89%	100.00%	93.36%	89.84%	50.00%	90.00%	83.84%	88.84%		100.00%	86.36%
	%OCR Mail	17.39%														12.85%	8.32%	18.90%		8.42%	18.97%
	AR SCRIPT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%
	% SCIPT	0.81%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.21%	0.00%	0.00%		0.00%	0.00%
	ERR R TOT	0.81%	0.00%	1.36%	0.24%	2.70%	0.21%	0.47%	2.42%	0.59%	0.00%	0.33%	1.11%	0.88%	0.00%	1.74%	0.81%	1.89%		1.07%	0.45%
	ERR R TOT BC	0.43%	0.00%	0.00%	0.24%	2.72%	0.00%	0.49%	0.00%	0.60%	0.00%	0.33%	0.00%	0.00%	0.00%	0.25%	0.48%	0.96%		1.07%	0.00%
	ERR R TOT OCR	3.53%	0.00%	3.92%	0.00%	0.00%	3.65%	0.00%	10.00%	0.00%	0.00%	0.00%	2.00%	2.63%	0.00%	12.98%	7.14%	7.58%		0.00%	2.63%
	ERR R SD	0.04%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%
	ERR R SD BC	0.02%	0.00%	0.00%	0.24%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%
	ERR R SD OCR	0.18%	0.00%	1.96%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%
	ERR R 90	0.87%	0.00%	0.89%	0.00%	2.70%	0.21%	0.47%	2.42%	0.59%	0.00%	0.33%	1.11%	0.88%	0.00%	1.74%	0.81%	1.89%		1.07%	0.45%
	ERR R 90 BC	0.42%	0.00%	0.00%	0.00%	2.72%	0.00%	0.49%	0.00%	0.60%	0.00%	0.33%	0.00%	0.00%	0.00%	0.25%	0.48%	0.96%		1.07%	0.00%
	ERR R 90 OCR	3.35%	0.00%	1.96%	0.00%	0.00%	3.65%	0.00%	10.00%	0.00%	0.00%	0.00%	2.00%	2.63%	0.00%	12.98%	7.14%	7.58%		0.00%	2.63%
	COST/KL	$32.08	$31.38	$37.03	$30.58	$32.54	$30.70	$30.80	$33.04	$30.36	$37.82	$31.85	$32.40	$32.18	$30.41	$31.70	$33.82	$32.53		$31.21	$31.75
I/C SEC 2	GAR	80.80%	88.53%	70.88%	89.68%	58.07%	96.95%	88.80%	83.88%	82.78%	89.96%	32.00%	79.74%	87.34%	90.20%	82.49%	88.57%	73.23%	81.18%	93.78%	89.20%
	AR	81.24%	88.66%	70.85%	89.67%	58.22%	97.34%	88.96%	83.88%	83.13%	89.96%	31.90%	80.47%	87.51%	90.20%	86.16%	88.57%	74.94%	81.75%	93.96%	89.58%
	AR BARCODED	84.31%	91.96%	88.21%	75.81%	63.70%	97.24%	88.96%	93.55%	72.95%	89.96%	31.73%	80.89%	94.05%	90.20%	87.35%	88.57%	90.97%	91.93%	94.64%	89.54%
	AR OCR	66.03%	85.19%	67.35%	83.87%	29.75%	100.00%	0.00%	100.00%	98.00%	0.00%	50.00%	70.00%	29.41%	100.00%	86.97%	0.00%	28.28%	81.06%	86.97%	100.00%
	%OCR Mail	16.82%														4.48%	0.00%	7.24%	18.97%	1.81%	0.20%
	AR SCRIPT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	% SCIPT	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R TOT	4.26%	1.34%	1.71%	4.06%	12.11%	1.88%	5.29%	2.74%	1.98%	6.83%	20.90%	4.52%	5.44%	0.80%	7.51%	5.85%	6.55%	2.70%	3.43%	2.47%
	ERR R TOT BC	3.90%	1.63%	0.00%	3.25%	4.40%	1.75%	5.29%	2.80%	3.78%	6.83%	21.21%	4.88%	4.34%	0.80%	7.85%	5.85%	7.25%	2.55%	3.49%	2.47%
	ERR R TOT OCR	8.86%	0.00%	2.03%	5.00%	97.87%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	36.87%	0.00%	5.00%	0.00%	0.00%	3.26%	0.00%	0.00%
	ERR R SD	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	ERR R SD BC	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Attachment to TW/USPS-T4-11-16 Question 13d (page 3 of 4)

| WEIGHTED COST | | |

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

TW/USPS-T4-14 Please list and describe as completely as possible the various activities engaged in by clerks working at a flat sorting machine. Please include all activities performed while a clerk is clocked into a MODS number corresponding to mechanized or automated flat sorting. Please provide separate answers (unless identical) for: (1) an FSM-1000; (2) an FSM 881 used in manual keying mode; (3) and FSM 881 used in the OCR mode; and(4) an FSM used in the BCR mode. If any written documentation describing these activities exists, please provide it. In addition, please answer the following, for each type of flat sorting machine:

a. Please identify separately the activities where a clerk at an FSM is:

(1) handling individual flats;

(2) handling bundles of flats to be sorted;

(3) handling bundles already sorted;

(4) handling trays of flats to be sorted;

(5) handling trays of already sorted flats;

(6) handling sacks of flats to be sorted;

(7) handling sacks of already sorted flats

(8) handling rolling containers of flats to be sorted;

(9) handling rolling containers of flats already sorted;

(10) handling empty equipment; and

(11) not handling mail or empty equipment.

b. Are there industrial engineering standards that describe the productivity to be expected in the individual activities that employees at an FSM engage in? If yes, please provide those standards along with any explanation needed for a layman to understand them.

c. Please assume that at a given FSM there is enough mail available to assure that the employees will be kept fully occupied. Based on your observation, experience and knowledge, what percentage of their total time would you expect clerks at this operation to spend on each required activity? In particular, what percentage of employee time would you expect to be spent on:

(1) keying or feeding flats;

(2) sweeping or other handling of already sorted bundles, trays or sacks;

(3) handling bundles, trays or sacks of flats to be sorted;

(4) other handling where employees touch the mail or bundles, trays, sacks or other containers with mail;

(5) handling empty equipment; and

(6) not handling mail or empty equipment?

d. Based on your observation, experience and knowledge, please describe the characteristics of flats handled at the various types of FSM's that most affect productivity, and the extent to which productivity is affected by each such factor.

e. Based on your observation, experience and knowledge, please describe the extent to which productivity in FSM sorting and the associated allied labor functions are affected by local conditions and describe the types of local conditions that most affect productivity.

f. Please describe technological or methodological changes that have affected productivity on FSM's over the last ten years. Please also describe any further changes expected to impact flats case productivity in the test year of the current rate case.

g. Please describe any effects that you expect the IMHS to have on the activities performed by clerks at FSM's and on FSM productivity.

h. Based on your observation, experience and knowledge, did the average productivity achieved in FSM sorting increase or decrease between FY88 and FY96? Please give separate answers for (1) FSM sorting with manual keying; and (2) overall FSM sorting. Please explain your answer.

i. Based on your observation, experience and knowledge, how much could one have expected the average productivity at FSM's to increase between FY88 and FY96, given the move to the 2+2 configuration, the introduction of flats barcoding and other technological improvements? Please explain your answer.

j. When the FSM's were being changed to the 2+2 configuration, how much did engineering studies indicate that this change would improve productivity?

Response:

Clerks at flats sorters feed barcoded flats and key nonbarcoded flats to be sorted. They may also obtain flats to be sorted, sweep the machine, and handle equipment incidental to these tasks, all depending on local practice. If a console

is in BCS mode, the clerk will load without keying. I have been recently informed that when the OCR/BCS mode becomes available, the clerk will be able to choose to key a flat that would clearly reject (e.g. poorly handwritten address) if left to the OCR/BCS. The standard position descriptions for Flat Sorting Machine Operators, PS-05 and PS-06 are attached to the response.

a.

(1) An operator can handle individual pieces of mail while feeding the machine in either a keying, barcoded reading or OCR mode. They will also handle individual pieces of mail when clearing jams. They may also handle individual pieces of mail while loading feeder tables.

(2) through (11). For questions a.(2) through a.(11) see answer to TW/USPS-T4-11.

b. No

c. Operators will rotate from keying and/or feeding mail to other duties (i.e., loading feeder tables, sweeping, etc.) within the FSM operation. Operators will key or feed barcoded flats for up to 45 minutes per rotation. Therefore, I would expect an operator to spend the majority of their time feeding and/or keying. While not feeding or keying, the operator is primarily engaged in loading feeder tables and sweeping the machine. Depending upon local practice, they may also retrieve mail to be sorted, remove bands from bundles of flats to be sorted.

etc. I am therefore, unable to provide estimates of the time spent on these activities.

d. Pieces near the limits of the machinability requirements can impact productivity. I am unable to estimate the extent to which productivity is affected by each factor.

e. Local management makes decisions regarding the distribution of flats with the characteristics mentioned in 14d above. They assess the tradeoffs between mechanized flats sorting with increased jam rates and manual distribution. Additionally, some facilities prepare flats for distribution (removing them from sacks, cutting bands, etc.) in opening units before taking them to the flats sorting machine operation. Some sites will require that personnel assigned to the FSM will accomplish these tasks within that operation. I am unable to describe the extent to which these local conditions affect productivity.

f. The current FSMs are described on page 10 of my testimony and the anticipated changes that may impact productivity in the test year are described on page 13. The major changes in flats technology during the last ten years are: the conversion to a 2+2 configuration allowing more throughput, the addition of barcode readers, the introduction of the FSM1000, and other lesser enhancements designed to improve efficiency.

g. The increased use of pallets which is a major element of IMHS will continue

to improve the machinability of the flats mail base by reducing damage. It will also reduce the instance of broken bundles and thus reduce the instance of unfaced or otherwise improve the orientation of the mail at the consoles.

h. Because work hours associated with sweeping and loading cannot be directly attributed to either the keying mode or BCR mode, I am unable to tell whether productivity declined in manual keying operations between FY 1988 and FY 1996. As for total FSM productivity, there has been a decline between FY 1988 and FY 1996. However, most of this decline occurred in the early part of this period. It is possible that our efforts with the letter automation program diverted some attention from other areas such as flats processing. Further, as I mentioned on page 11, lines 12 through 14 of my testimony, the mailer participation in flats barcoding has been below expectations until just recently, which could have impacted the overall FSM productivity.

I. While I would expect each of the improvements made to FSMs to have had a positive impact on productivity, I am unable to estimate how much one could have expected average productivity to increase over this time period.

j. I am advised that engineering estimated a 13% improvement.

STD POSITION DESCRIPTION U. S. Postal Service

FLAT SORTING MACHINE OPERATOR, PS-05

FUNCTIONAL PURPOSE

Operates a single or multi-position, electro-mechanical operator paced flat sorting machine in the distribution of flats requiring knowledge and application of approved machine distribution of directs, alphabetical or geographic groupings, by reading the ZIP Code on each flat.

DUTIES AND RESPONSIBILITIES

1. Reads ZIP Code on each piece of mail. Depresses proper key/keys to enable the machine to divert each piece of mail to the proper destination. Applies a high degree of manual and visual coordination and close visual atention for sustained periods.

2. May serve for a portion of the time, on a rotation basis, as a loader and/or sweeper/tyer. As a loader: culls mail to remove nonmachineable pieces and loads mail onto ledges for processing. As a sweeper/tyer: removes mail from separations in the machine; verifies sorted mail for accuracy; ties mail into bundles or dispatches direct to sacks, pouches or other containers.

3. May perform manual distribution, not limited to flats, as required.

4. May operate other mail sorting machines using similar keypad after completion of appropriate training.

5. Performs other job-related tasks in support of primary duties.

SUPERVISION

Supervisor of unit to which assigned.

SELECTION METHOD

Senior Qualified

BARGAINING UNIT

CLERK

KEY POSITION REFERENCE

KP-0012

(End of Document)

STD POSITION DESCRIPTION U. S. Postal Service

FLAT SORTING MACHINE OPERATOR, PS-06

FUNCTIONAL PURPOSE

Operates a single or multi-position electro-mechanical operator paced flat sorting machine in the distribution of flats requiring the knowledge and application of approved machine schemes consisting of distribution of other than directs, alphabetical and geographical groupings which requires a minimum of 100 scheme or memory items.

DUTIES AND RESPONSIBILITIES

1. Reads address of each piece of mail; depresses proper key/keys to enable the machine to divert each piece of mail to the proper destination requiring a high degree of manual and visual coordination and close visual attention for sustained periods.

2. May serve for a portion of the time, on a rotation basis, as a loader and/or sweeper/tyer. As a loader: culls mail to remove nonmachineable pieces and loads mail onto ledges for processing. As a sweeper/tyer: removes mail from separations in the machine; verifies sorted mail for accuracy; ties mail into bundles or dispatches direct to sacks, pouches or other containers.

3. May perform manual distribution, not limited to flats, as required.

4. Performs other job related tasks in support of primary duties.

SUPERVISION

Supervisor, Distribution Operations, or other designated supervisor.

SELECTION METHOD

Senior Qualified

BARGAINING UNIT

CLERK

KEY POSITION REFERENCE

KP-0016

(End of Document)

Document Date: 11-02-94 Occupation Code: 2315-21XX
SPD Number: SP-2028

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

TW/USPS-T4-15 Please describe the various types of opening unit functions applied in postal facilities to bundles, sacks, trays and pallets of Periodicals flats, and identify the ranges of MODS numbers used to identify these types of opening units. Additionally, please list and describe as completely as possible the various activities engaged in by postal employees working at opening units for Periodicals flats. Please include all activities that a clerk would perform why he is clocked into a MODS number corresponding to these opening units. If any written documentation describing these activities exists, please provide it. In addition, please answer the following, for each type of Periodicals flats opening unit:

a. Please identify separately the activities where a clerk at an opening unit is:

(1) handling individual mail pieces;

(2) handling individual bundles;

(3) handling trays;

(4) handling sacks to be opened;

(5) handling pallets to be opened;

(6) handling other containers to be opened;

(7) handling sacks of mail that has been sorted at the opening unit;

(8) handling other containers of mail that has been sorted;

(9) handling empty equipment; and

(10) not handling mail or empty equipment.

b. Are there industrial engineering standards that describe the productivity to be expected in the individual activities that opening unit employees engage in? If yes, please provide those standards along with any explanation needed for a layman to understand them.

c. Please assume that at a given opening unit there is enough mail available to assure that the employees will be kept fully occupied. Based on your observation, experience and knowledge, what percentage of their total time would you expect clerks at this operation to spend on each required activity? In particular, what percentage of employee time would you expect to be spent on:

(1) sorting or otherwise handling individual bundles or mail pieces;

(2) closing and removing sacks or other containers of already sorted mail;

(3) opening, dumping or bringing to the opening unit sacks or other containers of mail to be sorted at the opening unit;

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

(4) other activities that involve the handling of mail or containers with mail in them (please describe);

(5) handling empty equipment; and

(6) not handling mail or empty equipment?

d. Based on your observation, experience and knowledge, please describe the extent to which productivity in Periodicals opening units is affected by local conditions and describe the types of local conditions that most affect productivity.

e. Please describe technological or methodological changes that have affected productivity in Periodicals opening units over the last ten years. Please also describe any further changes expected to impact productivity in the test year of the current rate case.

f. Please describe any effects that you expect the IMHS to have on the activities performed at opening units and on productivity.

g. Based on your observation, experience and knowledge, did the average productivity achieved in Periodicals opening units increase or decrease between FY88 and FY96? Please explain your answer.

Response:

The MODS number ranges and titles for Periodicals Opening Units are as follows:

110-114 Outgoing Pref.

180-184 Incoming Pref.

Descriptions of the activities in these operations may be found in Library Reference H-147, Appendix A, Sections 110C and 180C. See also the attached standard position descriptions for a Mail Handler, MH-04 and a Distribution Clerk PS-05 enumerating the duties and responsibilities of those positions including those associated with opening unit functions.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

a.

(1) Handling individual mail pieces: Generally, opening unit activities do not include the handling of individual pieces of mail, rather they are handled in containers or in bulk quantities, i.e., bundles. Opening unit employees may have to handle individual pieces of mail if during handling, a bundle were to break.

(2) Handling individual bundles: Employees assigned to an opening unit will dump bundles onto a belt or into a container. They will distribute bundles into containers (sacks, rolling stock, etc.), and they will open bundles (i.e, remove bands, ties, string, etc.).

(3) Handling trays: Employees assigned to an opening unit will open trays (i.e., cut bands and remove sleeves/lids) and dump bundles from trays onto a belt or into another container. They will also place mail into trays after having removed bands, ties, string, etc. for subsequent processing.

(4) Handling sacks to be opened: Employees assigned to an opening unit will open and dump sacks containing mail.

(5) Handling pallets to be opened: Employees assigned to an opening unit may position a pallet within an operational area, remove shrink wrap, bands, etc. and empty the contents on to a belt or other container for subsequent handling, or they may make direct distribution of the bundles on a pallet.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

(6) Handling other containers to be opened: Other containers which can be handled within an opening unit include pouches, which are handled like sacks as described in (4) above, and various kinds of rolling stock.

(7) Handling sacks of mail that has been sorted at the opening unit: Employees assigned to an opening unit will label and "drop" sacks when full or to meet dispatch schedules. They will load the full sacks onto a conveyor or some type of rolling container for transport.

(8) Handling other containers of mail that has been sorted: Employees assigned to an opening unit will remove full containers and replace them with empty ones.

(9) Handling empty equipment: Employees assigned to an opening unit will hang empty sacks on racks in preparation for distribution. They will position empty rolling stock around sortation belts. They will consolidate empty equipment and remove unneeded equipment it from the opening unit.

(10) Not handling mail or empty equipment: Employees assigned to an opening unit could be moving between activities within the opening unit, they could be on their way to retrieve mail or equipment, or they could be on their way back to the opening unit after having moved full containers of mail. They could be performing administrative functions. They could be away from the area for personal needs, etc.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

b. No.

c. I would expect the majority of the time to be spent on distribution – activities 1 and 3. I am unable to estimate the percentages of time spent on the listed work elements.

d. The dock arrangements, the layout of the workroom floor, the number of floors or annexes, local labor agreements, and other local practices can all effect opening unit productivity. Since productivity is not measured in opening units, I am not able to quantify these effects.

e. One significant change that has affected Periodicals opening units' productivity is the advent of the Integrated Mail Handling System (IMHS). IMHS is a mail handling program designed to improve the overall mail handling functions within the Postal Service. Heavy emphasis is placed on the physical system elements of truck loading and unloading systems and dock transfer systems. Accordingly, customer mail preparation that is congruent with IMHS is also a component of the overall program. For instance, mail on pallets helps to streamline the overall Periodicals opening unit workload because the dumping of sacks is not required. In the future, I expect that additional material handling capabilities such as the Tray Management System will have a positive impact on opening unit efficiencies.

f. See response in 15e.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

g. Increased. As I mentioned in my response to question TW/USPS-T4-4e, my opinion is that the Postal Service receives fewer sacks today than in 1986 due to the increase in palletization. As I mentioned in 15e, palletized mail helps to streamline the overall Periodicals opening unit workload which helps improve productivity.

STD POSITION DESCRIPTION U. S. Postal Service

DISTRIBUTION CLERK, PS-05

FUNCTIONAL PURPOSE

Separates mail in a post office, terminal, airport mail facility or other postal facility in accordance with established schemes, including incoming or outgoing mail or both.

DUTIES AND RESPONSIBILITIES

1. Makes primary and one or more secondary distributions of incoming mail by delivery point, (for example, classified or contract station or branch or other delivery unit, general delivery, lockboxes, rural, highway contract route, or city carrier route) based on a knowledge of the distribution scheme.

2. Makes primary and one or more secondary distributions of outgoing mail for dispatch (for example, by city, state, or region) based on a knowledge of the distribution scheme.

3. In addition, may perform any of the following duties: maintain records of mails; examine balances in advance deposit accounts; face and cancel mail; tie mail and insert facing slips; open and dump pouches and sacks; operate cancelling machines; record and bill mail (for example, c.o.d., registered, etc.) requiring special service; and provide service at public windows.

SUPERVISION

Supervisor, Distribution Operations, or other designated supervisor.

SELECTION METHOD

Senior Qualified

BARGAINING UNIT

CLERK

KEY POSITION REFERENCE

KP-0012

(End of Document)

STD POSITION DESCRIPTION U. S. Postal Service

MAIL HANDLER, MH-04

FUNCTIONAL PURPOSE

Loads, unloads, and moves bulk mail and performs other duties incidental to the movement and processing of mail.

DUTIES AND RESPONSIBILITIES

1. Unloads mail from trucks. Separates all mail received from trucks and conveyors for dispatch to other conveying units and separates and delivers mail for delivery to distribution areas.

2. Places empty sacks or pouches on racks, labels them where prearranged or where racks are plainly marked, dumps mail from sacks, cuts ties, faces letter mail, carries mail to distributors for processing, places processed mail into sacks, removes filled sacks and pouches from racks and closes and locks sacks and pouches. Picks up sacks, pouches, and outside pieces, separates outgoing bulk mails for dispatch and loads mail onto trucks.

3. Handles and sacks empty equipment; inspects empty equipment for mail and restrings sacks.

4. Cancels stamps on parcel post, operates cancelling machines, carries mail from cancelling machine to distribution cases.

5. Assists in supply and slip rooms and operates copy machine and related office equipment.

6. In addition, may perform any of the following duties: make occasional simple distribution of parcel post mail that requires no scheme knowledge; operate electric fork lifts; rewrap damaged parcels; weigh incoming sacks; clean and sweep work areas, offices, rest rooms, and trucks where work is not performed by a regular cleaner.

7. With approval of the Chief Postal Inspector, acts as an armed guard for valuable registry shipments and as a watchman and guard around post office building.

SUPERVISION

Supervisor, Distribution Operations, or other designated supervisor.

SELECTION METHOD

Senior Qualified

(Continued on Next Page)

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

TW/USPS-T4-16 At pages 17-19 in your testimony you discuss the MODS and PIRS based cost pools used in this docket by witnesses Bradley and Degen. For each of these cost pools, what is a typical ratio of workers to supervisors? For example, at OCR's, which form one cost pool, how many workers does one supervisor typically supervise?

Please provide your best estimate of an average ratio for each cost pool. To the extent that the ratio of workers to supervisors in a given cost pool varies with circumstances, please explain what those circumstances are and how much one can expect the ratio to vary. If it is common for one supervisor to oversee the workers in more than one cost pool, please identify the groupings of cost pools that typically may be assigned to the same supervisor and estimate the ratio of workers to supervisors in the combined pools. If any written guidelines exist regarding the ratios of workers to supervisors at mail processing operations, please provide a copy.

Response:

As noted in my testimony, cost pools generally mimic the layout of the workroom floor. However, "cost pools" are not an Operations concept and I have neither data nor experience in relating cost pools to supervision. The prescribed ratio of supervisors/managers to mail processing employees is 1 to 20. This ratio is managed on an area-wide basis so that the area can adjust the supervisory ratio to reflect inter-facility differences (e.g. multi-floor facilities, annexes, union rules, etc.) A series of memos detailing these policies in more detail is attached.

GAIL G. SONNENBERG
VICE PRESIDENT
HUMAN RESOURCES

UNITED STATES POSTAL SERVICE

September 25, 1995

VICE PRESIDENTS, AREA OPERATIONS

SUBJECT: Manager, Distribution Operations, Authorizations

As you know, Managers, Distribution Operations (MDO), are authorized based on the number of Supervisors, Distribution Operations (SDO), on a given tour. The criteria for those authorizations have remained constant, yet may not meet the needs of all locations.

On a number of occasions, issues regarding MDO authorizations have been raised including physical plant configuration, operational differences, supervisory population within a given plant, lack of a career ladder covering what may be as much as an eight-level gap, etc. The current criteria are simply not flexible enough to meet all the different needs which have been expressed.

Recently, proposed new criteria were circulated for comment. The following reflects inclusion of some of your suggestions. Other suggestions, which were not included, would further increase flexibility, but would also cause a decreased span of control for MDOs--an undesirable result.

This modified criteria for staffing retains a consistent span of control at varying MDO levels, keeps the total number of supervisors/managers allowed at the 1:20 ratio, and still manages to provide a great deal of flexibility.

A Manager, Distributions, EAS-18, will still be authorized as the fourth supervisor on a tour and supervising at least three EAS-16s. The EAS-20 will be the seventh supervisor on a tour and supervising at least six EAS-16s. The EAS-22 will be the tenth supervisor on a tour and supervising at least nine EAS-16s. The EAS-24 will be the thirteenth supervisor on a tour and supervising at least twelve EAS-16s.

Within those basic parameters, however, it will be the responsibility of the Plant Manager to establish levels of supervision which best meet the needs of that particular plant. For example, on a tour with 200 employees, a total of ten supervisors/managers would be authorized which would mean that the supervisory staffing, under the previous criteria, would have been nine EAS-16s and one EAS-22 MDO. With this authorization, the plant manager is able to change the mix to eight EAS-16s and two EAS-18 MDOs. This keeps the total number of supervisors the same while providing greater managerial flexibility.

Staffing could be changed as follows:

Total Supervisors	Previously Authorized MDOs	New Authorized
1, 2, or 3	none	none
4, 5, or 6	1-18	1-18
7	1-20	1-20

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Total Supervisors	Previously Authorized MDOs	New Authorized
8 or 9	1-20	1-20 or 2-18s
10 or 11	1-22	1-22 or 2-18s
12	1-22	1-22 or 1-20 and 1-18 or 3-18s
13	1-24	1-24 or 1-20 and 1-18 or 3-18s
14	1-24	1-24 or 2-20s or 1-22 and 1-18 or 3-18s

In any plant which chooses to implement this change, several factors must be considered. The first is that no changes may be made to encumbered positions. Only vacancies may be used. The second is that each MDO, regardless of level, is a direct report to the plant manager. This change does not add a layer of management. The third is that while the value of making these changes is added flexibility, the potential danger of decreasing the span of control by having more managers at a lower level is the potential for over-management at the unit level.

You should also bear in mind that, in plants which currently have EAS-24 MDOs, the career progression program is an additional alternative.

This change is effective immediately and should prove to be a solution for most, if not all, of the concerns which have been raised. If you have any questions regarding the foregoing, you should contact Jim Leahy at (202) 268-4191, or John Mularski at (202) 268-4179.

Gail Sonnenberg

cc: Mr. Henderson
Mr. Kane
Ms. Regan

JAMES C. WALTON
VICE PRESIDENT, WORKFORCE PLANNING AND
SERVICE MANAGEMENT

UNITED STATES
POSTAL SERVICE

March 25, 1997

VICE PRESIDENTS, AREA OPERATIONS
MANAGER, METRO OPERATIONS

SUBJECT: Casual Employees in Plants

How casual employees are counted towards supervisory staffing in Plants has been a subject of discussion and concern for some time.

While casuals are only counted as a half credit towards the 1:20 ratio, the arguments for allowing full credit are familiar and sensible. Some of those arguments are the turnover rate; the need for closer supervision; the continuous training requirement; and the lack of a long term relationship. Additionally, there is continued emphasis from Headquarters on maintaining as many casuals as contractually allowable in order to benefit from the lower cost per workhour and increased flexibility.

We have decided that, effective immediately, casual employees will be counted at full credit towards determining supervisory staffing in Processing and Distribution Operations. The number of casuals counted will be the average number paid, not on-rolls, during the previous 12 months, exclusive of the Christmas period.

No additional workhours are authorized for these positions. They are to be funded from 204b hours, supervisory hours in excess of 40, and/or savings from the operations to which they are deployed resultant from closer supervision.

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FAX: 202-268-3331

If you have any questions, you may contact Jim Leahy at (202) 268-4191.

James C. Walton

cc: Mr. Henderson
Mr. Maguire
Mr. Porras
Mr. Leahy
Mr. Mularski
Manager, Human Resources (Area)
Manager, In-Plant Operations(Area)
Manager, Operations Support (Area)

JAMES C. WALTON
VICE PRESIDENT, WORKFORCE PLANNING AND
SERVICE MANAGEMENT

UNITED STATES
POSTAL SERVICE

December 22, 1994

MEMORANDUM FOR AREA VICE PRESIDENTS

SUBJECT: Supervisory Staffing
Processing and Distribution Installations

As you are no doubt aware, there has been some confusion over the application of the 1 for 20 ratio of supervisors/managers to Function 1 employees in processing and distribution installations.

Even though the overall ratio must be maintained, nothing requires that it be maintained in each and every operation. Some naturally require a greater degree of supervision than others. In order to allow a certain degree of flexibility, staffing has been by tour, not by operation.

We have come to recognize that, just as some operations are different from others, so some buildings are different, or smaller, than others, and that these differences make them either more or less difficult to properly supervise.

In order to provide the greatest possible latitude in allocating supervisory staff, the current authorized numbers of Supervisors, Distribution Operations, and Managers, Distribution Operations will now be authorized area-wide as follows:

AREA	MDO/SDO CAP
Allegheny	1094
Great Lakes	1163
Mid-Atlantic	1015
Midwest	857
Northeast	864
New York Metro	1296
Pacific	1272
Southeast	1084
Southwest	811
Western	661

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The Area Vice President may redistribute these positions depending on the size and physical or operating characteristics of individual plants. You may not approve positions in excess of the above cap, and Managers, Distribution Operations must continue to be authorized, both in grade and in number, following established criteria.

My staff will monitor both the ceilings and MDO authorizations to ensure compliance, and will also be available to assist you in the event that complement growth necessitates increases to current authorizations.

James C. Walton

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN
TO INTERROGATORIES OF TIME WARNER

TW/USPS-T4-17 Please refer to your answer to TW/USPS-T4-12. You indicate that an FSM can be used simultaneously in the BCR and manual keying mode, with some consoles set for BCR and some for manual keying and that this causes no problem in the output stream.

a. Please confirm that a given console must be set for either BCR or manual keying and that the operator at that console cannot arbitrarily switch from one mode to another (e.g., when he sees that one flat has a barcode while the next one does not.) Please explain if not confirmed.

b. Is it a fairly common practice to use FSM's with some consoles in BRC and some in manual keying mode? If no, why not?

c. Please assume that an FSM-881 is used for incoming primary distribution with two consoles in the BCR mode and the other two in the manual keying mode applied to non-barcoded flats. Assume that one of the output streams, containing both barcoded and non-barcoded flats, is to a five-digit zone with more than ten carrier routes and that these flats are later given to an FSM operator for sorting to carrier route. Please confirm that the console used by this operator must be set in manual keying mode and that both the barcoded and non-barcoded flats will have to be keyed. If you do not confirm, please explain.

d. Assume that an FSM has produced a tray of barcoded flats which will receive further sortation in another postal facility. How will that tray be marked to indicate that it contains only barcoded flats, and how will it be handled and transported to assure that it is handled as barcoded flats in the destination facility? Please also indicate the different marking and handling that is applied to: (I) a tray with both barcoded and non-barcoded flats; (2) a tray with machinable but non-barcoded flats; and (3) a tray of manually sorted flats that may include non-rnachinable flats.

Response:

a. Confirmed.

b. Yes.

c. Not confirmed. Under your assumed scenario of where an output steam from incoming primary distribution contains both barcoded and non-barcoded flats for a zone with ten or more carrier routes, the mixed output stream could either be processed in keyed mode or in BCR mode. If the mix of the assumed output stream

is primarily barcoded flats, it may be more practical to process the flats in BCR mode. In contrast, if the mix is primarily non-barcoded flats, it would be more practical to process the flats in keyed mode. As for daily operations, field sites, performing incoming primary distribution, generally keep the barcoded and non barcoded mail separate for zones which would be subsequently processed on FSMs to the incoming secondary (i.e., zones with 10 or more carrier routes) in order to minimize combined output streams.

The tray of flats will be labeled as containing barcoded flats. Its handling will be the same as trays of non barcoded flats except that it will be staged with other barcoded mail while the trays of non barcoded mail will be staged with other non barcoded mail. Assuming all other characteristics are the same (e.g., class), both the barcoded and non barcoded mail will be transported in the same manner. As for the subparts (1)-(3) of the question, trays referenced in part (1) could be labeled as barcoded flats or non-barcoded flats depending on the local site and depending on the mix of the container. The trays referenced in parts (2) and (3) would be labeled as non-barcoded flats.

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TW/USPS-T4 21 Please refer to your answer to TW/USPS-T4-13a, in which you describe the various methods that may be used to handle the flats rejected by an FSM-OCR.

a. Please confirm that according to LR-H-113, at page 101, the FY96 hourly productivity rate for outgoing primary flat sortation performed on FSM's BCR mode in MODS offices was 1,078 flats per manhour, and that for outgoing primary flats sortation performed on FSM-881's in manual keying mode the corresponding hourly productivity rate was 774 flats per manhour. If you do not confirm, please state what you believe the achieved productivity rates were in FY96 and explain your answer.

b. Is it reasonable to assume that, apart from differences in accept rates, the throughput of flats sorted in OCR mode on an OCR equipped FSM 881 will be roughly the same as in BCR mode? If you do not agree, please explain.

c. Please assume, as witness Seckar has assumed, that the throughput on an FSM 881 in BCR and OCR mode will be the same, and that the acceptance rate in FSM OCR mode is 60%. Please assume also that the rejected flats are keyed manually on an FSM, one of the alternatives you indicated in response to TW/USPS-T4-13a. Under these assumptions, using the hourly productivity rates from LR-H-113, please confirm the following calculations or, if you cannot confirm, explain why you disagree:

(1) Processing 10,000 outgoing primary pieces in the FSM-OCR mode will take 10,000/1,078 = 9.276 manhours;

(2) Processing the 4,000 pieces rejected in the first pass by manual keying on the FSM 881 will take 4,000/774 = 5.168 manhours;

(3) Total manhours spent in processing the 10,000 pieces through outgoing primary is therefore 9.276+5.168 = 14.444 manhours;

(4) The average achieved productivity will therefore be 10,000/14.444 = 692 pieces per manhour less than if. all pieces had simply been keyed manually on the FSM 881 in the first place; and

(5) If the 4,000 rejected pieces, rather than being manually keyed on an FSM 881 in the second pass, were instead sorted on an FSM-1,000 or manually, the resulting average productivity rate would be even less.

d. Please confirm that, using the MODS productivity rates in LR-H-113, applying the calculations indicated in part c above will lead to essentially similar conclusions for

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outgoing secondary, state primary and incoming primary flats distribution. Additionally, please explain what changes the Postal Service plans to make that will cause real savings to be produced by FSM's in OCR mode.

Response:

a. The citations are confirmed but as discussed by witness Seckar, USPS-T-26, at pages 29-30, these productivities are not used in his modeling work. The FSM-BCR productivity used in the models is 1100. The FY93 productivities used in the models for FSM 881 for manual keying, are shown at LR-H-113, page 98.

b. Yes, see Seckar's testimony at page 30.

c. I confirm your statements (1) to (5). However, there appears to be an implication that statement (4) demonstrates that the FSM-OCR will not "cause real savings." I don't agree that this statement implies that the FSM-OCR will not provide savings for the following reasons. First, statement (4) is wrong to say that the processing alternative to the FSM-OCR is simply FSM manual keying, since the FSM-OCR could also reduce manual flats sorting as well. This is because the FSM-OCR will allow more flats on the FSM 881s since there won't be as much need to switch between or simultaneously run both BCR and manual keying. Less switching will mean longer runs and higher throughputs, and greater overall utilization of the FSMs. Second, as noted in my testimony at page 14, the FSM-OCR will allow greater use of the FSM-BCR, since there should be a reduction in the barcoded pieces which are keyed. Third, there is a savings in mail preparation costs by having the FSM-OCR since there is less need for

separate barcoded and non-barcoded flats. For instance, an SCF opening unit sorting 5-digit bundles to 5-digit breakouts presently needs to make twice as many separations in order to make separate breakdowns for barcoded and non-barcoded flat bundles for each 5-digit zone. Finally, the addition of a high speed flats feeder to the FSM 881 would alter the results in your assumptions.

d. Not applicable. See my response to part c.

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TW/USPS-T4-22 Please refer to the Postal Inspection Service report named National Coordination Audit - Allied Workhours (December 1996) that is included in LR-H-236. The report refers, in the executive summary and at pages10-12,to Regional Instruction (RI 399) issues. It defines RI 399 as "an understanding between the Postal Service and the clerk and mail handler unions regarding specific allied labor assignments' (Page 1, Footnote 2).

a. Does RI 399 refer to agreements that may differ between one part of the country and another? If they are different, how many different RI 399 agreements are there?.

b. What are the most typical "RI 399 issues? Do they, for example refer to what kind or work can be done by clerks and what can be done by mailhandlers? Do they refer to what can be done by casual and/or transitional employees? Please explain as fully as possible.

c. What kinds of restraints do RI 399 agreements place on management's ability to assign employees where they would be of most use at a given point in time? Please explain as fully as possible.

d. The report recommends, and USPS management appears to have concurred, that "a consistent approach toward RI 399 issues is needed to help minimize the impacts of local agreements on plant operations" (Page 11). Please explain what progress has been made in this area since the Inspection Service issued its report

e. Please provide copies of typical RI 399 agreements and, if possible, provide copies of all such current agreements.

f. On page 12 the report refers to a study being undertaken by Headquarters Strategic Operations Planning, of costs per workhour, that it was hoped would "help to identify the true costs of craft work restrictions." AP 4 FY97 is indicated as the target date. Please indicate whether this study has been completed and if so, describe its findings. If there exists a written report, please provide a copy.

Response:

a.-e. These questions have been redirected for a USPS response.

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f. It is my understanding that the study was completed but was unable to identify the cost of craft work restrictions. No written report of the study was prepared.

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TW/USPS-T4-25 The Postal Inspection Service report "National Coordination Audit - Allied Workhours" (December 1996), included in LR-H-236, discusses problems associated with the lack of performance indicators for allied labor (LDC 17) operations and argues that this often causes inadequate control of LDC 17 workhours. It states, for example, that

> "LDC 17 supervisors generally expressed that their focus was to keep the employees in budgeted positions "busy" (page 10).

It recommends (pages 14-15) that

> "productivity benchmarks should be developed for each LDC 17 operation that does not directly support mail distribution operations."

a. For each type of letter, flat and parcel automated, mechanized and manual distribution operation, please describe the allied labor functions that "directly support" that type of distribution. Please also indicate which of those functions, in your experience, are currently being recorded in MODS as part of the respective distribution operations and which are currently normally recorded as part of LDC 17.

b. Please describe the allied labor (LDC 17) operations that do not "directly support specific distribution operations. Please also identify the MODS operation numbers normally used for each such operation.

c. Is distribution of small (less than one pound) parcels generally performed as part of LDC 17 functions? If no, where is such distribution normally performed? What MODS operation numbers are normally used for distribution of small parcels?

d. Please describe the types of LDC functions that can be performed by clerks, the functions that can be performed by mailhandlers and the functions that can be performed by either craft. If this depends on the type of facility, or its geographic location, please explain fully.

e. Do all post offices where mail processing is performed use both clerks and mailhandlers? It no, describe the types of offices that use only clerks and those that use only mai1handlers.

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Response:

a. See the list of Allied Labor functions in section 312.112 of LR-H-147. Those functions may also be performed in direct support of a distribution operation. When performed in direct support of a distribution operation, (i.e. the employee is dedicated to performing the function(s) for a single operation rather than multiple operations in succession), those hours are to be reported under the operation they are supporting and thus reported under the appropriate LDC for the distribution operation. Lists of the functions performed in MODS operation may be found in Appendix A within LR-H-147.

b. LDC 17 is "Mail Processing – Other Direct Operations". It is used for all nonsupervisory hours of employees involved in mail processing operations other than distribution. These operations include mail preparation, presort operations, traying and sleeving, opening, pouching and traying, and platform operations. LDC 17 is also used for the Air Contract Data Collection System and at the BMCs for forklift operators and dock clerks. As indicated in a. above, allied labor operations generally contain functions that might be performed in support of specific distribution operations. However, it is unlikely that functions of 010-019, Cancellation, or 118-119, ACDCS, would be performed in direct support of a single distribution operation.

c. No. Mechanized and manual distribution of parcels is performed in LDCs 13 and 14 respectively. Manual parcels are sorted in operations 50, 55, 100, 102, 103, 130,

and 200. Mechanized parcels are sorted in operation 105, 107-108, 138-139, and 346-347.

d. LDCs are not directly related to craft. Both clerks and mailhandlers can be clocked against each of the Mail Processing LDCs, 11-18. For example, any clerk or mailhandler primarily involved in or directly supporting the manual distribution of letters, flats, and parcels would be clocked in LDC 14.

e. Not necessarily. Although all offices surveyed in the audit that is the subject of this question would have both clerks and mailhandlers, some very small offices (e.g. with a single CSBCS) might not have mailhandlers, and mail concentration points (e.g. a HASP) might not have clerks.

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TW/USPS-T4-26 Please refer to your answer to TW/USPS-T4-7h. In that interrogatory you were asked to identify all computerized tools used by postal facility managers to staff and schedule their mail processing operations. You identified only one such tool, namely the Site META program, for which a User's Manual was provided as Library Reference H-221 under protective conditions.

Please refer also to Library Reference H-255, which describes a 1991 study in which the contractor evaluated various USPS Models and concluded (on page 2-1) that: "Two of the models examined dealt specifically with staffing and scheduling issues; The Annual Staffing and Resource Management Simulator (ASRMS) and the Post Office Scheduler (POSKED)."

a. Are you familiar with (1) the ASRMS; and (2) the POSKED programs?

b. Why did you omit references to both of these programs in your response to TW/ USPS-T4-7h?

c. In your opinion, is the Site META program a more suitable tool for staffing and scheduling of mail processing in today's environment than the ASRMS and POSKED programs? Please explain your answer.

d. Based on your experience, to what extent are the ASRMS and POSKED programs being utilized for staffing and scheduling of mail processing, activities today? If they are not used today, or are being used less than in the past, please explain.

e. According to LR-H-255, at page 2-2, POSKED can be run in three modes. To the extent POSKED is still used in postal facilities, in which mode is it normally run?

f. Does a written manual for POSKED exist? If yes, please provide a copy.

g. Does a written manual for ASRMS exist? If yes, please provide a copy.

Response:

a. I am aware of those programs.

b. They are no longer nationally supported programs, and I have no knowledge of their continuing use.

c. Although I am not an expert in the use of such tools, I would say that Site META is a more suitable tool based upon the Postal Service's decision to use it and considering that the other two programs referred to are no longer supported.

d. See answers to b and c above.

e. See answers to b, c, and d above.

f. A search of the USPS Headquarters Library was conducted, but we were unable to find a POSKED manual.

g. A search of the USPS Headquarters Library was conducted, but we were unable to find a ASRMS manual.

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TW/USPS-T4-27 Please consider the following hypothetical. A manual flat sorting operation (e.g., 060) in a mail processing facility is staffed by 10 clerks. Assume that experience in that facility is that the average productivity during a tour is 400 flats per manhour. At a certain point, 3,000 flats are available for processing and the next batch, based on normal mail arrival patterns is expected in one hour. During that hour, the clerks sort the 3,000 flats, so as to be *ready* for additional mail when it arrives. At a certain later point, one hour before the first critical dispatch there are 5,000 flats, which therefore need to be processed within the next hour, and the supervisor urges the clerks to make an extra effort during that hour so as to not miss service commitments.

a- Based on your experience, is it not likely that the clerks during that "surge" period, given the urgency and the fairly light workload earlier in the tour, will make an extra effort and achieve a somewhat higher productivity than the average for the whole tour (e.g. more than 400 flats per manhour)? If no, please explain.

b. In your experience, are mail processing clerks, during a short "surge" period before a critical dispatch, capable of working at a faster pace than they would be able to sustain over a full eight hour tour?

c. Given that, according to the IOCS data presented by witness Degen, clerks at manual flats cases spend an average of 17.1 %, or an hour and 22 minutes out of an eight hour workday, on "breaks personal needs", would you agree that there must be periods during an average tour when the workload at flat cases is fairly light? If you do not agree, then please explain why mail processing supervisors allow so much time to be spent on "breaks personal needs".

Response:

a. Yes.

b. Yes.

c. I agree that volumes fluctuate within a given operation, and that it is not always easy to anticipate the timing and duration of those fluctuations. Therefore, there are periods of time when workload in a manual flats sorting operation will be "fairly light" by comparison to heavier volume periods during the same tour. Adjusting workhours to workload to precisely match those fluctuations is difficult. However, despite this

difficulty, productivity in manual flat sorting has been fairly static over the last ten years.

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TW/ USPS-T4-28

a. How do you explain the fact that, according to IOCS data, the percent of time that employees spend on "breaks personal needs" in mail processing facilities is much higher today than it was ten years ago?

b. According to the IOCS data presented by witness Degen, the percentage of employee time spent on "breaks personal needs", as well as the percent of time spent "clocking in or out", is higher at manual operations such as opening/pouching units and manual flats cases than at highly automated operations such as OCR and BCR. Is there anything in your experience that might explain this phenomenon? If yes, please explain.

Response:

a. Washup time and breaks are subject to local agreements. I have been told that in some facilities, all employees have, by local agreement, been granted two fifteen minute wash-up periods per day whether or not they directly perform "dirty work or work with toxic materials" as prescribed in the national agreement.. As facility size has increased travel distance and thus time to and from bathroom facilities may have increased. USPS facilities became totally non-smoking in 1993. Prior to that, smoking was allowed in designated areas within the building. The complete ban on smoking may have contributed to employee requests for personal needs time and the length of time needed for those requests. The 1992 restructuring increased the number of employees supervised by individual supervisors thus increasing the span of control.

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b. Provisions for wash-up time are included in the national contracts. Both the Mailhandler and APWU contracts state that the installation head shall grant reasonable wash-up time to those employees who perform dirty work or work with toxic materials. Employees working in opening/pouching units are handling sacks, pouches and packages of mail. Employees working in manual operations are handling individual pieces of mail as part of the distribution function, and may also be handling sacks/pouches as part of that activity. Handling sacks/pouches, bundles and individual pieces of mail is, by the nature of the product handled, dirty work. Therefore, those functions are more likely to be granted wash-up time and more frequent wash-up periods. Similarly, depending upon facility layouts, opening/pouching units are more likely to be located near platform operations which can be further from lunch and/or break facilities thus incorporating more travel time in breaks/personal needs. Also, machine paced operations create a more controlled environment within which to manage employees.

TW/USPS-T4-29 Please refer to your response to TW/USPS-T4-9. Part b asked 'to what extent instructions regarding clocking in and out are followed in practice,' and you responded: "They are widely followed." Part i asked, "is assuring that employees are clocked into the correct MODS operation numbers high on the list of priorities for facility managers and supervisors?" Your response was 'Yes.'

Please refer also to the Postal Inspection Service final report 'National Coordination Audit: Allied Workhours' (December 1996) (Case No. 034-1181680-PA(I)), which reports the results of a national audit of allied workhours in 25 Processing and Distribution Centers (P&DCs) between February and April 1996. (The report is found in LR-H-236.) At pages 2 and 18-19 the Inspection ,Service states:

> The lack of supervisory control and review of employee clockrings resulted in improperly charged workhours to LDC 17. Our review disclosed Management Operating Data System (MODS) workhours reported for opening unit operations were in error approximately 31 percent of the time.... [p. 2.)
>
> Of the 2,412 employees checked for clockring accuracy, 744, or 31 percent were clocked into MODS operations other than the ones they were working. The 31 percent error rate had significant impact upon the amount of LDC 17 workhours reported.... The inaccuracy of the MODS workhour data for the opening units was caused by supervisors not ensuring that employees were properly clocked in. Employees who were found to be clocked into an incorrect operation were generally unconcerned with the accuracy of their clockrings. Some supervisors were surprised to find the large number of employees clocked incorrectly, and admitted they do little if any monitoring of employee clockrings. [pp. 18-19.]

a. Please confirm that the conditions described by the Inspection Service, as of the time it conducted its audit, are different from your description of current conditions in your responses to TW/USPS-T4-9, parts b & i.

b-. Do you accept the findings and conclusions of the Inspection Service with respect to conditions at the time of its audit? If not, please state your reasons and describe all evidence which you believe discredits the Inspection Service's findings and conclusions.

c-. Were you aware of the contents of the Inspection Service report at the time of your response to TW/USPS-T4-9? If so, why did you not mention the report in your response? If your answer is that the conditions described by the Inspection Service as of February-April 1996 no longer exist, please indicate the reasons and the evidence that caused you to reach that conclusion.

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Response:

a. I can confirm that the specific conditions quoted from the report which are based upon an audit of 25 facilities are different than my description based upon my observation, knowledge and experience. For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

b. I agree with Postal management's responses as contained in the audit report which concurred with the recommendations of the audit. I accept that the Inspection Service audit findings and conclusions are descriptive of the conditions found by the audit team during their audit of 25 postal facilities using the methodologies employed by the audit teams. However, as indicated in my response to OCA/USPS-T4-9b I believe that the sites chosen by the Inspection Service were not selected randomly, but rather were chosen because of they were likely to exhibit the conditions found in the report. Also, I am not able to confirm that the specific calculations used by the Inspection Service are correctly applied, and note that the 31% error rate cited in the audit greatly exceeds anything I would expect based on my personal experience. For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

c. Yes, I was aware of the Inspection Service report at the time of my response to TW/USPS-T4-9. I did not mention the report since the questions directed to me asked for a response "...based upon my observation, experience and (personal)

knowledge...". For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

TW/USPS-T4-30 Please refer to your response to TW/USPS-T4-7d and 5d. In 7d you were asked whether 'manual sorting operations are often over-staffed relative to the volume that is available for manual processing?" Your response was, 'No. See answer to c above" (which stated in relevant part: "We staff to workload. Work rules provide sufficient flexibility to match the workforce to the work load in manual cases"). In 5d, you were asked '[i]f in your opinion extra costs are being incurred because flats that could be sorted by FSM are instead sorted manually?' You responded in part: '[L]ocal management has incentives to make use of the most efficient processing alternatives available. FSM processing is more efficient than manual distribution. Therefore, I do not believe that extra costs are being unnecessarily incurred."

Please refer also to the Postal Inspection Service final report 'National Coordination Audit: Allied Workhours' (December 1996) (Case No. 034-1181680-PA(I)), which reports the results of a national audit of allied worktours in 25 Processing and Distribution Centers (P&DCs) between February and April 1996. (The report is found in LR-H-236.) At pages 10, and 18-19 the Inspection Service states:

> At the P&DCS, LDC 17 supervisors generally expressed that their focus was to keep the employees in budgeted positions 'busy", and minimize overtime hours. Several plants had employees who were performing direct distribution functions, but were clocked into LDC 17 operations. This allowed the productivities of direct distribution operations, with specific benchmarks and perceived higher priorities, to be artificially higher. . . .[p. 10.]

a. Do you accept the findings and conclusions of the Inspection Service with respect to conditions at the time of its 1996 audit? If not, please state your reasons and describe all evidence which you believe discredits the Inspection Service's findings and conclusions.

b. If your answer to part a is yes, please describe the changes in conditions since 1996 that have (1) eliminated management incentives to "keep the employees in budgeted positions 'busy', and minimize overtime hours" and to artificially inflate the .productivities of direct distribution operations, with specific benchmarks and perceived higher productivities" and (2) created management incentives to 'make use of the most efficient processing alternatives available.'

Response:

a. I agree with Postal management's responses as contained in the audit report which concurred with the recommendations of the audit. I accept that the Inspection Service

audit findings and conclusions are descriptive of the conditions found by the audit team during their audit of 25 postal facilities using the methodologies employed by the audit teams. In the specific findings quoted in this question, I can accept that the audit is descriptive of the conditions "generally expressed" by the LDC 17 supervisors interviewed as well those found in "several plants" among the twenty-five plants visited. LDC 17 supervisors are supposed to keep their group productively employed and it is appropriate for personnel serving several distribution operations (e.g. preparing mail for them) to be charged to LDC 17. Furthermore, as noted in my response to OCA/USPS-T4-9b, I believe that the sites chosen by the Inspection Service were not selected randomly, but rather were chosen because they were likely to exhibit the conditions found in the report. For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

b. The paragraph on page 10 of the subject audit report from which this quote was taken begins with recognition that facility and Area management closely monitor operational budget performance. In my response to TW/USPS-T4-5d I referred to "...local management incentives to make use of the most efficient processing alternatives available." Those incentives are tied directly to budget performance. In that context, I would expect supervisors to maximize the use of their budgeted positions and to optimize the mix of resources available to them including the judicious use of overtime hours. I believe that these incentives existed before 1996 and continue to exist. Therefore, I am not able to respond to subparts (1) and (2) of this question.

Additionally, as noted in my response to OCA/USPS-T4-9b I believe that the sites chosen by the Inspection Service were not selected randomly, but rather were chosen because they were likely to exhibit the conditions found in the report. For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

TW/USPS-T4-31 Please refer to your responses to TW/USPS-T4-7c-g, DMA/USPST14-1 and T14-23 (redirected from witness Bradley), and NAA/USPS-T4-13, where you generally indicate that management has a high degree of flexibility in matching employee complements to available mail processing workloads.

Please refer also to the Postal Inspection Service's "Audit Report: MLOCR/Automation" (December 1989) (Case No. 020-1027622-AO(I)) (filed as LR-F240 in Docket No. R90-1). At pp. 15, 96-97 and 174, the report states as follows

> A comparison was made between actual employee complement changes and estimated changes in complement which considered increases/decreases in FHP, TPH, overtime, and automated AO mail volumes. I This was performed in order to determine if the actual employee complement change at each audit site had a relationship to that site's changes in mail processing operations and volumes. Our analysis disclosed that the 22 audited sites have a net reduction of 96 employees which is 462 less than the potential reduction we computed.
>
> [P. 15.]
>
> For 17 audit sites, we also evaluated how productivity rates in LDCs I 1, 12, and 13 for letter operations and LDC 14 workhours changed from peak to low volume days (Mon-Fri) during AP 05 FY 89. Our analysis disclosed that letter distribution (TPH)' pieces per hour dropped as the volume of mail to be work[ed] declined at all 17 sites.... We compared the top 10 volume days to the low 10 volume days and documented a drop in productivity of 160 pieces per hour.. . . [P. 17.]
>
> The Postal Service cannot expect an AO Postmaster to reduce his mail processing complement if he receives limited volumes of automated mail and does not receive a consistent volume of mail on a continuous daily basis. [P. 18.] . . .

Please refer also to the Postal Inspection Service final report 'National Coordination Audit: Allied Workhours" (December 1996), which reports the results of a national audit of allied workhours in 25 Processing and Distribution Centers (P&DCs) between February and April 1996. (The report is found in LR-H-236.) At pages 1-2 and 15, the Inspection Service states:

> Allied workhours in P&DCs were loosely managed and inadequately controlled. . . . Our review of opening unit operations (110-117 and 180-189) at the 25 P&DCs disclosed management inefficiencies regarding these workhours representing 36 percent of total LDC 17 [i.e., allied] workhours. We

> determined that the Postal Service could have realized a 12.8 percent reduction in actual workhours expended. In Fiscal Year (FY) 1996, unrecovered opening unit cost reductions could have amounted to nearly $141 million, if higher locally demonstrated productivities were achieved. [Pp. 1-2.)
>
> The audit disclosed that opening unit. and metered mail ... workhours used to prepare mail for processing should be charged to direct distribution operations, i.e., automation, mechanization, and manual operations. Interviews with plant management indicated a strong desire to include these support workhours with their direct distribution counterparts provided that operational productivity benchmarks were re-calculated.... By including support (workhours currently charged to LDC 17 operations) with direct distribution workhours, managers can compare their actual performance to the recalculated operational benchmarks for automation, mechanization, and manual distribution operations. These changes would allow the P&DCs to effectively manage up to 37.7 percent of total LDC 17 workhours. [P. 15.] .

a. Do you accept the findings and conclusions of these reports? If not, please state your reasons and describe all evidence which you believe discredits their findings and conclusions.

b. Are manual mail processing operations at the present time consistently achieving productivities closer to their highest 'locally demonstrated productivities" than were found in the two Inspection Service audits. If yes, please provide full documentation. If no, please explain how the continuing failure to achieve demonstrably attainable productivities in manual processing is consistent with the view that employee complement is being successfully managed to fit actual workloads and avoid overstaffing.

Response:

a. I agree with Postal management's responses as contained in the audit reports which concurred with the recommendations of the audits. I accept the findings and conclusions of the reports as descriptive of the conditions found by the audit teams at the audited sites during the period of the audits, but offer the following considerations. The 1989 audit of USPS MLOCR/Automation was conducted in the early days of automation. The operational changes and associated complexities added by that change had significant impacts on the management of the workroom floor. Those

complexities may have led, for example, to the inconsistent delivery of automated volumes to associate offices. Also, regarding the specific reference to reduced positions (actual vs. estimated), it's noted that the performance of just three of the 22 audited facilities, which actually added a total of 637 positions, had a significant impact on the total results achieved. In that respect, that audit may be subject to the same limitations as the Allied Labor Audit discussed in the TW/USPS-T4-29 and 30. For further discussion of the Allied Labor Audit, see witness Degen's response to TW/USPS-T12-35.

b. I am not aware of any analysis which would either confirm or not confirm whether or not manual mail processing operations at the present time consistently achieve productivities closer to their "locally demonstrated productivities". I also do not know whether it is reasonable to assume that "demonstrably attainable" productivities based upon one week's worth of data in the case of the Allied Labor Audit, or one AP's worth of data (over eight years old), in the case of the MLOCR/Automation Audit are relevant indicators of potentially sustainable productivity levels.

RESPONSE OF U.S. POSTAL SERVICE WITNESS MODEN TO
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REDIRECTED FROM WITNESS SECKAR

TW/USPS-T26-3f. Are there any reasons to believe that the productivity rates achieved in FSM OCR sorting, when OCRs have been installed, will be any higher than the FSM BCR rates achieved in FY96? If yes, please describe all such reasons.

RESPONSE:

In general, there is no reason to expect that the productivity rates achieved in FSM OCR sorting will be higher than the productivity rates achieved in FSM BCR sorting. I would expect that the productivity for FSM OCR sorting would be somewhat lower than FSM BCR sorting depending on the OCR reject rate. However, it could still be possible that the future productivity rate of either sorting method could be higher than the FSM BCR rates achieved in FY 1996. For instance, overall FSM productivity could increase as a result of longer "runs" on the machine, since the machine will not have to be switched between BCR and keying mode as frequently as is done today. Also, there could be some productivity gains as a result of less need for segregation of barcoded and non-barcoded. There are instances today where operators may pick up a bundle of flats only to find that the bundle was improperly segregated. There is also the possibility that a high speed flats feeder could be added to the FSM 881. This would have an impact on the throughput and productivity. Also, as mentioned at page 14, lines 11 through 19, of my testimony, we expect barcode utilization to improve. This could yield an increase in overall FSM productivity, since most of the non-carrier route flats are barcoded and only a small proportion would require processing on the FSM OCR. As a result of the reasons mentioned

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above, it is, therefore, possible that the FSM OCR productivity levels in the future could be higher than the FSM BCR productivity levels achieved in FY 1996.

INTERROGATORIES OF UNITED PARCEL SERVICE TO UNITED STATES POSTAL SERVICE WITNESS MODEN

UPS/USPS-T4-1. On page I 9, lines 6 to 8, of your testimony, you state that standard conversion factors are used to compute comparative productivities across BMCs. Please provide all such conversion factors, their source, and all information related to their calculation or determination.

Response:

A summary of pieces to parcels conversion factors is attached. These factors were implemented in 1985-1986 based on a time and motion study of BMC operations completed earlier. Documentation describing the study methodology is no longer available.

SUMMARY OF WEIGHTED FACTORS

AS OF : 18-Sep-87

MAIL TYPE	MIN/PC	WT. FACTOR
PARCEL	0.2858	1.00
SACK	0.5251	1.84
NMO	0.8886	3.11
IPP	0.1404	0.49
075	0.0680	0.24
045	0.0470	0.16
115	3.3972	11.89
PALLET	8.7110	30.48

UPS/USPS-T4-2. On page 4 of your testimony at lines 2-3, you state that Section II of your testimony "provide(s] an overview of [the Postal Service's] operations as they relate to the processing of letters and flats." Please provide a similar overview of the Postal Service's operations as they relate to the processing of:

(a) Packages carried as part of Parcel Post;
(b) To the extent the operations differ from those for Parcel Post, packages carried as part of Standard (B) Special;

(c) To the extent the operations differ from those for Parcel Post, Standard (B) mail carried as Bound Printed Matter; and

(d) To the extent the operations differ from those for Parcel Post Standard (B) mail carried as Library Rate mail.

Response:

a. A discussion of Parcel Post processing operations supporting the Postal Service's rate proposals in this case is found in the testimony of witness Daniel (USPS-T-29) on pages 12 through 20.

b.-d. Witness Daniel's discussion is also applicable to Special, Bound Printed Matter, and Library Mail.

UPS/USPS-T4-3. (a) To what extent has the volume of barcoded Parcel Post packages increased or decreased for each year from FY 1991 up to and including FY 1996?

(b) To what extent has the volume of prebarcoded Parcel Post packages increased or decreased for each year from FY 1991 up to and including FY 1996?

Response:

a.-b. This information is not available.

UPS/USPS-T4-4. (a) To what extent has the volume of barcoded Priority Mail packages increased or decreased for each year from FY 1991 up to and including FY 1996?

(b) To what extent has the volume of prebarcoded Priority Mail packages increased or decreased for each year from FY 1991 up to and including FY 1996?

Response:

a.-b. This information is not available.

UPS/USPS-T4-5. (a) To what extent has the volume of barcoded Express Mail packages increased or decreased for each year from FY 1991 up to and including FY 1996?

(b) To what extent has the volume of prebarcoded Express Mail packages increased or decreased for each year from FY 1991 up to and including FY 1996?

Response:

a.-b. This information is not available.

UPS/USPS-T4-6. Please describe all differences in the handling and processing, from collection through delivery, and in transportation between (a) Priority Mail Flat Rate Envelopes on the one hand and (b), on the other hand, Priority Mail packages.

Response:

Generally, Priority Mail Flat Rate Envelopes are handled and processed in the same manner as Priority Mail packages as they are both containerized in sacks and/or other transport containers and placed on the same transportation. However, there are some differences that can create differences in handling and processing. Obviously, large packages that cannot fit in sacks are treated as "outsides" and handled as individual pieces. Similarly, large packages that exceed the maximum piece dimensions of the Small Parcel Bundle Sorter (SPBS) would be processed separately from any Priority Flat Rate Mail envelopes that would be processed on the SPBS. Large packages may also receive different handling at delivery. If a package is to large to fit into the recipient's mail receptacle and cannot be left in a secured location, a Delivery/Notice/Reminder/Receipt (Form 3849) will be left for the customer advising them of their options for obtaining the oversized package.

UPS/USPS-T4-7. Please provide an update on the equipment used to apply and/or sort barcodes for Parcel Post packages, similar to the update provided by you on pages 5-7 of your testimony for letters and flats.

Response:

All of the BMCs utilize the Package Bar Code Sorting (PBCS) system to read and sort mailer applied barcodes. The system also applies barcodes to parcels that are not prebarcoded by mailers. Barcodes are also applied to packages by Postage Validation Imprinters at our retail units.

UPS/USPS-T4-8 Please provide an update on the equipment used to apply and/or sort barcodes for Priority Mail packages, similar to the update provided by you on pages 5-7 of your testimony for letters and flats.

Response:

Three sites have had barcode readers placed on their SPBS machines and they are listed in the testimony of Ms. Garvin (USPS-T-3) in Docket MC96-1. Otherwise, the Postal Service has not deployed any processing equipment to apply and/or sort barcodes for Priority Mail packages. As I mentioned in 4-7, barcodes are applied to packages by Postage Validation Imprinters at our retail units.

UPS/USPS-T4-9. (a) Please provide a complete description, similar to that given on page 9, line 9, through page 10, line 2, of your testimony, of the future system or systems for processing and transporting Priority Mail.

(b) Are the various shapes of Priority Mail (letters, flats, and packages) separated from each other and either processed or transported differently? If so, describe (1) how and at what point in the operation this separation takes place, (2) the cost of performing the separation operation, and (3) all differences in processing and in transportation by shape of mail.

(c) Are Priority Mail Flat Rate Envelopes separated from Priority Mail packages and either processed or transported differently from each other? If so, please describe (1) how and at what point in the operation this separation takes place, (2) the cost of performing the separation operation, and (3) all differences in processing and in transportation between Priority Mail Flat Rate Envelopes and Priority Mail packages.

Response:

A detailed description of the flow of Priority Mail in the future Priority Mail Processing Center environment is provided by Witness Sharkey in response to interrogatory UPS/USPS-T33-1a.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF THE UPS REDIRECTED FROM WITNESS BRADLEY

UPS/USPS-T14-44.

a. Please discuss the use of overtime wages to accommodate peak volume periods in MODS, non-MODS, and PIRS facilities versus the use of part-time or casual workers.

Response:

a. Planning to use overtime is cost-effective in relatively few high volume periods such as Christmas. However, mail volumes are not entirely predictable and some employees with essential skills may be unexpectedly absent from work, so overtime is commonly incurred even when not planned. For additional details, see my response to DMA/USPS-T4-18d.

RESPONSE OF UNITED STATES POSTAL SERVICE WITNESS MODEN TO THE INTERROGATORIES OF UPS REDIRECTED FROM WITNESS BRADLEY

UPS/USPS-T14-58. You have used "total pieces handled" as the basic measure of volume in your cost analysts.

(a) With respect to First Class letters, Priority Mail, and Parcel Post, what is the minimum number of "handlings" as counted in your analyses that a particular item might experience between its initial drop-off at a postal facility and its delivery to its final destination? What is the maximum number of handlings?

(b) Has the number of times a piece is handled increased or decreased over time? Why? If the number of times a piece is handled has increased over time, what is the impact of this change on the relationship between pieces delivered and costs? If the number of times a piece is handled has decreased *over* time, what is the impact of this change on the relationship between pieces delivered and costs?

(c) Does the number of times a piece is handled increase or decrease with volume?

Response:

a. The minimum would be one for each. For example, some trayed, prebarcoded mail might be finalized to a high volume destination in a single pass on a BCS Outgoing Primary scheme. The maximum number of planned distribution piece handlings would be 6 for letters, 4 for Priority Mail, and 5 for parcels.

b. Increased due to Delivery Point Sequencing and the fewer stackers (and thus reduced depth of sort per handling) on automated equipment compared to the Multi-Position Letter Sorting Machines they have largely supplanted. However, automated handlings are much more efficient and I am told the increased handlings are much more than offset by the reduced staffing costs in automated operations compared to their mechanized predecessors.

c. In the short run there would not be any change with volume. Longer term, if the volume increase was concentrated in a few destinations, sort schemes might be changed to finalize more mail in the primary, reducing the average number of handlings.

CHAIRMAN GLEIMAN: Does any participant have additional written cross examination for Witness Moden?

MR. BERGMAN: Yes. Direct Marketing Association has.

CHAIRMAN GLEIMAN: Flip the mike on --

MR. BERGMAN: Sorry about that. Yes, Direct Marketing Association would like to add one more written cross examination designation for Witness Moden.

CHAIRMAN GLEIMAN: Could you just identify yourself for the record?

MR. BERGMAN: Sure. I'm Michael Bergman, representing Direct Marketing Association.

CHAIRMAN GLEIMAN: Okay, and if you would care to show the witness the copies of the additional --

MR. BERGMAN: Sure. For the record it's Interrogatory Response DMA-USPS-T-4-85, which was filed by Witness Moden on October 15th, 1997, which Direct Marketing Association recently received.

MR. REITER: Mr. Chairman, that was the one I described last that was --

CHAIRMAN GLEIMAN: The revised --

MR. REITER: The revised version that we have in the packet already.

MR. BERGMAN: 85?

MR. REITER: 85 has already been added into the

packet.

CHAIRMAN GLEIMAN: Yes, it is in there already, so we don't have to do anything else.

MR. BERGMAN: Thank you.

CHAIRMAN GLEIMAN: Thank you, Mr. Reiter.

Anyone else?

[No response.]

CHAIRMAN GLEIMAN: Six participants requested oral cross examination of Witness Moden: American Business Press; Direct Marketing Association; Florida Gift Fruit Shippers; The National Newspaper Association; the Newspaper Association of America; and the Office of the Consumer Advocate.

Does anyone else wish to cross examine this witness?

[No response.]

CHAIRMAN GLEIMAN: If not, is there someone here from ABP?

[No response.]

CHAIRMAN GLEIMAN: Does the Direct Marketing Association wish to cross examine?

MR. BERGMAN: Yes, we would, Your Honor.

CHAIRMAN GLEIMAN: As long as you don't call me Your Honor, I'll let you cross examine -- until I get one of those black robes with the gold stripes on the sleeves.

MR. BERGMAN: I apologize, Chairman Gleiman.

CHAIRMAN GLEIMAN: Whenever you are ready, Mr. Bergman.

MR. BERGMAN: Thank you.

CROSS EXAMINATION

BY MR. BERGMAN:

Q Good afternoon, Mr. Moden.

A Good afternoon.

Q My name is Michael Bergman. I represent the Direct Marketing Association.

I would like to ask you a few questions on an issue that you discussed in several of your interrogatory responses concerning the scheduling by the Postal Service of its workers based on periodic variations in mail volume, in particular, Interrogatory Responses DMA-USPS-T-14-1, which is redirected from Witness Bradley; DMA-USPS-T-4-25; DMA-USPS-T-4-34; and DMA-USPS-T-14-23, which is also redirected from Witness Bradley.

Mr. Moden, from your operational experience, have you observed variations in mail volume ~~process~~ processing during a day at a typical mail processing plant?

A Yes.

Q Approximately what kind of range of variation have you observed?

A Across the facility or within a particular

operation or --

Q Across the facility -- as mail processing in general --

A In a day?

Q In a day, what kind of range in terms of the volume of mail processed?

A Well, that is very hard to say.

I mean there is -- volumes arrive and leave facilities throughout the day.

Q Can you give me a rough estimate? Is it 10 percent or 20 percent or 30 percent?

A Well, if you took -- I would really have a hard time giving you a specific number, but let me just say that the point in time at which it might be -- lowest would be lowest volume in the facility at any one time would be right after dispatches to the associate offices and stations and branches, which is generally the beginning of the MODS day.

Again depending on type of facility and their role in the network, it would be very difficult for me to put an estimate on a typical day, how much more volume would be in the facility to be worked on.

I'm sorry, but I'm having a hard time relating that to any experience that I have.

Q But you do agree there is some type of variation --

A There is.

Q In mail volume.

A Yes.

Q Okay. And the next line of questioning is generally how the Postal Service at the local level will schedule workers to staff that variation. For instance, will they bring in workers from other operations? Will they hire part-time workers? Will they approve overtime? If you can give me an idea of how they will schedule for the increases and decreases in mail -- the processing variation?

A Well there's I guess two forms of variation that you were referring to on what I would call a typical day or -- I have an expectation for volume per operation. I might anticipate based on time of year, day of the month, day of the week ~~as to~~ or by major mailers in my service area. I have some expectation for what the workload would be in operations throughout my facility, and so I would schedule resources and people to handle that workload across all of those operations.

I guess the other variation that could occur is unexpected or unanticipated workload shifts, unusual volume increases perhaps, and this I would use the sorts of things that you were talking about where I could extend a part-time flexible's hours, I could ~~use~~ call in casuals, the other things that are available to us. Yes.

Q Okay. If we just want to break that down into

instances where there would be let's say an unexpected volume increase, for instance, so the work load is greater than the number of workers, how -- more specifically how would a local plant manager try to handle that kind of increase?

A Again, you're talking across the plant --

Q Across the plant.

A And in all operations.

Q Right.

A Generally those kinds of increases happen within a tour, and there's a specific function being performed on that tour, either outgoing processing, more cancellations than expected, or collections, or it might be on the incoming side. But within -- it'd be easier for me to talk I guess within an operation, if that's okay, or do you want to --

Q Sure, we'll start ~~with~~ within an operation and maybe we'll expand it.

A All right.

If volume materialized greater than anticipated and I had a sense of that earlier in the day, maybe early collection runs were running heavier than normal, I might choose to call in employees to work earlier. I could ask employees who were scheduled to depart, their tour was ending, I could ask them to stay in overtime. To the extent that casuals had the skills I needed, I could call them in.

Those are essentially the ways we've handled significant increases.

Q You agree that there's a limit to the number of casuals or other part-time employees that can come in, that could be called in?

A Yes. We're talking now still today, yes?

Q Yes. Okay. So that would require at least periodically the requirement for overtime by regular employees.

A That's correct.

Q Okay. And just on the other end, when there is an unexpected excess capacity and you want to reduce the number of workers, and again, if you want to consider either a plant in general or within a particular activity, how would a local plant manager try to adjust?

A First off by part-time or supplemental work force, sending the casuals home, reducing the part-time flexible hours, finding, you know, when we talked about again specific operations I could divert resources to other operations within the facility. I could what is essentially called selling annual leave. I could, you know, if it got to that point. Those are the things I have available to me.

Q You agree that there are limits again to the ability to reduce workers -- in other words, there are limits to the minimum number of hours that a full-time regular

employee can work.

A That's correct.

Q Okay. And there are also limits to the, let's see, minimum number of hours worked for all employees called in outside of their regular work schedule?

A That's correct.

Q Okay. So that at least periodically in some instances you're going to have some excess capacity where you just can't reduce workers to the workload for a particular operation.

A For a particular operation, yes, but again, within a -- in a particular operation I have the ability to shift workers between operations.

Q But there will be instances where let's say the level has reduced to the point were even when you're shifting among operations you're still going to have excess capacity just because of let's say labor agreements. You just can't reduce workers to the required level of mail volume processing.

A Maybe as a hypothetical, I suppose, but in my experience we've found as I said there are defined activities that go on in specific tours, and there might be an opportunity for me or there are opportunities to take workers that would have normally -- their normal activity on a scheduled tour and divert those resources to something

that might have been done on the subsequent tour. So there's additional flexibility in terms of work-force utilization across operations.

Q Okay. From your operational experience, do you find that there's a variation in mail volume processing during a week at a typical facility?

A Yes.

Q Okay. And would your answers concerning the need for overtime and perhaps, you know, some excess capacity or some adjustment for the day apply to a week as well? Maybe I can rephrase it, if you're not clear what my question was.

A In other words, do the same sorts of -- do I have additional flexibility in terms of -- on a weekly basis than I do on a daily basis?

Q If you can compare the types of flexibility that one might have.

A Unexpected changes in workload or to planned changed in workload?

Q To both. To expected and unexpected.

A Yes. To planned changes in workload I can -- I will schedule people according to expected workload. PTF schedules, part-time flexible employees' schedules might differ by day of the week. Casual schedules will differ by day of the week. And how I assign even the full-time regulars, obviously days off for a full-time complement will

be different by day of the week in anticipation of the workload for that any one day.

Q How about for unexpected changes in mail volume?

A I have for unexpected changes pretty much the same flexibility available to me that I referenced for the daily in terms of calling in PTFs and/or casuals early or using overtime.

Q And you agree that the same kind of limitations that we were discussing earlier by day apply by week. I mean, there are limitations to how much you can reduce -- that you can call in say casual workers, and so therefore they may require overtime for regular employees?

A So we're talking about increases now, not decreases?

Q For increases; right.

A Again, with the additional flexibility of movement of employees between operations, yes.

Q Okay. That was yes?

A That's correct.

Q Okay. How about for excess capacity, unexpected excess capacity by week? Do you agree that there are also limitations to the ability of a local manager to adjust the workload to the -- work force to the workload?

A Well, I don't think -- do I agree? I've said that there are ways in which we do adjust workload or work force

to workload, and I've -- the methods that I've referenced are the methods that we use. That's correct.

Q And just bringing this out to an accounting period, do the same -- if you want to sort of quickly sort of give the same types of considerations by local unit managers in terms of staffing for both expected and unexpected increases and decreases in mail volume by accounting period.

A Well, usually the unanticipated increases in volume are, you know, unexpected nature of those increases is more current than long-term. In other words, if I were anticipating volume for a particular high-volume period, say the Christmas period, I would adjust my expectations accordingly. So it becomes less, if you will, less likely that I would have unexpected increases in workload over time over longer periods of time.

Q How would you staff the expected increases in mail volume for an accounting period?

A With the available resources I have, the mix of part-time and full-time employees and casuals.

Q Okay. And once again there are limitations to the amount of casual and part-time employees that one would -- that a manager can bring in.

A There are the same limitations that we talked about before, although in an AP basis they're different in

terms of the number of hours, for example. The number of hours that I can work an employee in a day doesn't equate necessarily to the number of hours I could work them in a pay period, for example.

Q Right.

By the way, I should back up. From your experience you have observed variations in the amount of mail volume processed during an accounting period; is that right?

A That's correct.

Q Okay. Can you give some estimate of the range of mail volume variations?

A It would, you know, I think there are certain times of the year, the fall mailing season, for example, when volumes are high, of a particular type, advertising mail, for example, and the Christmas period there's cancellations, First Class ~~mail~~ mail volumes are high. I don't have a good estimate right now to give you of what those ranges are.

Q Okay. Let me just show you -- for the record I'm referring now to two U.S. Postal Service financial and operating statement reports, one for accounting period 2 for the postal fiscal year of 1996, and one is a financial and operating statement, accounting period 11, postal fiscal year 1996, and I just want to show you what the variation in

mail processing volume is. For the record the report for accounting period 2 indicates that there are 15,143,000,000 actual pieces processed, and for accounting period 11 it indicates there's 12,696,000,000 pieces processed.

Can I show this to the witness?

CHAIRMAN GLEIMAN: Certainly.

THE WITNESS: I see both those numbers, yes. Need these back?

MR. BERGMAN: Yes.

BY MR. BERGMAN:

Q From our calculations, a little roughly, it's about a 19-percent difference in the mail processing volume. Is that what you would expect from your experience in mail processing volume variation by accounting period?

A Those two periods were which again?

Q Accounting period 11 and accounting period 2.

A Well, the -- I guess the data is what the data suggests, yes.

Q Okay. And that's -- that's quite a bit of variation in -- in mail processing. Don't you agree?

A Yes.

Q Okay.

A I might add, just as -- as a comment about that, is -- that was volume, correct? That was not -- not pieces handled, that was volume?

Q I believe that's volume.

A Right. The work content of piece -- of -- of the volume to be worked changes, as well. When I talked about the Christmas period, for example, and the collection mail stream, that's -- that's all -- you know, the big increases there are handwritten addresses all at originating processing facilities that have to be handled all the way through the system. Some of the other changes that you see would be predominantly in work-shared volumes or customer volumes, which have a lot less work content associated with them.

Q Okay.

I'd like to ask you just a few questions concerning the -- the management decision-making on staffing, and this is referring specifically to your response to DMA-T-14-23.

A Okay.

Q You state there that there is an annual work hour budget for each facility based on anticipated workload and management incentives are based, in part, on budget performance. Hiring freezes were used locally on occasion before restructuring in 1992, but since then the only constraint on hiring has been the need to stay within the budget or justify an increase. Okay?

How are budgets for -- for local mail processing

offices determined?

A Well, it starts with a -- a look at past history. It looks at anticipated workload and it looks at other things that would affect workload, like the deployment of equipment, like a facility change, a work methods change, any other capital expenditure, like a ~~trade~~ Data management system or -- or whatever, takes those things into consideration, as well as the work content of the expected increase.

Q What do you mean -- what exactly do you mean by "work content"?

A If there is an -- for example, in the -- in the instance of classification reform, there were changes to the mail preparation requirements which -- which led to an impact in terms of workload at the -- at the facility. So, that sort of information would be taken into account when determining the budget requirements for the coming year, anticipating as much as we could.

Q Who makes these decisions at the -- well, let me back up. Is it management at the local level who makes the decisions?

A All levels of management are involved in the budget-setting process. It -- it's -- involves headquarters areas and the districts as well as the individual facilities.

Q How does it start? Does the individual facility give a proposed budget and that gets reviewed through different tiers of the hierarchy?

A It -- it starts at both ends, to be honest with you. It starts at the local level in anticipation of what their workload needs are, as well as at the -- at the area and national level, in anticipation of some of the events that local sites might not be aware of, so both, and -- and it's a long -- it's a long process that -- several iterations.

Q And just -- the sort of expected volume of -- of the workload is obviously one of the criteria considered in -- in the budget.

A That's correct.

Q Okay. But does this policy for authorizing the local budget vary depending on the size or type or the location of the facility?

A What policy are you referring to?

Q Just in how -- how budgets are determined both from the local level and from the headquarters and -- and regional levels.

A I'm not sure. Can you say -- I'm --

Q In other words, are there -- are there certain offices, either by their size or their type, where, let's say, budgets are determined only ~~by~~ at the local level with, let's

say, less input by more senior management or only by senior management with less input by local --

A Well --

Q -- managers?

A We have various management levels including district offices where we might have several facilities within their purview, and they would be involved with setting budgets within their -- their -- their service areas. So, I can't say, necessarily, there's one facility size that mandates that this office has more, if you will, input than another, but certainly, from a practical standpoint where the resources are used, you know, the budgets will be more closely scrutinized, I guess, and -- and established with a back-and-forth between those facilities and the upper-level management.

Q Okay.

In your response to DMA/USPS-T-14-23, there -- you say that management incentives are based in part on -- on budget performance. Can you tell me what incentives are provided for the local office management to stick to the budget?

A Well, there's -- there's the Postal Service's EVA, economic value added, which has been in place now for a couple of years. That has as one of its components the financial performance of the Postal Service, and every

office and operating unit contributes to the financial performance of the Postal Service, and the way that's measured is by budget performance, and so, when managers review performance with their facilities or subordinate managers, that's what they're -- that's what they're doing.

Q How long has this economic value added been in effect?

A I'd have to check, but I would guess the last three years, maybe, four years. I'm not exactly certain of the date.

Q As a general matter, how do local offices resolve the -- the budget decisions on whether to hire additional workers versus other expenses -- let's say new capital equipment?

A How do local facilities make the choice?

Q Or how is that decision made, whether it's made, you know, again, by sort of a combination of local decision-making and higher decision-making, or is it made only at the local level?

A It's made in combination.

Q Okay.

A Significant capital expenditures are -- are justified at the -- obviously, at the national level, with input from local facilities and local management, and -- I'm sorry -- the -- did you say at the local level, as well?

Q Well, my question was just generally how -- how the decision process is made to resolve whether to, let's say, increase hiring, if you need to increase hiring because of increasing workload, versus capital expenditures.

A I see. Well, major buys -- a new -- new technology, for example, a bar-code sorter or a flat sorting machine or whatever -- would be -- before it was ever in place in the Postal Service -- would be driven by the cost of those operations at the facility level and a recognized need for a national deployment.

Once you start talking about individual facilities and their needs -- and shifting resources is essentially, I think, what we might be talking about here -- that's made at the local level in terms of whether or not -- with local management and their next level of management as to whether or not resources can be shifted from one facility to another, capital resources, or whether or not additional resources have to be purchased.

Q In your response to DMA/USPS-T-4-23, you talk about -- that the only constraint on hiring has been the need to stay within the budget or justify --

A I'm sorry. T-4 or T-14?

Q -- T-14 -- I'm sorry -- 23, where you say that the only constraint on hiring has been the need to stay within the budget or to justify an increase. Do you mean by that

that there might be circumstances that would justify an increase in the budget to permit additional hiring?

A Well, once the budget is set, no.

Q Okay. What -- what happens with -- once the budget is set in terms of -- and there's been an increase in -- in -- unexpected increase in workload, how -- how is that accomplished at the -- at the local level if they can't hire additional workers?

A These sorts of things are usually involved with when there is a network change, where I move volumes from one facility to another, and example of that might have been, again, the classification reform, where we eliminated one of the -- for example, the state distribution network and replaced it with the ADC network, and we were shifting actual workload from facility to facility, and a facility that was gaining some of the workload, you know, once the realized -- workload materialized, there would be perhaps budget adjustments necessary to accommodate the additional workload that hadn't been adequately anticipated.

Q But would -- as a general matter, once a budget is -- is set and there has been an unexpected increase in -- in volume, would that necessitate possibly more overtime than ordinarily would be required just because of limitations on additional workers that can be -- that can be hired?

A That's -- that's one possible outcome, yes.

Q Okay.

Do local mail processing facilities have authority to -- to permit overtime?

A Generally, yes, most do. Some management at the local level, division level, or district level hold tighter control than others, but yes, generally, facilities of any size have the authority to -- to call overtime, yes.

Q Okay. And who makes that decision at the local level?

A If it's a plant in a -- in any given night, we're talking about the -- the operation supervisors, in conjunction with their -- their tour superintendent.

Q Okay. And is that decision ~~reviewing~~ reviewed by anybody else?

A It's reviewed, certainly, locally in terms of next day, hours used, and volume processed, and over time, it's reviewed -- well, even at -- even on a daily basis, it's reviewed by next level of management and, over time, by higher and higher levels of management, yes.

Q When you say "next level of management," what level is that?

A It would be at the district level.

Q Okay. Are there any limits on the authority ~~for~~ of the local supervisor to authorize overtime?

A Only within the limits of the contract.

Q Are you --

A There may be -- there may be limits established locally in terms of expectations for overtime usage, but I'm not aware of any national policy.

Q When you say "contract," do you mean the labor agreement?

A That's correct.

Q Okay. So, there -- is there -- so, there's no policy, no Postal Service policy on -- on limiting the authority of a local unit to authorize overtime --

A No.

Q -- outside of the constraints of the labor agreements.

A Not that I'm aware of.

Q Okay. And same with the -- same line of questions concerning hiring additional workers. Do local units have authority to hire additional workers?

A They do, but that's not a decision that's made as it's not the same sort of decision that's made with using overtime. Overtime is usually related to a near-term requirement based on workload. A hiring requirement is because of the -- is over time, it takes time, not overtime in terms of hours usage but over periods of time.

And yes, while they do have some authority to hire, that is a decision that is, because of the long-term

ramifications of hiring, that is decision that is looked at much more closely.

Q I'm sorry, much more -- I missed the last word.

A Closely.

Q Okay. So there are more limitations to the ability of a local unit to conduct hiring?

A Yes. I am not exactly sure what the policy is at a national basis in terms of local hiring practices, but yes, there are restrictions.

Q Okay. Would that in a sense also necessitate additional overtime at times just becuase of that constraint, the policy constraint on hiring?

A Well, whether it is a policy constraint or just a practical constraint of the lead time necessary to bring a new employee on, train them, and get them scheduled, you have to use what tools are available to you to accommodate that interim period, and one of those might be overtime.

Q Okay, and who makes a decision or begins the decision at the local level concerning hiring additional workers?

A Who starts that decision?

Q Who would start that decision?

A At the plant level, it would be generally at the plant level where they would be, you konw, looking at overtime usage, skill sets that may be needed -- for example

maintenance craft skill sets. It would start there.

Q Okay, and would that decision be reviewed by another level of management?

A Yes. Before any significant hiring was done, yes, it would be done at the district level or the --

Q Okay. Is it also reviewed at Headquarters as well, or is ~~usually~~ it the district level that would be the highest?

A Unless it was significant I can't imagine, I am not aware of a requirement for Headquarters review of local hiring practices.

Q Okay, and when you talk about ~~services~~ the Postal Service's lag time between kind of the initial decision and then let's say the authorization by the district level, give me a rough idea of how long the time would be to hire additional workers, necessary let's say to ~~fulfill~~ match an increasing work load?

A Well, generally there is -- I can't think of the correct term right now but a record. You are on a waiting list to be hired. You have taken a test. We have a pool of resources available who have indicated desirability to work for the Postal Service, and they take a test in most cases to be placed on that list and we would start from there.

So if you are assuming that that list is in existence from the time that we would decide to hire from that list, I'm not sure, I would guess probably two weeks to four weeks perhaps, maybe less.

Q Are there instances where that list does not exist?

A Or it might not be up to date.

If you havent' hired in a while, you might want to go and start that list again, yes.

Q Okay. How many instances might that be, where you don't even have the list to kind of begin the process?

A Well, usually again these are longer term decisions and you are anticipating the need for hiring, you know, well in advance or hopefully well in advance of the need for that, so you are trying to anticipate future hiring needs, so it is not an instance where all we need to hire and we forgot to create the list.

We would have been planning that in ancipation of the need.

Q Okay. What kind of tools does the office generally use, does a local office use to schedule? In other words, are there scheduling models or computer programs or spreadsheets?

A Well, I think we talked about, in interrogatory responses, about the site META, and have put I believe the handbook for that as evidence.

That is generally the tool that is available to the sites. That's sponsored on a national basis.

There may be other applications, other computer

models that local sites use in addition to that.

Q Are you familiar with the other models that local units might use?

A No, I am not.

Q And finally, I just want to ask you a few questions concerning your responses to DMA-USPS-T-4-16, 39, and 41, where you state that there are cost savings from delivery point sequencing for zones with less than 10 routes both in straight work hours and in overtime.

I'll give you a minute to refer to those interrogatory responses.

A Okay. 616?

Q T-4-16, 39 and 41.

A Okay.

Q Would you like a minute to review your response?

A Okay. Yes.

Q Okay. In these responses you state that there are capturable and measurable savings in zones with less than ten routes from DPS, delivery point sequencing. Could you explain in what way that there are cost savings that are both measurable and capturable for such zones with less than ten routes? I think you stated that both in overtime usage and in regular work hours.

A Well, yes. In -- take an example of a zone with nine routes. Each of those routes today could be what we

would call overburdened, each receiving an hour of overtime a day. DPS would eliminate the need for that overtime. You could have an instance too where those routes ~~we~~ were instead of using overtime were using auxiliary assistance where another employee was delivering part of that route. The need for auxiliary assistance could be eliminated as well through DPS.

Q In response to our interrogatory DMA USPS-T-4-41(c) you mention that DPS can lead to -- eliminate certain in-office work hours that can lead to route adjustment which can reduce the requirements for complement and equipment. Could you just explain in what way DPS can lead to route adjustments which can reduce the requirements for complement and equipment?

A Well, DPS is targeting office time.

Q Right.

A And it's in a sense trying to reduce the manual-labor-intensive sequencing of letter mail that the carrier does today. By reducing office time, that frees up time for -- more time can be spent on the street. So that's the -- that's what we talk about, you know, the office savings. Route adjustments, when I do that to -- now I have nine people carrying a certain geographic area. When I expand someone's street time, I have to make adjustments in terms of coverage as to what part of the city or geographic

territory they're going to cover, and I'll do that with fewer hours, fewer employees -- or employees or hours.

Q Okay. And would that savings also be in place for zones with less than ten routes as well? ~~possibly?~~

A I think that's -- that's what this question is referring to, isn't it?

Q Well, I think your response may have been broader than that, and I think our question was referring to that, but I think your response -- I wasn't sure whether your response was referring both to greater than ten routes and less than ten routes. But you can just confirm with respect to less than ten routes.

A The savings that's available if sites choose to sort to zones with fewer than ten routes would be the same sort of savings over time and/or straight-time hours.

MR. BERGMAN: That's all I have, Chairman Gleiman.

CHAIRMAN GLEIMAN: Thank you.

Mr. Feldman, did you want to cross-examine the witness?

MR. FELDMAN: Mr. Chairman, thank you very much. I think we're going to reserve any opportunity for followup.

CHAIRMAN GLEIMAN: Thank you.

Florida Gift Fruit Shippers?

I don't see anyone in the room.

That brings us to the National Newspaper

Association.

MR. YOURSHAW: The Newspaper Association of America, Mr. Chairman, NAA. I have just a couple of questions.

CROSS EXAMINATION

BY MR. YOURSHAW:

Q First, I don't know whether you can give me precise numbers or not, but I hope you can give me at least a feel in a -- like a mid-sized or typical or average MODS facility, what would be the, you know, the number of piece handlings per day that you'd expect to get from a BCS machine and from an OCR machine?

A I'm not sure I can tell you. That would depend again in terms of the operations that that facility has.

Q I mean, but do you have like a ballpark rule-of-thumb number that you'd expect normally, you know, such a machine to produce, or even a range?

A I could probably calculate one, but I don't have one right off the top of my head; no.

Q Okay. Well, after a new machine like that comes on line, how long does it take before it is processing the number of piece-handlings that you would expect to be processing? Is that a lengthy period of time before a machine can ramp up, or --

A It might depend on whether it's the first of that

particular piece of equipment in that facility or the 20th piece of equipment for that.

Q Well, let's assume it's the 20th.

A I would assume that that piece of equipment would be producing -- and I don't know what the number is yet --

Q Well, whatever the number is, it would be producing it? Assuming you have the volume to sustain that usage.

A Yes, perhaps not to the level of the earlier machines, but because of newness of employees or whatever might be happening -- and it also depends on what that particular piece of equipment is being used for. I might -- that 20th piece of equipment, for example, the delivery point bar code sorter, might only be used for incoming secondary sort. The first one might be used for outgoing primary, outgoing secondary, managed mail, and incoming secondary. It depends on what the workload requirement was, why that additional piece of equipment was purchased.

So I am not sure that answers, but it would vary by function.

Q Are we talking days? Are we talking months? In general -- to get these machines and the operator who operate the machine --

A Proficient --

Q -- up to speed, proficient?

A Yes, I would hope in a matter of weeks.

Q A matter of weeks?

A Relatively short period of time.

Q The other question I had for you and in part I think this refers to your response to TW Number 7, TW-USPS-T-4-7.

A T-4-7. Yes.

Q You have that there? Then if I may, I have here a response of Dr. Bradley which discusses what was perceived as a possible apparent contradiction between your testimony and his and his explanation of what that might be, if I could just -- I'll lend that to you.

I'll ask the question.

The document that I just handed to you is Presiding Officer's Information Request Number 4, Interrogatory Number 4, and there Dr. Bradley was talking about an apparent contradiction between his testimony, asserting the low variabilities of backstop and gateway activities versus your testimony regarding the Postal Service's ability to size staff precisely that you gave in your interrogatory.

Specifically, Dr. Bradley said, "It is my understanding that Witness Moden's response was describing the Postal Service reactions to unexpected changes in daily conditions like machine breakdowns."

Is that an accurate characterization of your testimony?

A Not entirely, no.

Q What else would you say your testimony is saying?

A We're referring -- we are talking abcut, I'm sorry, the testimony or are we talking about this question?

Q Well, the question which has in effect become testimony because it's been entered.

A The gateway and backstop obviously are impacted by that, those particular circumstances.

If a piece of transportation doesn't show up, a power outage, whatever it might be, yes, those are affected by that.

But I think -- give me just a second to review T-4-7 again.

Q Okay, sure.

A I guess you are referring specifically to Section C there where it talks about --

Q Yes. That is the most specific reference you have there.

A Yes, when we talked about staffing before, those operations are key obviously to subsequent operations.

Let's take for example, a facer canceller operation which must process all the collections before the mail can be subsequently sorted for dispatch.

We staff those operations because of the very nature of the criticalness. In other words, we can't afford to have delays in the processing or cancellation of that mail because of the impact it has on subsequent operations.

If, for example, a truck is delayed for any reason, and I am not talking hours here but for a short period of time, rather than try to move people out of those particular operations, we would be willing to accept some period of time where volume might be light -- in other words, so that the workers are there when that volume does come.

But I wouldn't call that necessarily staffing in anticipation of a truck breakdown or for some other unforeseen circumstance, like a power outage, for example, so I guess I would argue -- I would say that we staff because of the criticalness of the operations. We staff to move that mail through there as fast as possibly can be, and not necessarily staff in anticipation of all eventualities.

Q But for that arguable mismatch between the staffing and the volume, in general do you staff fairly precisely to the volume?

A We staff in anticipation of the work load in a given period of time, and if that work load doesn't materialize within that given period of time or if it pushes back to the end of that period of time, then we'll have to

make other arrangements. We will have to do other things.

Q There may have been a mismatch but in general, on average, over a reasonable period of time would you say that it works out that the staffing matches up with the work load --

A Yes.

Q -- with the volume?

A Yes.

MR. YOURSHAW: Thank you. That's all I have.

CHAIRMAN GLEIMAN: Did National Newspaper Association have any cross examination?

[No response.]

CHAIRMAN GLEIMAN: If not, then that moves us to the Office of the Consumer Advocate.

CROSS EXAMINATION

BY MR. RICHARDSON:

Q Mr. Moden, I just have a couple of questions on your testimony here.

On the last page of your testimony on page 22, where you discuss non-MODS facilities and compare them to MODS facilities, am I correct in justifying the use of non-MODS facilities -- well, using MODS facilities' volume variabilities and applying them to non-MODS facilities? Is that what you are discussing there?

A This part of the testimony was to support Witness

Bradley's testimony, yes.

Q And you yourself cite some obvious differences between the MODS facilities and non-MODS facilities, citing that the non-MODS facilities are simpler and smaller and the clerks have greater personal knowledge of local delivery area, and that the size is different, and those are points which I would have thought were important in volume variability and therefore would be a reason for the non-MODS to be considered different from the MODS system.

Then you go on to point out that there are other factors that are important. What other factors do you think are important if those aren't important, if those factors are not important?

A I'm not sure I see the reference where I talk about other factors that are important.

Q On line 21, going over to 22 --

A Oh.

Q -- you say the factors accounting for volume variability would be -- would thus be much the same regardless of facility size --

A Oh.

Q -- and what are those factors if not the ones that you've just discussed?

A Oh. Well, I think that's referring to the prior factors, and the factors accounting for volume variability

would thus be the same. I mean I think it's referring to those prior -- that part of the testimony is referring to those prior factors.

Q Even though they are obviously -- as you say, they are differences that they are still the ones that -- that are used in determining volume variability?

A Well, I -- I'm not sure I -- I guess the point I'm trying to make here is that my understanding of the volume variabilities and the information that -- that witness Bradley used was hours and TPH, from which he derived the variability.

My experience -- that's productivity, and I was referring here in those -- in those operations that are alike in -- in these non-MODS and MODS offices, my take on the variability and the productivities are that the factors are generally the same.

Q And I am asking you what are those factors that affect volume variability?

A ~~Their~~ They're equipment, ~~their~~ they're mail flows, ~~their~~ they're -- performance of the individual clerks, ~~their~~ they're work-room's floor size, they are those things.

Q But you recognize that they are different as between non-MODS and MODS facilities.

A Some of them are. We say there are similarities in work -- in equipment and flows.

THE REPORTER: Similarities in equipment and what?

THE WITNESS: And mail flows.

BY MR. RICHARDSON:

Q Are you aware of any mathematical or statistical studies or analyses which compare mail processing flows between MODS and non-MODS facilities?

A No, I'm not.

MR. RICHARDSON: Thank you.

Mr. Chairman, for OCA, that is all the questions I have. However, I do have, as I mentioned in our motion for oral cross examination, that we do have some questions we would like to ask on behalf of participant David Popkin pursuant to his request. I have a few questions, about seven or eight questions, that were submitted to OCA.

CHAIRMAN GLEIMAN: Please proceed.

BY MR. RICHARDSON:

Q Mr. Moden, these questions relate to your response to NDMS/USPS-T-33-31, and that was a question posed which related to a hypothetical --

A Yes, I have it.

Q -- piece of mail that was mailed, and just to set -- ~~set~~ the record straight here, I'll indicate that that --~~that~~ question asked about ~~the -- about~~ a hypothetical that someone deposited in a collection box, and 11 1/2-ounce package affixed of $2.85 and the contents were in an

envelope with a pre-printed inscription, first-class mail, and then you went on to answer some questions. These questions relate to variations on that hypothetical, and the first question from Mr. Popkin is, had the envelope contained a pre-printed inscription, priority mail, would the article have been sent as priority mail with an attempt to collect the 15-cent postage due from the addressee?

A If it was determined that the intent of the sender was to -- for priority service and that was their expectation and that was their desire, yes.

Q Would the priority mail endorsement perhaps be crossed out and replaced with a first-class mail endorsement and have the letter delivered without assessment of any postage due?

A Yes, if it -- if it was considered to be first-class mail and not recognized as priority.

Q In your response to the interrogatory you indicated that the proper First Class postage of $2.85 had been paid on an 11-1/2-ounce letter. Under which section of the present or proposed rates does the calculation of rates of 32 cents for the first ounce and 23 cents for each additional ounce allow for the $2.85 rate?

A I'm sorry, what was -- could you start that question again?

Q Sure. In your response to the original

interrogatory, you indicated in subpart (c) and (d) that the proper First Class postage of $2.85 had been paid on an 11-1/2 ounce letter. Under which section of the present or proposed rates does the calculation of rates of 32 cents for the first ounce and 23 cents for each additional ounce allow for the $2.85 rate?

A In the revised response there was a revision to this response. Do you have that?

Q Yes, I do.

A C refers now to response to part B. The original response talked about -- the presumption on the original response was that the piece would not be detected as being -- would not have been detected and not have been identified as short paid. The subsequent revision said yes to part B, that would the Postal Service handle it as Priority Mail and attempt to collect 15 cents? The revision says yes, provided the misidentification as short paid is detected. C then refers to would the Postal Service handle it as First Class mail and attempt to collect 15 cents. And the revision says no, see my response to B. So there is no -- I can't point to a provision I guess that you're referring to.

Q Thank you. With the new proposed rates, will it allow for 11-to-12-ounce First Class mail letters to be sent for $2.86 postage?

A I'm not familiar enough to be honest with you with the new rates scheduled to know. I just don't know. Without looking at it I don't know.

Q Then you wouldn't know whether they would allow 12-to-13-ounce First Class mail letters to be sent for $3.09 postage?

A I'm not sure. Are you asking whether or not using the same hypothetical is there a First Class rate at over 11 ounces? Is that what you're asking?

Q I believe so. With the new proposed rates, will that allow --

A Again, I'm not familiar with the new rates to know.

Q Again, could you explain how a mailer might be advised what the rate is or how that -- what the rate is that exists or -- as proposed? How would a mailer be advised of that, of the appropriate rate?

A I'm unclear. I guess if -- if I were to use whatever available resources the Postal -- the Postal Service makes available in terms of rate schedules, either over the counter through a retail clerk or published information, I think I could find it there.

MR. RICHARDSON: Thank you.

Those are all the questions submitted by Mr. Popkin, Mr. Chairman.

CHAIRMAN GLEIMAN: Thank you.

Does anyone have followup?

[No response.]

CHAIRMAN GLEIMAN: If there's no followup, there may be some questions from the bench.

Commissioner LeBlanc?

COMMISSIONER LeBLANC: Mr. Moden, would you characterize the period from 1988 to 1996 as a period of substantial change in the mail processing operations of the Postal Service?

THE WITNESS: Yes.

COMMISSIONER LeBLANC: Would you characterize this period as a time of -- I'll call it introduction of automation and a reduction in manual operations?

THE WITNESS: Yes.

COMMISSIONER LeBLANC: Then what has been the effect on productivity of the manual operations? In particular, has the service been able to adjust labor levels down proportionate -- proportionately -- excuse me -- to the drop in the volume, or are there what might be called worker refugees due to the automation?

THE WITNESS: I think the Postal Service had -- has adjusted its work-force and work hours downward.

COMMISSIONER LeBLANC: Earlier today, in a response to a question from Time-Warner to witness Bradley,

it was pointed out that productivity for manual operations is lower in 1996 than it was in -- I mean than in '88, 1988. If this is true, would it indicate that variabilities for the manual operation should be increasing through the period 1998 to '96?

THE WITNESS: I can't -- I'm not sure I can speak to the impact of that change in productivity on variabilities, but I can -- I'd like to say that -- that workload in the -- in the -- on the work room floor in the Postal Service is not just a function of the volume or pieces handled but also of the work content of those pieces handled.

COMMISSIONER LeBLANC: But isn't that adjusted? Didn't I understand you to say that that's also adjusted?

THE WITNESS: I didn't say that. I don't --

COMMISSIONER LeBLANC: I'm sorry.

THE WITNESS: Okay. And -- and -- and the -- the reliance on automation that you referenced earlier had an impact on -- on the manual operations in terms of the quality of mail that was left in those manual operations.

COMMISSIONER LeBLANC: The quality of mail?

THE WITNESS: Yes. As we automated more and more, the type of mail that was left for -- for either the LSM or the manual sort became the more difficult mail to handle.

COMMISSIONER LeBLANC: Oh.

THE WITNESS: It was either thicker pieces, poorly -- poorly addressed, or whatever, but there was -- the quality of the mail left to be sorted manually and the work content of that mail increased. Quality went down, work content went up.

COMMISSIONER LeBLANC: Well, let me kind of shift just a little bit on you, but earlier today I asked a question, this morning, to witness Bradley, and as I understand it, the Postal Service agreed to determine whether it can provide first handling pieces data for a facility.

So, could you tell me if there are any operations corresponding the MODS-based cost pool -- cost pools developed by witness Degen for which first handling piece data are available? Do you have any --

THE WITNESS: Some of that data may be available. I don't know for what period of time.

COMMISSIONER LeBLANC: Counsel, can we check and get a response to that?

MR. REITER: I believe that's what Ms. Duchek said we would do this morning, isn't it? Are you asking something different now?

COMMISSIONER LeBLANC: It's a little bit different, because this is based on the -- if I'm understanding, this is the first handling piece. We talked

about total pieces this morning, did we not?

MR. REITER: I -- I thought what you asked for this morning was first handling pieces.

COMMISSIONER LeBLANC: Okay.

MR. REITER: Yes.

COMMISSIONER LeBLANC: Then that's my mistake.

MR. REITER: Then we have already answered that.

COMMISSIONER LeBLANC: Okay. Yes, you have.

Is it also my understanding, then, that we are going to have the -- the first handling piece data by operations as well as by facility, just to clarify that?

MR. REITER: Again, as I recall from this morning, we were going to check into what we did have and let you know that and --

COMMISSIONER LeBLANC: Correct. But that is by --

MR. REITER: -- if we had it, you know, what it would take to get it.

COMMISSIONER LeBLANC: Right. But that was by operations as well as facility.

MR. REITER: We can check into that. We'll let you know about that, as well.

COMMISSIONER LeBLANC: Fine. Thank you very much. Thank you, sir.

Thank you, Mr. Chairman.

CHAIRMAN GLEIMAN: Mr. Moden, you -- you said

something a moment ago that has me confused. If I understood you correctly, you indicated that, with increasing reliance on automation, the quality went down and the work time went up on manual mail?

THE WITNESS: Yes. If you -- if you look at the trend in automation over time, the -- the first mail, for example, that customers would bar code if you looked at just customer -- was generally what we would call good, clean, machinable mail, bills and other statements that would -- that would process readily on automation.

As more and more of that mail became automation mail and left the other alternatives, either LSM or manual, what -- what's left in that -- in that pile of mail to be sorted, which may have been a relatively small portion of the total, becomes now the more difficult mail to handle. It's thick pieces, for example. It's over-size pieces. It's pieces that would fill up a cell in a -- in a manual case rather quickly and have to be -- and that's what left in those -- and plus more just plain script mail and -- and other things that are -- are harder to read.

CHAIRMAN GLEIMAN: I understand that, but you don't mean to say that the quality of the mail declined? I mean, a handwritten piece of mail with my handwriting on it five years ago or ten years ago was probably no more illegible than, you know, a piece of mail with my

handwriting on it today. So the quality of my piece of mail didn't decline.

THE WITNESS: No, I did not mean that. I meant that the proportion of mail in that category is much greater now than it was before.

CHAIRMAN GLEIMAN: Okay. And the time to work my piece of mail did not go up?

THE WITNESS: No.

CHAIRMAN GLEIMAN: And there's less mail overall in that category of manual mail because some of it migrated up to automation compatible.

THE WITNESS: I'm sorry, in that category are you talking about the --

CHAIRMAN GLEIMAN: Excuse me, the residual manual mail that's left. There are now fewer pieces in the pot called manual than there were a number of years ago.

THE WITNESS: Yes, but that's further complicated by the Postal Service's decision to remove letter-sorting machines. The old LSM, the 12 console -- you may have seen what -- we're removing those from service and so that now is where we had that as an alternative, that's now putting more mail in manual operations in some circumstances.

CHAIRMAN GLEIMAN: I don't want to beat a dead horse, but your statement that the quality went down, you're talking about in an overall pool, which is not the same pool

that existed years ago. So the pool is a different pool.

THE WITNESS: Pool not in the sense --

CHAIRMAN GLEIMAN: Excuse my Baltimore accent. It's p-o-o-l.

THE WITNESS: Pool not in the -- or in the sense that it's used in this proceeding?

CHAIRMAN GLEIMAN: Yes.

THE WITNESS: In a manual letter operation, for example?

CHAIRMAN GLEIMAN: Yes.

THE WITNESS: Proportionally, and maybe I'm not making -- proportionally the mail that's in that pool today, it's characteristics are different than it was in prior years.

CHAIRMAN GLEIMAN: Right.

THE WITNESS: That's the point I --

CHAIRMAN GLEIMAN: And the pool itself is smaller.

THE WITNESS: Again, considering that some of that mail moved from mechanized sort, LSM, to manual, I'd have to check the TPH in each of those to see.

CHAIRMAN GLEIMAN: So to the extent that the work time went up, it's not all a consequence of the mail per se -- the mail pieces per se or automation, it's -- there's also some other decision that was made by the Postal Service to discontinue the use of LSMs or MP LSMs and move what used

to be worked in a mechanized setting down to a manual setting.

THE WITNESS: That's correct.

CHAIRMAN GLEIMAN: So that some of the increased time is a consequence of a Postal Service management decision?

THE WITNESS: Recognizing that it saves in the alternative, which was the LSM.

CHAIRMAN GLEIMAN: Well, the reason it saves, it takes more time to work, time is money, and you're telling me that it saves --

THE WITNESS: The decision --

CHAIRMAN GLEIMAN: In the alternative?

THE WITNESS: The decision to remove the LSMs from service was made on a lot of different considerations. One, the quality of sort on the LSM is not as high as it is in a manual case, just by the nature of the -- a letter per second dropping in front of that operator and that operator having to translate either the zip code information or the address information and key a key code combination that will send it to the proper destination on the sweep side. So there's an error-rate consideration.

Operators on an incoming secondary LSM, for example, are higher-paid employees than are manual clerks, and so there was that consideration. There's a significant

training time associated with training someone to operate an LSM. And so those are some of the reasons that went into that decision to eliminate or -- they haven't all been eliminated, but downsize significantly reliance on the LSM.

CHAIRMAN GLEIMAN: From all those considerations that you just listed, can I conclude that just because work time went up doesn't mean that the cost of working that mail went up? And I'll tell you why I come to that conclusion, if you want.

THE WITNESS: I'm not certain -- I don't know about the cost of working that mail. I know about the hours spent.

CHAIRMAN GLEIMAN: You just said that the people who do manual are less costly employees to the Postal Service than the MP LSM people, that it's less costly and less time-consuming to train them. I just find it strange that work time went up on manual mail. If you tell me that's the case, that's okay, but I can't conclude from what you said what would otherwise be intuitive, and that is that the cost of doing -- of handling that mail went up also, because you just added qualifiers as to why the Postal Service got rid of MP LSMs.

THE WITNESS: I'm sorry, but I'm not sure if you're asking me whether the costs have gone up in that --

CHAIRMAN GLEIMAN: You just told me that you don't

know whether the costs went up or down, I think.

THE WITNESS: That's right.

CHAIRMAN GLEIMAN: Okay. All you know is that the quality in the pool overall went down, and the work time for the entire pool or on a per piece basis went up. Which is it?

THE WITNESS: I don't know the productivity numbers that I think were shown to Witness Bradley this morning, and I just saw them briefly, I haven't had a chance to look at them. I'm not sure how significant the change has been in manual sort over that time.

CHAIRMAN GLEIMAN: Well, I don't want to prolong your agony or mine on this issue. I'll just have to sit down and draw myself a picture and see if I can figure it all out.

Are there any other questions from the bench?

[No response.]

CHAIRMAN GLEIMAN: If there are none, other followup as a consequence of questions from the bench?

[No response.]

CHAIRMAN GLEIMAN: Redirect, Mr. Reiter?

MR. REITER: May we have a few minutes?

CHAIRMAN GLEIMAN: Certainly. Five minutes?

MR. REITER: That will be okay. Thank you.

[Recess.]

CHAIRMAN GLEIMAN: Mr. Reiter.

MR. REITER: Thank you, Mr. Chairman.

REDIRECT EXAMINATION

BY MR. REITER:

Q Mr. Moden, earlier, in response to a question, I believe that you stated your opinion that the Postal Service generally was able to staff to workload. Did you mean to imply by that that work hours would have to increase proportionally with changes in mail volume?

A No, I did not.

Q Can you explain why that is?

A Depending on the type of operation, if -- take for an example the manual letter or manual flats case or manual distribution. As more volume is added to that operation, there are economies of scale in terms of some of the support activities that directly support that distribution. Those are the initial setup of that operation, bringing equipment to and from to put mail -- sorted mail in, bringing mail to and from that operation, the so-called support activities that do not necessarily change on a one-to-one basis with volume.

Likewise, even the -- there obviously becomes a point at which you have to add additional staff, but that point is -- is not reached on a one-to-one basis necessarily. As more volume is there to be sorted, there is

less opportunity for potential shortages or -- or periods of -- of down-time.

Q You were discussing elimination of the MP LSMs with Chairman Gleiman earlier. Mail that had been previously worked on the LSMs -- did that all go to manual operations?

A No. No. It's part of the automation program to -- to put bar-codes on that mail through -- through automation. The mail went through both automation and to -- to manual.

MR. REITER: Thank you.

That's all I have, Mr. Chairman.

CHAIRMAN GLEIMAN: Is there any followup as a consequence of redirect -- excuse me -- recross as a consequence of redirect?

[No response.]

CHAIRMAN GLEIMAN: I have one question, Mr. Moden.

THE WITNESS: Uh-huh.

CHAIRMAN GLEIMAN: The first question that you were asked on redirect about the staffing to workload -- is it possible that -- that your explanation is a reflection of the distinction between volume variable cost and institutional cost?

THE WITNESS: I'm sorry, I don't know.

CHAIRMAN GLEIMAN: Did you ever hear of overhead

cost?

THE WITNESS: I've heard of it, yes.

CHAIRMAN GLEIMAN: Thank you.

MR. YOURSHAW: Mr. Chairman, we have one brief question.

CHAIRMAN GLEIMAN: Step up to the batter's box.

RECROSS EXAMINATION

BY MR. YOURSHAW:

Q You mentioned just a minute ago that there are some economies of scale associated with in effect filling up the capacity of a machine from maybe starting it out at less than its full capacity and as the volume increases, you know, the same people are doing the same work, but processing more volume -- at least until that machine is at full capacity and that group of workers are at full capacity.

Did I understand you correctly about that?

A The example I think I used was a manual operation.

Q Right. It might be a manual -- the labor that goes into feeding a machine or something like that, but any manual operation. Is that fair?

A No. The operation I specifically was referring to was a manual distribution operation. No machines.

Q Would you call anything associated with any other manual operations having economies of scale?

A Would --

Q Are there any other manual operations where you would say they have economies of scale?

A Manual operations in terms of the distribution function or are you talking -- your use of the term before was manual operations to feed a machine, is that --

Q Well, I was trying broadly to refer to any and all human labor.

A Yes, I believe there are.

Q Could you characterize some more of those for us, please?

A Other examples in a manual parcel operation, for example, where there's a significant amount of work necessary to hang sacks, label sacks, subsequently drop full sacks or even partially full sacks, depending on the distribution of the mail that is made to those.

That is going to happen whether there's one piece of mail in that sack or 10 pieces of mail in that sack. There's some work that is going to be necessary.

Q I understand. Over the long-run, viewing a big picture of the whole Postal Service, would you say that there are inherent economies of scale for manual operations or is this more what I would call a step function? At a certain point you have economies of -- you know, the sacks might be full, the sacks might not be full, but if volume

increases to the point where you have not only got full sacks but you are starting on the next sack, you know, then the step function has moved up one step and you have to hire more people to handle that second sack, so that productivity may change in a step function rather than the smooth line, but in the long-run, in overall, they're going to have to hire more people to handle more volume when the volume exceeds the near-term small economy of scale that might be achieved, filling -- putting it in one sack --

A Yes, to put it back into the terms of the examples I gave, yes, I would think at a certain point in time where I add more volume and more distribution clerks, I may have to add additional personnel to bring mail to that operation or take it away, but I don't know at what level.

Q Yes, but would you say it is fair to say that in the long-run, in the significantly long-run -- we are not talking about days or weeks here, but in terms of a year or more, that there are not infinitely available economies of scale for manual operations?

A Yes, I guess I would say that there comes a point in time at which perhaps additional resources would have to be added.

MR. YOURSHAW: Thank you. That's all I have.

CHAIRMAN GLEIMAN: Anything else?

MR. ~~RICHARDSON~~ REITER: I have one redirect question,

just for the record.

RECROSS EXAMINATION

BY MR. ~~RICHARDSON~~ REITER:

Q Mr. Moden, you are not an economist, are you?

A No, I am not.

Q So when you use the term "long-run," what would you understanding of that be?

A Well, long-run from our perspective might be, you know, could be a year -- or longer than a year.

MR. ~~RICHARDSON~~ REITER: Thank you.

CHAIRMAN GLEIMAN: Thank you, sir. Any further follow-up?

[No response.]

CHAIRMAN GLEIMAN: If not, then that brings us to the end of another wonderful day here in the hearing room.

Mr. Moden, I want to thank you for your participation today, your appearance, your contributions to our record.

If there is nothing further, you are excused.

[Witness excused.]

CHAIRMAN GLEIMAN: That concludes today's hearing.

We will reconvene tomorrow, Tuesday, October the 21st, to hear from Postal Service witnesses Degen and Brehm.

We'll see you all tomorrow -- or some of you.

[Whereupon, at 3:20 p.m., the hearing was

recessed, to reconvene at 9:30 a.m., Tuesday, October 21, 1997.]