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POSTAL RATE COMMISSION OFFICE OF THE SECRETARY

POSTAL RATE AND FEE CHANGES, 2000

Docket No. R2000-1

RESPONSES OF TIME WARNER INC. TO INTERROGATORIES OF THE UNITED STATES POSTAL SERVICE TO WITNESS HALSTEIN STRALBERG (USPS/TW-T1-1-8) (June 16, 2000)

Time Warner Inc. (Time Warner) hereby provides the responses of witness Halstein Stralberg (TW-T-1) to Postal Service interrogatories USPS/TW-T1-1-8 (filed June 2, 2000). Each interrogatory is stated verbatim and followed by the response.

Respectfully submitted,

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USPS/TW-T1-1. On page 28 of your testimony, lines 1-2, you say that "some of the mail unloaded may be 'direct' containers, including pallets, that simply need to be cross-docked and staged for loading onto outbound trucks. This activity takes little time." (emphasis added)

- a) What is the basis for this conclusion? Please cite all studies you have conducted or reviewed regarding the costs of cross-docking 'direct' containers.
- b) What is your understanding with respect to the average length of travel for cross-docked direct containers as compared to the average length of travel for containers being moved to opening units and sorting operations?
- c) Have you ever observed the staging of cross-docked containers inside the plant due to insufficient dock space?
- d) Has dock space at plants increased in proportion to cross-docked 'direct' containers?
- e) Has the staging of cross-docked direct containers added to the congestion of the dock area?
- f) What impact have the additional forklifts needed to move cross-docked pallets had on the level of congestion on the dock?

<u>USPS/TW-T1-1.</u> Let me first point out that these questions appear to result from a misunderstanding of the intent in my testimony. I do not suggest that crossdocking a pallet or other container of "direct mail" takes no time, or that platform congestion is not a significant problem in some mail processing facilities. That congestion, by the way, is caused by all mail, since both the working mail and the "direct" mail must cross the platform when it arrives and be staged on or near the platform prior to dispatch.

The intended meaning of the statement you quote is simply that the time used to cross-dock "direct" mail, both in work-hours and in elapsed time, is small compared with the much larger time taken by mail that requires handling bundle by bundle and piece by piece, sometimes in several iterations to achieve the required sort, and often involving substantial delays while the required sorting operation(s) are set up for the appropriate sorting scheme.

A corollary of this common sense observation is that if both the "working" mail and the "direct" mail are eventually to be dispatched on the same truck to the same destination, then it is the "working" mail that represents the "critical path" and therefore the major personnel scheduling problem in a processing facility.

a. See the general comments above regarding the intent of the statement you quote from my testimony. As to studies of the costs of crossdocking direct containers, what I do know is that there are two categories of data that often are used by the Postal Service in order to estimate costs of container operations. One of these has its origin in the science of industrial engineering and uses MTM (major time and motion) analysis which breaks down the individual movements involved in various repetitive tasks. MTM-based estimates are used in this docket at least in the testimonies of witnesses Crum (USPS-T-27) and Eggleston (USPS-T-26). particular, witness Crum uses some MTM standards in his estimates of savings produced when Periodicals and Standard A sacks and pallets bypass cross-docking in intermediate facilities due to mailer dropshipping. A broader set of MTM-related standards can be found in the so-called "planning guidelines," a copy of which is included in an attachment provided by witness Eggleston with her response to TW/USPS-T26-1d. I myself have used some of these standards, for example in testimonies supporting the establishment of a pallet discount in Dockets No. R87-1, R90-1 and MC91-3. See in particular my R87-1 rebuttal testimony (TW-RT-2, Ex. F).

The other set of standards, also frequently used by some Postal Service witnesses, originates with the R84-1 testimony of USPS witness Byrne (Docket No. R84-1, USPS-T-14) and is based on an analysis of processing rates at the San Francisco BMC and the Buffalo ASF.

b. The average length of travel for both cross-docked and "working" containers will vary with the layout of a particular facility. I don't believe one can make any general statement as to one being longer than the other. What can be said with certainty, however, is that once the "direct" container has been cross-docked, it is ready for dispatch as soon as the truck it will go on becomes available. For the mail in a "working" container, on the other hand, being brought to the opening unit is only the initial step in a process that may involve multiple handlings as well as long waiting periods. Mail with a particular presort may, for example, need to wait until the machine on which it will be sorted becomes available to do the particular sorting scheme that is appropriate for that mail. Regarding the total distance traversed

within a given facility, I believe it is obvious that the "working" mail will on average have traveled much further by the time it finally is ready for dispatch.

- c. I have seen mail staged almost everywhere in postal facilities, both on the platform and inside the building. Insufficient platform space is undoubtedly a serious problem in many facilities. It is a problem in BMC's, for example, because those facilities were built at a time when the Postal Service apparently was thinking only in terms of sacks and parcels on conveyor belts rather than modern containerization methods. A large part of the congestion on postal platforms is, in my observation, caused by empty equipment, including APC's, hampers, nutting trucks, BMC containers, etc. Empty equipment in a given facility is of course not caused by containerized "direct" mail that is just cross-docked through the particular facility.
- d. This question appears to need further specification. For example, what period of time does it refer to, and to what types of facilities? Further, does it refer to total platform area or the area that is available for staging of cross-docked containers? But whatever the question means, I believe the Postal Service itself would be in the best position to answer it.
 - In recent years there has been a substantial increase in dropshipping by mailers, which means that many "direct" containers now avoid cross-docking by being entered at their destinating facilities.
- e. Obviously, everything that comes across the platform in a mail processing facility adds to the congestion on that platform. I think it needs to be understood, however, that almost everything that arrives at and is dispatched from Postal Service platforms nowadays is in some kind of container. Even sacks, trays and parcels tend to be transported in containers such as hampers, APC's, BMC containers and postal paks. In my observation, only a small portion of these are "direct" containers, and as the "working" containers are emptied of their contents they tend to create a formidable "empty equipment" problem that causes congestion practically everywhere, not only on the platforms.

This fact is shown clearly by the IOCS data (USPS-LR-I-12), according to which mail processing employees spend about as much time handling empty containers as they spend handling containers with mail in them. According to the same data, there do not seem to be many "direct" containers, except for pallets, which the IOCS doesn't even call containers.

If the Postal Service believes Periodicals pallets in transit are the cause of crowded platform conditions, the best way to address this problem is stronger incentives for mailers to dropship pallets directly to the destinating facilities.¹

f. I am not sure that I understand this question. Forklifts are an integral part of modern material handling methods. They are used in mail processing facilities to move pallets, postal paks and other containers, across platforms as well as to a variety of other operations.

The question seems to assume, nonsensically in my opinion, that there would be fewer forklifts required, and less platform congestion, if pallets with high degree of presort, which can be cross-docked, were to be replaced with pallets of lower presort (e.g., ADC pallets), which need to be broken at an earlier stage and have their bundles sorted into postal containers such as postal paks and hampers.

I have however, tried to arrive at some idea of how much of forklift operator time might be spent on handling cross-docked pallets. This is possible because operations of mechanized forklifts can be identified on an IOCS tally from the Question 19 data. I found \$69.627 million (tally costs) of mechanized forklift operations in MODS facilities according to the FY98 IOCS. Of that amount, \$58.475 million was incurred by employees clocked into the Platform operation. Of the \$58.475 million, 61.9% was identified as "not handling." That is slightly less than

¹ In the mail flow models he uses to estimate processing cost avoidances under DSCF and DDU dropshipping, witness Crum uses industrial engineering productivity standards that assume ideal work conditions. Had he included a "congestion" component to represent the extra costs the Postal Service seems to believe are caused by cross-docked pallets, then the resulting dropship savings would no doubt be much larger. The same applies, of course, to the modified model for DDU dropship savings that I included in my present testimony. That is, in both instances, the costs avoided by drop shipping are understated.

the 64.2% not handling for all MODS platform costs. Of the rest, 9.4% is "direct" costs and 28.7% is "mixed mail" costs, including costs of empty equipment handling.²

In other words, the "direct" forklift costs are less than one fourth of the total forklift related handling costs. Of these direct forklift costs, 63% (or 5.9% of all forklift costs) represent pallet handling. Note that "direct" costs in IOCS refers to tallies where subclass could be identified by the IOCS clerk. That would include both "direct" and "working" pallets of flats bundles prepared by Periodicals and Standard A mailers, since subclass information is easy to extract from the placards that come with such pallets. The time spent by forklift drivers in cross-docking "direct" pallets is therefore only some subset of 5.9% of forklift driver time. I conclude that there simply is no basis for the theory that direct Periodicals pallets are major contributors to congestion on Postal Service platforms.³

² A tally represents operation of a mechanized forklift if it has a "T" in field F128 and a "B" in field F9212. See Exhibit 2 in my testimony. If there is an "A" in field F9212, the tally represents a manual forklift. Total manual forklift costs at MODS platforms were \$14.830 million, only 4% of which were "direct" costs.

³ Of the much larger "mixed mail" portion of forklift driver platform costs, only 21% represents pallet handling. The rest is for handling of various other container types, particularly postal paks and APC's.

USPS/TW-T1-2. On page 28 of your testimony, lines 13-16, you say that "What defines the time constraints, however, and requires initial bursts of activity to get the mail unloaded and started on its processing, and later more burst[s] of activity to meet dispatch schedules, is the 'working mail' that is separated from the direct mail in the opening units."

- a) Is it your contention that there would be no exigency to unload or load a truck that would only contain 'direct' containers of mail?
- b) Please reconcile your conclusion that working mail alone creates the bursts of activity on the platform with the testimony of witness Degen (USPS-T-16) at page 50, lines 11-12 where he describes the limited unloading and loading time required to keep the trucks on schedule.

<u>USPS/TW-T1-2</u>.

- a. No. However, the "exigency" would in many cases be substantially less.
- b. Witness Degen's testimony speaks for itself. It has always been my impression, however, that to the extent facilities do plan their processing schedules and their staffing requirements, the predominant driving need is the need to meet critical dispatches. Mail processing schedules essentially are based on working backwards from the critical dispatches and thereby determining when the different operations must start and the staff is required at each operation. Obviously, the more processing steps that need to be executed before the mail is ready for dispatch, the tighter is the available time-window between arrival and dispatch.¹

In 1973 I wrote a proposal on behalf of Universal Analytics Inc.(UAI), in response to a Postal Service request for proposal to develop a manpower staffing and scheduling program for an automated post office, as it was conceptualized at that time. I proposed to base this program on a "back loading" algorithm, which would start with critical dispatches and work backwards, attempting to meet all work scheduling requirements with the minimum manpower. UAI was granted the contract over several better known bidders, and I was told later that this was because it had been felt that the "back loading" concept came closest to the way that postal managers actually do determine their staffing needs. The program we developed (called first STAMPS and later MPCM) was never used for live scheduling, due at least in part to union concerns that it might lead to fewer jobs. However, since then I have talked to hundreds of postal managers at all levels and never been given any reason to doubt that critical dispatches in fact are what drives staffing requirements in mail processing facilities.

Your question appears to suggest, as does the referenced portion of Mr. Degen's testimony, that staffing requirements at postal platforms are based not on critical dispatch requirements but on the need to unload certain trucks as fast as possible so that they can get on their way to the next scheduled stop. I do not doubt that some trucks arriving at mail processing facilities need fast unloading in order to keep on schedule. The question is, however, whether a facility manager would plan extra staff to unload certain individual trucks faster if there were not also a need to get that mail into the processing stream. Obviously the need for fast unloading is not a determining factor for the many vehicles that bring collection mail to an SCF in the late afternoon or early evening. Nor do I believe it is a consideration when mailers bring in their drop-shipments. It might be a factor for some "star routes" that stop at multiple SCF's, but if there is only one truck at a given time that needs fast unloading, a small crew could empty the truck of mail (which doesn't take much time anyway when the mail is containerized) and then worry about getting it into the mailstream after the truck has gone.

James Barrier Land Committee Co.

USPS/TW-T1-3. If a forklift picks up a pallet and moves it from point A to point B, then returns to point A with nothing on its forks, what proportion of the time would that forklift driver be observed not-handling mail?

<u>USPS/TW-T1-3.</u> The answer to this question depends on several factors. For example, if points A and B are close, then the time spent lifting the pallet up and setting it down could be a substantial portion of the total time. This could occur if pallets have been staged near an SPBS and the forklift driver is moving the pallets from the staging area to a pallet dumper, or if pallets were previously staged for loading onto a given truck and the forklift driver is in the process of moving them from the staging area onto the truck, or if pallets are being unloaded from a truck and staged nearby.

In the case where pallets are moved by forklift over a substantial distance, the answer to your question would depend on how much the weight of the pallet affects the speed with which the forklift moves. That in turn would be affected by factors such as the degree of congestion when the move occurs, or whether the forklift driver is under some pressure, knowing that he has a number of other pallets to move, or instead, for example, he stops on the way back after setting down one pallet to chat with other employees.

USPS/TW-T1-4. If a platform worker is waiting for a truck, what portion of that waiting time would we expect to observe him/her handling mail?

<u>USPS/TW-T1-4</u>. That depends on what you mean by "waiting for a truck." If you mean that the platform worker is waiting for an already arrived truck to back all the way in to the platform, perhaps signaling to the driver when to stop, then one would not expect that worker to be handling any mail during that short period.

If, on the other hand, you refer to a situation where a truck is expected to arrive in about an hour, then one would hope that management has arranged for the workers to have something productive to do in the meantime. For example, they could work on the mail that came in on previous trucks, e.g., moving direct containers to their outbound trucks, sorting sacks and trays, moving the working mail to its respective opening units, dumping "working" sacks on opening belts, or doing other things that mailhandlers can do.

USPS/TW-T1-5. On page 29 of your testimony, lines 14-16, you say that "As illustrated above, 'allied' operations in MODS facilities incur very large 'not-handling' costs, in spite of being much less automated than the piece distribution operations they support."

- a) Please indicate the approximate amount of time that you believe workers clocked into platform operations should be observed not handling mail.
- b) What does being less automated than piece distribution operations have to do with the expected amount of not-handling time in platform and other allied operations?
- c) Do you mean to imply that allied operations have the same essential nature as piece sortation operations, except that they are less automated? If your answer is yes, please indicate the piece distribution counterpart to waiting for trucks.

USPS/TW-T1-5.

a. I don't understand what you mean by "should" in this context. Obviously, the percentage of not handling time indicated by IOCS data for MODS platforms (64.2% in FY98) is very high and should if possible be reduced through more efficient use of personnel.

It is also obvious that if facility management decides to keep a very large workforce on the platform in order to be prepared for any workload peak that might occur, then a lot of idle time will result in between peaks, and this will be reflected in IOCS samples as "not handling" time.

This is not necessarily wrong in all circumstances, since management may have good reasons to want to be able to meet all workload peaks without causing delays. Assume, for example, that a Postal Service study indicated that by doubling the staffing on MODS platforms, the overnight First Class delivery percentage could be raised from, say 95%, to 99.995%. Assume further that a survey indicated such a high reliability of First Class delivery would persuade many people to keep using letter mail rather than switch all their communications to the Internet. In such a hypothetical case, Postal Service management might be justified in deciding to "overstaff" in order to protect its First Class volume.

The problem is that current postal costing does not consider the impact management decision-making has on costs. An IOCS sample may record the fact that an employee was not handling mail. It may also record where he was at the time and what kind of other activity he may have been engaged in. It cannot, however, record that this employee was where he was because management wanted him there in order to be better prepared for workload peaks or other emergencies. Instead, IOCS attributes the cost of such not handling in proportion to direct costs based on an unverified and almost certainly incorrect proportionality assumption.

b. Let us start with the widely acknowledged fact that "not handling" time, as a percentage of total time spent by mail processing employees, has grown a great deal over the last 15 years. It is hard to escape the conclusion that this must have something to do with the switch to an automated environment. Indeed, Postal Service witnesses, among others, have argued all along that one should expect less direct handling and more "not handling" in an automated environment, where employees are more likely to be handling or monitoring equipment, rather than touching individual mail pieces. See, e.g., Docket No. R94-1, Tr. 1237-39 (responses of USPS witness Barker to questions at hearing from Chairman Gleiman).

This argument, however, implies that most not handling time should be found at the highly automated operations. Since platform employees have always had to "wait for trucks," one would not expect that particular form of not handling to take much more time than it used to.

Based on these considerations, I would have expected the increased "not handling" time to be concentrated in the most automated operations. That the opposite is true is to me an indication not of the predictable or necessary consequences of automation but of overstaffing and inefficiency in the allied operations.

c. I don't know what you mean by the "essential nature" of a mail processing operation. I believe I have made it very clear in my testimony in this docket as well as in Docket R97-1 that I consider allied operations to differ in many respects from operations that only sort pieces of a particular shape.

Of course, there are also many similarities and interrelationships between allied and piece sorting operations. Platform operations are perhaps the most distinct. In the major opening and pouching units, in my observation, most employee time is spent preparing mail for piece sorting, or preparing mail that has been piece sorted for dispatch or a subsequent piece sorting operation; many operations performed on letters and flats can be performed either at the piece sorting or opening unit operations. See USPS-ST-43 at 9 (Unger). It is unfortunate that insufficient information is available to determine exactly how much of the not handling and empty equipment time spent by opening unit personnel is related to letter, flats and parcel operations respectively. My testimony indicates what <u>can</u> be concluded about the shape affiliation of some allied not handling and empty container costs.

USPS/TW-T1-6. On page 29, lines 2-8, you say that "working mail' drives the need for high staffing levels in allied operations" and that "this mail is most responsible for the extensive amounts of 'not-handling'." Please specify the mail processing cost pools corresponding to your use of the term 'allied operations.'

<u>USPS/TW-T1-6.</u> See footnote 17 on page 21 in my testimony.

USPS/TW-T1-7. On page 29, lines 9-10, at the end of section C of your testimony, you say "These observations bear directly on the question of how to distribute allied 'not-handling' and 'mixed mail' costs." Please indicate how the observations you make in section C of your testimony bear on the issue of mixed mail costs.

<u>USPS/TW-T1-7.</u> See in particular the discussions on page 30, starting at line 16 though page 31, line 7, on page 34 at lines 3-9, and in section IV.F of my testimony.

USPS/TW-T1-8. On page 4, lines 3-6 of your testimony you say that "In visits to postal facilities in the preceding years I had become concerned that the rapid move to letter automation would lead to claims of great savings, which the Postal Service would only be able to justify by reporting higher costs for non-automated mail." Please list the changes that the Postal Service has made to the CRA methodology that have led to "reporting higher costs for non-automated mail." Please be specific with respect to the changes and your reasoning as to why each change has reduced the CRA costs for automated mail, while increasing the costs for non-automated mail.

<u>USPS/TW-T1-8.</u> See my testimony on Periodicals mail processing costs in Dockets No. R90-1, R94-1 and R97-1 as well as this docket, where I discuss these issues in greater detail than is possible here.

To summarize, the Postal Service did not need to change its CRA method in order for this effect to occur. All it had to do was to demand that facility managers demonstrate savings from the automated equipment they were receiving. Managers knew that to do so they would need to reduce the manhours spent sorting letters, a task made easy by the order of magnitudes increase in sorting speed provided by the new equipment. At the same time, however, managers did not want to give up any more staff than necessary, which is understandable because having more staff enables a facility to respond better to unusually heavy volumes or other emergencies. Also, excess staffing makes life easier for managers, who do not have to plan staffing schedules within constraints as tight, or urge their workers to work as hard, as they otherwise would have to do. Employees no longer needed for letter mail sorting were therefore assigned to other operations, including flat sorting and in particular opening units where productivity normally is not monitored.

Between FY86 and FY89, when the first big push towards automation of letter sorting occurred, the total USPS work force grew right along with claims that automation was producing savings. In that period, Periodicals costs grew by leaps and bounds, as demonstrated in my testimony (see Exhibit 1). Then in the summer of 1989 a hiring freeze was imposed. The growth in Periodicals processing costs gradually slowed in the next few years and the costs actually dipped downward in FY92. But they resumed

growing in FY93 and have continued to grow in excess of general inflation and increases in mailhandler wages ever since. Periodicals costs never recovered from the huge increase that occurred between FY86 and FY90.

As a result of these developments, the Postal Service appears to have been saddled with huge inefficiencies in some of its manual operations, particularly manual opening units where a lot of time appears to be wasted; at least that was the impression shared by industry members of the Periodicals review team. The IOCS reflects this inefficiency as large amounts of "not handling" time, both at platforms and in opening units.

When I say that there was no need to change the CRA in order to achieve the effect described, I am referring particularly to the various proportionality assumptions imbedded in the IOCS, whether it is interpreted through the previous LIOCATT program or the new MODS-based cost distribution program introduced in Docket No. R97-1. These proportionality assumptions practically guarantee that mail which incurs large direct handling costs also will be charged with large "not handling" costs, even though the growth in not handling costs may have been caused by the mail whose direct costs went down as a result of automation. The introduction of MODS-based costing in R97-1, while it did not cause this effect, has only magnified it.

DECLARATION

I, Halstein Stralberg, declare under penalty of perjury that the foregoing answers to interrogatories are true and correct, to the best of my knowledge, information and belief.

Date:

June 16, 2000

CERTIFICATE OF SERVICE

I hereby certify that I have this date served the foregoing document in accordance with sections 12, 25(a), and 26(a) of the Rules of Practice.

Timothy L. Keegan

June 16, 2000