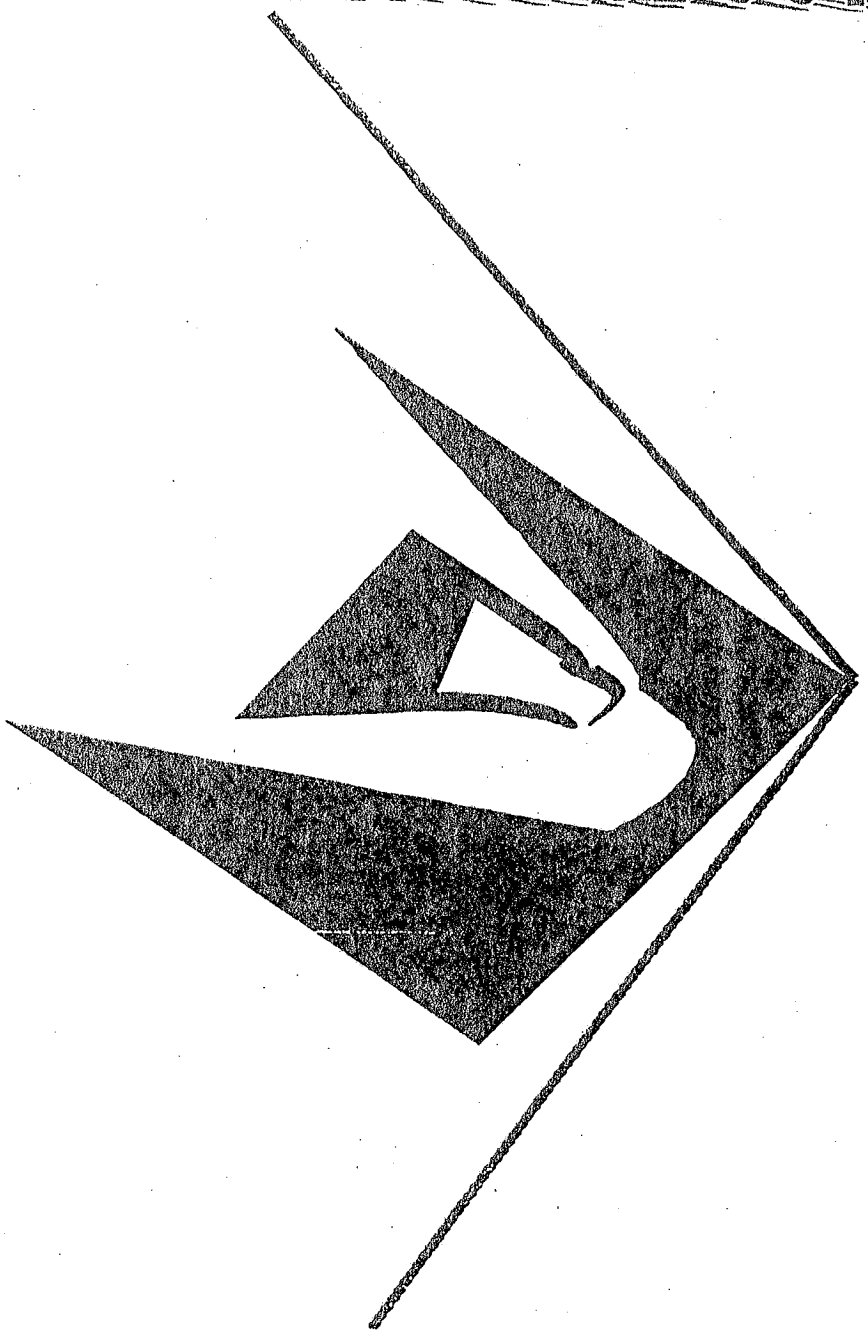
BREAKTHROUGH PRODUCTIVITY



Distribution Operations Performance Improvement Guide

Letter Mail

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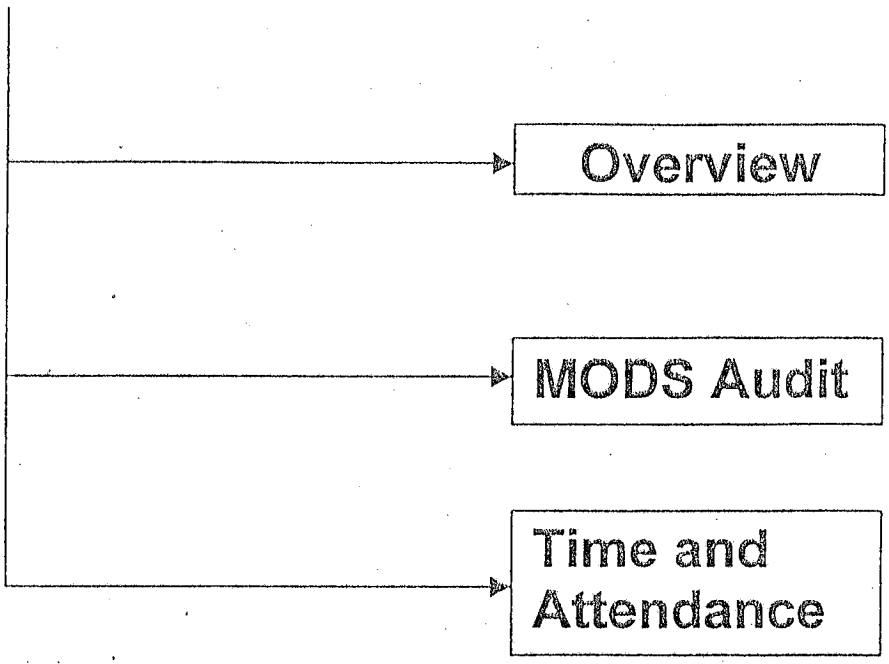
1.0 Data Validation



1.1 Overview

Reliable data is a key ingredient for effective decision making and is also vital to measuring performance and gauging the overall success of an organization. Properly recording employee clock rings and mail volumes into the correct operations provides valuable indicators that can be used for performance measurement, tracking, and planning.

A MODS audit, as well as a Time and Attendance review, as described in handbooks M-32 and F-22, should be conducted within each facility to ensure the accuracy of volume and work hour recording. Once the audits and corrective actions have been completed, you can now determine the true performance of a given operation(s).

The cornerstone of Breakthrough Productivity is DATA INTEGRITY. Before attempting to analyze or determine root causes for any operation, please assure the data you use is accurate and reliable.

1.2 MODS Audit

The purpose of conducting a MODS Audit is to verify system-reporting accuracy.

A MODS Audit is a system review of the Management Operating Data System for compliance and accuracy in reporting procedures.

- The review covers all phases and requirements of the MOD System.
- The review lasts at least one week covering all tours and all days of the week.
- The review checks the accuracy of scales and all volume recording equipment.
- A spot check of tare weights is conducted.
- Inventory procedures are monitored for accuracy.
- Weighing procedures are monitored for proper volume recording.
- Operational reporting is verified for accuracy.
- Work hour reporting is verified for accuracy.
- Procedures for generating a mailflow density matrix are reviewed.
- A report is submitted to the Plant Manager no later than one week after the review is completed.

TRAINING OFFERED CRAFT 500 MDO

SCALES TIME KEEPING PIMS EOR

Recommendations for correction are included with the findings where appropriate.

1.2.3 When to Conduct a MODS Audit

MODS Audits are required to be conducted at least once per year.

A MODS Audit should be conducted whenever the following occurs:

- A major shift or change in volume
- A major increase or decrease in work hour reporting
- A major increase or decrease in productivity
- Changes in mail flow or equipment

MODS Audits

7-1 Objectives

Each MODS office must conduct a MODS System review at least once each year. The review covers all phases and requirements of the MODS System and helps to determine the accuracy of MODS reporting procedures. All review team members must be familiar with MODS, and the team leader must have a good working knowledge of the system. Ideally, team members will be from another facility. Each office may perform a self-review periodically to ensure that everyone is using proper procedures and collecting accurate information.

7-2 Review Requirements

The review lasts at least one week, from MOD tour 2, Saturday, through MOD tour 1, Friday. On each tour the team must observe the scales and verification process at least part time and for at least four days. The team also must observe operations and make Time and Attendance checks for at least three days.

The review team leader gives the plant manager a report identifying all deficiencies and requesting corrective action. Except when indicated, the review team performs the procedures described in this chapter.

7-3 Review Procedures

7-3.1 Ensure Proper Condition of all Volume Recording Equipment

During the week before the review, the team leader must ensure that floor scales are calibrated to zero. Verify that all equipment is maintained and repaired in a timely manner.

7-3.2 Spot-check Tare Weights

To verify that the tare weight is clearly and conspicuously marked on all rolling stock equipment for transporting mail to distribution operations, spot-check the tare weights of mail transport equipment.

7-3.3 Analyze and Verify Accuracy of Reports

Verify that MOD System reports are retained as required.

7-3.4 Productivity Reports

- To analyze productivity, use the Mail Processing Operating Report. Compare productivity for the review period (day, week, or AP) with productivity for similar prior periods.

7-3.5 Trend Analysis Report

- To observe productivity trends, use the Volume/Hours Comparison Report and the Trend Analysis Report. Identify operations that show a significant change in productivity and do not show probable causes for the change.

7-3.6 Mail Volume Adjustment Report

- For PSDS offices, the Plant Manager (or designee) must review the Mail Volume Adjustment Report, which lists volume transactions and adjustments. Determine the justification of volume adjustments (TR A-1).
- Verify documentation for all transactor volume entries, using either Form 1476D MOD Worksheet for Mail Volume Adjustments or locally designed volume forms.
- Verify the accuracy of transactor inputs (TR7) of volumes that are normally weighed—mail from preparation and opening units—and identify the reason for transactor entry.

7-3.7 MODS Daily Detail Listing

- To verify that volume was recorded correctly (particularly withdrawal transactions), use the Daily Detail Listing Report provided each day by the PSDS Data Collection Site. This report lists all volume entries from scales and transactors.

- Verify that all volume withdrawn from an operation to another operation is entered in this report.
- To correct duplicate volume transactions, verify the use of a TR A-1 entry.

7-3.8 Verify the Entry of Planned Hours

- Verify that planned hours have been entered by labor distribution code (TR A-6) by week in each accounting period since the last review.

7-3.9 Ensure Proper Inventory Procedures

- Ensure that inventory procedures are observed and verify the following:
- that volumes and mail types are stated correctly with inventoried mail at the end of each MOD day—or at the end of each tour if the office is tour reporting
- that type and origin correctly identify the inventoried volumes for each distribution operation with mail volume on hand
- that first and subsequent handling pieces, preferential and standard volumes, and machineable and non-machineable mail volumes are inventoried separately

7-3.10 Verify Proper Volume Reporting Procedures

- Verify that employees observe all volume recording procedures. These are the requirements for the review team:
- Monitor scale transaction at the floor scales for proper recording procedures. The mail processing employee identifies the originating and designating operation numbers, mail type, source type, containers, transport equipment, and tare weight. Preferential, Standard, and machineable and non-machineable letters and flats are weighed separately.

- Verify that the mail-processing employee identifies the correct source type.
- Verify that all volumes are recorded into distribution operations.
- Verify that all operation numbers used for activities in the office conform to the operation number definitions in Appendix A.
- Verify that workload units are entered for all work credit operations used by the office. Also, verify that data collection, conversion factors and workload unit recording procedures meet all requirements.
- Verify that letter, flat, priority, and parcel post volumes are identified and entered by source type code as required.
- Verify that all volume withdrawn from an operation to another operation is entered in this report.
- To correct duplicate volume transactions, verify the use of a TR A-1 entry.

7-3.11 Verify Proper Procedures for Generating Mail Flow Density Matrix

- The Mail Flow Density Matrix Report reflects all the mail flow densities entered for the office. The report is produced at the beginning of each accounting period. The plant manager (or designee) must approve the mail flow matrix every six months or whenever there is a significant change in mail flow pattern. Mail flow densities must be updated every six months. Verify the following: that methods for generating densities for all operations are based on sound statistical sampling or actual mail counts, that all required densities have been entered for all operations used by the office, that proportions of mail by station have been obtained, that carrier mail has been entered by station and total station box to establish the 777/778 proportion file.

7-3.12 Verify Correct Workhour Reporting Procedures

- Determine whether employees are clocked into the operation in which they are working. To identify employees clocked into an operation, use either PSDS or ETC/TACS. If it is not possible to resolve differences between employee, badge card, and inquiry listings, use employee inquiries to check the employee clock rings in question.

7-3.13 Operations

- Verify that hours for automation and mechanization operations are being recorded properly. Ensure that employees are charged to the correct operation, especially when additional temporary help is being used for dispatches or for final closeout. All allied labor hours must be charged to the correct manual, mechanization, or automation distribution operation.

7-3.14 Adjustments

- Verify that adjustments are properly made.

7-3.15 Unassigned or Invalid Operation Numbers

- Verify that adjustments are made to transfer all MODS hours that have accumulated in operation 999 for unassigned or invalid operation numbers.

7-3.16 Workhours Transfer Report

- The workhour transfer report is a list of all TR A-4 entries. The plant manager (or designee) must approve hours that have been transferred. Use workhour transfer entries sparingly—never to control productivity or instead of normal employee clock rings.

7-3.17 Overtime

- Verify that overtime hours are accumulated so that total MODS overtime hours can be reconciled with paid overtime hours within a tolerance of 5% per pay period. To enter overtime resulting from TR 6 entries or forced by the time and attendance system, use the overtime adjustment transaction TR7-9.

7-3.18 Verify Proper Mechanization Automation

- Verify the following:

  That a scheme recycle rate and machine mishandling rate have been entered for each mechanization and automation operation used in the office (These rates must agree with the most recent distribution quality tests conducted by the Quality Control Office.) that at least one runtime transaction and one downtime transaction have been entered for each machine the office used on any day in which total piece handling is reported that unique machine identification numbers are assigned to equipment in each group as required.

7-3.19 Review Report

- The review team leader must submit a report to the plant manager no later than one week after completing the review. The report must identify: all findings the cause of each discrepancy recommended corrective action.

7-3.20 Corrective Action

- Initiate corrective action promptly. Conduct follow-up monitoring to ensure that actions to correct all discrepancies are implemented. The plant manager is responsible for ensuring that timely corrections are made.

Reference: Handbook M-32, Management Operating Data System (MODS) Chapter 7

1.3 Time and Attendance Responsibilities

Summarized

1. **Supervisor Responsibilities**
   a. Control employee access to badge card/time card.
   b. Make certain employee's clock in and out according to assignment.
   c. Certify all daily clock rings.
   d. Certify all daily time and attendance reports for their employees.
   e. Process all temporary schedule changes.
   f. Complete supporting documentation (forms) as required by USPS policy and procedures.

2. **Employee Responsibilities**
   a. All employees are required to use time recording devices daily, if available.
   b. All employees must enter the four basic clock rings and the required move rings in the proper sequence by correct operation number. This will allow for the calculation of the elapsed time by operation.
   c. All employees must adhere to their assigned schedules and operation number assignments.

3. **Timekeeper Responsibilities**
   a. Rack badge cards for use by the employees.
   b. Correct and adjust daily and weekly reports
   c. Record scheduled and non-scheduled absences.
   d. Make leave entries for employees.
   e. Maintain files or forms that support time and attendance entries.
   f. Assist the supervisor in obtaining employee inquiry reports as necessary.
   g. Assist in the preparation of time and attendance adjustments as necessary.

4. **Badge Card Handling**

   a. Employees are authorized only one badge card.

   b. Employees are permitted access to their badge card up to a maximum of five minutes before their scheduled start time.

   c. Employees must make their own four basic clock rings. The employees' supervisor may make move rings to change the operation number assignment.

   d. Employees are not permitted to retain their badge card after clocking in or out. After clocking in, the badge card must remain in the badge card rack. At the employee's tour the badge card must be placed in the designated out box.

TIME AND ATTENDANCE INQUIRIES

(PSDS System)

The purpose of the Postal Source Data System's (PSDS) time and attendance reports is to provide management with the assurance that employees are clocked into the system properly. The PSDS system can be inquired by transactions (TR) 76 and 81 to determine which employees are on the clock on a specified operation number. The time and attendance inquiries must be made at least once every six weeks for all pay locations/work locations.

1.3.1 Data Retrieval

- TR 76 and 81 may be input on any transactor by setting the screen as shown in the attached exhibits.

1.3.2 Availability of Data

- When inquiries are made only clock rings and related transactions not transferred to off-line processing are available.
- Inquiries can be made for the current day only. The system permits inquiry time of 0001 through the current time.
- The TR 81 inquiry will capture all on-line clock rings for a specific employee for the current day.
- The TR 76 is utilized as shown in exhibit 6-5.

1.3.3 Types of Attendance Inquiries

- Attendance inquiries by operation number show all employees on the clock on a specified operation at a specified time or for the entire day. (TR 76)
- Attendance inquiries by pay location identify employees on the clock in a specified pay location at a specified time. (TR 76)
- Attendance inquiries by employee ID list the clock rings and related authorization presently on-line for a specific employee at the time of the inquiry. (TR 81)

EMPLOYEE ATTENDANCE INQUIRIES

(Instructions)

According to Handbook F-22, Time and Attendance Procedures, the supervisor is responsible for controlling employee access to badges, making certain that employee's clock in and out according to their schedule and work assignment. Supervisors must ensure employees are clocked into the operation they are working in order for MODS work hour data to be as accurate as possible. Scheduled Attendance Inquiries are a required audit process to ensure the accuracy of the employee's daily clock rings.

- Create a reporting structure for managing the employee inquiry process. Designate a control point to:

- Select the operation numbers to be reviewed. The selected operations should be inquired at least once per tour.

- Randomly select an inquiry time for each tour of duty and make the inquiry request to the timekeeping unit.

- Notify all supervisors in charge of the selected operations of the review no more than five minutes before the inquiry time.

- Supervisors in charge of the selected operations will record all employee badge cards racked for the operation and submit the list to the designated control point.

- The designated control point will collect the inquiry from the timekeeping unit and compare the list of employees with the list received from the supervisors.

- Employees not on the inquiry, but on the supervisor's list will require an interview of the employee ID to resolve the discrepancy.

- Employees on the inquiry, but not on the supervisor's list will require an interview of the employee by his/hers for resolution.

- The results from all inquiries conducted should be consolidated on the accounting period report and reviewed by a designated official.

Exhibit 6-5 PSDS Time & Attendance

TR 76 Attendance Inquiry by Operation Number
TR 76 Attendance Inquiry by Pay Location
Text References 633.3, 634.3

TR CD	TIME	PAY LOC/ OPN CODE	INQUIRY TYPE	DPP
76	XX.XX	XXX	X	XX

TIME

Enter the time for which the inquiry is specified. Rings made after this time will not be shown.

PAY LOC/OPN CODE

Enter the pay location or operation number against which the inquiry will be run.

INQUIRY TYPE

0 = inquiry by operation number
9 = inquiry by pay location

DPP

Enter the current day of the pay period.

Note: Used by Postal Inspectors, Postal Systems Examiners, and supervisors to obtain a list of employees charged to a particular operation or assigned to a particular pay location at a specified time. This transaction is used to verify attendance and labor distribution.

Exhibit 6-6
Attendance Inquiry by Operation Number Report
Text References 633.1

PO CHICAGO BMC OPN 033 ATTENDANCE INQUIRY BY OPERATION NUMBER
REPORT NO. DP210-03 NO RETENTION REQUIRED
15 MINUTE CUTOFF TIME 1023

EMPLOYEE NAME MACH	SSN	DPP	RING	TR	TIME	OPN	SDO	P/L	TIME	F/NUM*LDC(B)
XXXXXXXXXX, XX 1001	123-45-6789	06		76	1000	(A)	1-2	123	1014	REQUESTER
XXXXXXX, XX 6012	234-56-7890	06	MV	34	0648		1-2	234		
XXXXXXXX, XX 6206	345-67-8900	06	BT	31	0999		2-3	345		

(A) Sorted and listed by operation number.
(B) The authorized employee who requested the inquiry.

Exhibit 6-8
TR 81, Attendance Inquiry by Employee ID Number
Text References 635.1

TR CD **EMPLOYEE ID NUMBER**
XXX-XX-XXXX

EMPLOYEE ID NUMBER

The employee ID number against which the inquiry will be run.

Note: Used to obtain a list of current day transactions for an employee.

Exhibit 6-9
Attendance Inquiry by Employee ID Report
Text References 635.3

PO Chicago BMC OPN 203 ATTENDANCE INQUIRY BY EMPLOYEE ID NUMBER
Report No DP210-03 NO RETENTION REQUIRED

15 MINUTE CUTOFF TIME 1023 DPP 06 PP22 10/09/80

-EMPLOYEE NAME- MACH	SSN	DPP	RING	TR	TIME	OPN	SDO	PL	TIME	AUTH/RTE F/NUM*LDC
SMITH, JOHN 1001	123-45-6789	06		81			1-2	203	1014	REQUESTER
DOE, JANE 6006	234-56-6789	06	BT	31	0648	351	1-2	203		
6106		06	OL	32	0999	044				
(A) 6008		06	IL	33	2321	160				
6010		06	ET	35	0851	175				
1015		06	H/L	24	00	0600	06		0999	666-55-4444
(B) 1018		07	OV/TIME	29	12	0650	01		1451	999-88-7777
1017		10	LEAVE	201	g	0650	00		0791	888-77-6666
1017		11	LEAVE	201	g	0650	00		0791	888-77-6666
1017		12	LEAVE	201	g	0650	00		0791	888-77-6666

(A) All clock rings currently on-line.
(B) Authorizations entered for future days.

TIME AND ATTENDANCE INQUIRIES

(ETC SYSTEM)

The purpose of the Electronic Time Clock's (ETC) time and attendance reports are to provide management with the assurance that employees are clocked into the system properly. The ETC system can be inquired through the report option to determine which employees are on the clock on a specified operation number. The time and attendance inquiries must be made at least once every 6 weeks for all pay locations/work locations.

Data Retrieval:

The report is obtained by accessing the Reporting Menu screen and selecting option (A) EMP'S ON THE CLOCK as shown in the attached exhibits.

Availability of Data:

Inquiries are available for the current day and any prior day before the rings are archived. Rings are automatically archived after each week for three years.

Types of Attendance Inquiries:

The ETC report function generate attendance inquiry reports by finance number, pay location, operation number, and date and time. The report lists all available employees on the clock for the specified finance number, pay location, operation, date number, and time.

Employee Attendance Inquiry

Date: _____ Time: _____ Operation Number: _____

Supervisor: _____

List Employees who have badge cards in rack:

	Employees' Name	Last 4 numbers of SSN	Is Employee listed on the time and attendance inquiry? Yes	No
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				
		Totals:		

Date completed: _____

Completed by: _____

Time Returned: _____

List any Employees on inquiry that was not on the badge card rack list

	Employees' Name	Last 4 numbers SSN
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Summary		Percent
1. Number of Employees that match the time & attendance inquiry:	_____	_____%
2. Number of Employees that do not match the time & attendance inquiry:	_____	_____%
3. Number of Employees on time & attendance inquiry but not on badge rack list:	_____	_____%
Totals:	_____	100%

Describe action taken on discrepancies:

_____

_____

_____

_____

_____

_____

_____

_____

EMPLOYEE INQUIRY WORKSHEET

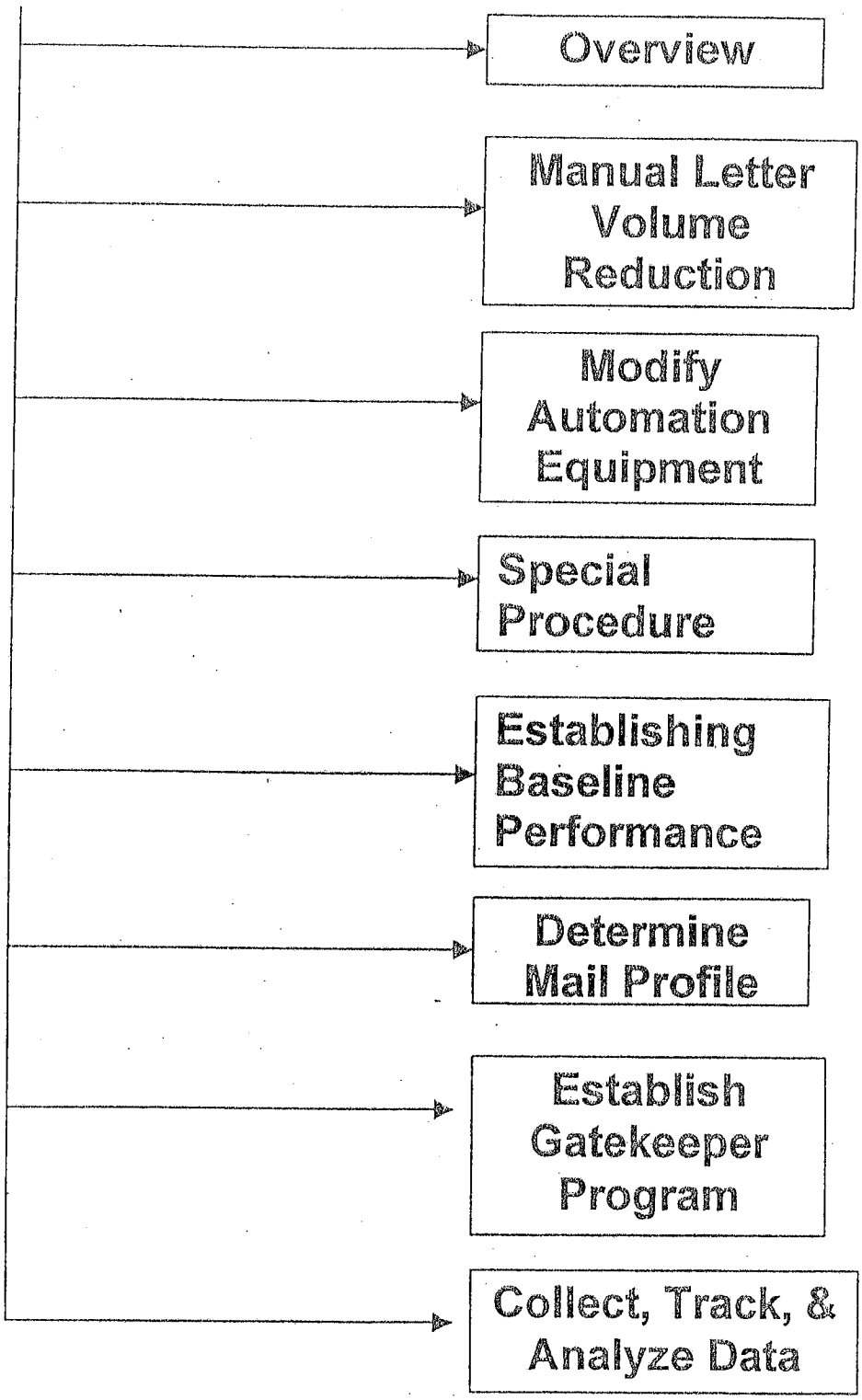
PLANT NAME: _____ DATE: _____

Date of Inquiry: _____ Time of Inquiry: _____ Operation Number of Inquiry: _____

	Pay Loc	Name	Last 4-Digit of SSN	Supervisor's Name
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				

List all Employees in the designated operation at inquiry time and submit to office.

2.0 Improving Letter Mail Operations



2.1 Overview

USPS Operations managers have a continuous balancing act that they must maintain in order to meet their service and performance goals. In general, Mail Processing managers have responded well in their adherence to making their Operating Plans. This is particularly true for First Class Mail commitments, but becomes considerably more of a gray area when it comes to Standard and Periodical commitments. Clearly, the mail arrival profile and the measurement systems for these different mail types are contributing factors to the way these volumes are handled. Historically, managers take whatever actions are locally deemed necessary to process and dispatch their facility's daily mail volumes, and often times, these actions result in a loss of efficiency. Consistency in mail flows, from the opening units to the dispatch operations, should be an integral part of a manager's planning process. Clearly defined distinctions between committed and non-committed volumes, as well as, updated and accurate Operating Plans for all mail types are required for this consistency.

In today's Mail Processing environment where continuous improvement to our automation technology should require less and less manual labor, it is important to be aware of and understand the changes that take place along with the improvements. Automated and mechanized systems enhancements have enabled the USPS to produce better planning tools and performance. But systemically, manual operations continue to present more of a challenge in the way of their managerial skills. Managing people to be as efficient and productive as they can be remains to be the most challenging aspect of this business.

Since manual letter mail operations have the highest associated labor cost per piece, it makes good sense to target these operations as the first area of opportunity. The current (FY 2000 AP 8 YTD) cost per thousand pieces processed in manual operations is $67.44, while the cost of processing a thousand pieces through automation is $4.31.

The process to improve the productivity and overall efficiency of letter operations includes several key areas of focus:

- Better mail flow management
- Reducing the amount letter mail processed in manual operations
- Improving the work methods of distribution clerks and mail processors
- Adjusting the work hours appropriate to the workload

2.2 Letter Volume Reduction Process

2.2.1 Objective

- The overall objective of this process is to enable Mail Processing Facilities to reduce their manual letter volume and the associated labor cost, which consequently, results in the overall improved productivity performance of the facility.
- With specific modifications to the MLOCR/ISS and the MPBCR/OSS, along with the use of a "*gatekeeper*" like position at the entry area of the manual operation, potential automation mail is identified, separated/culled, and forwarded to the more efficient operating mode.

2.2.2 Requirements

- The following processes are required for this productivity improvement initiative:

⇨ Modify the MLOCR/ISS and MPBCR/OSS

⇨ Check for required special procedures

⇨ Establish baseline performance in both Automation and Manual Distribution Operations

⇨ Determine the mail profile by conducting letter sampling

⇨ Establish "gatekeeper" like position at manual letter operations

⇨ Collect, track, and analyze data

⇨ Take action to correct improper mail flows and handling

⇨ Reduce or reposition staffing to realize improved productivity

2.3 Modify Automation Equipment

1. **Modify automation equipment** to process manual mail.
   - Modifications to the MLOCR/ISS and MPBCR/OSS will be necessary in order to process specific thick and flimsy mail pieces. (See Appendix for work orders)
     a. MLOCR-A*/ISS & MLOCR-B/ISS Manual Mail/Jam Reduction Modification
        - Modification Work Order No. MWO-023-99 (Bulky)
     b. MLOCR-A*/ISS & MLOCR-B/ISS Spring Loaded Roller Modification
        - Modification Work Order No. NYMA 00-SLR (Chunky)
   - To obtain the total benefits of these modifications, the Manual Mail/Jam Reduction modification must be completed in conjunction with the Spring Loaded Roller modification. The modifications include mechanical changes, replacements and adjustment/alignment changes to the sorter of the MLOCR/ISS and, the feeder, reader, and sorter of the MPBCR/OSS.

   - These modifications will allow automation processing of mail pieces that are considered manual mail pieces. These mail pieces have the following characteristics:

     - Flimsy
     - Thin and light books
     - Hard/Non-bendable & bendable
     - Small newspapers
     - Thick (up to 5/8")

Mail Flows for Processing Manual Mail on Modified MLOCR/ISS & MPBCR/OSS

Mail Type	Flow →	→	→
Flimsy Thin Books Hard/Non-bendable Newspapers Thick	→	MPBCR/OSS with Chunky Modification	
Thin Books (Untabbed)	→	Tabbing Machine	→ MLOCR/ISS with Chunky & Bulky Modification
Bulky (Untabbed) & Noise in Clear Zone	→	Tabbing Machine	→ LMLM ↓ MLOCR/ISS with Bulky & Chunky Modification
AFCS Culled Rejects	→	MLOCR/ISS w/Bulky & Chunky Modification →	MPBCR/OSS w/Chunky Modification
Thin Folded Letters (Bar-coded)	→	Tabbing Machine →	MPBCR/OSS w/Chunky Modification
Thin Folded Letters (Non-Bar-coded)	→	Tabbing Machine →	MLOCR/ISS with Bulky & Chunky Modification ↓ MPBCR/OSS w/Chunky Modification

2.4 Special Procedure

- Review the feasibility of using a tabbing machine for the purpose of tabbing folded mail pieces. Folded mail pieces that require a center or leading edge tab contribute significantly to the jam rate on automation, as well as, result in damaged mail. Develop a cost justification based on the amount of candidate mail for the tabbing machine. For example:

  - The cost of manually distributing 30,000 mail pieces one time at 500 PPH at a $25 work hour rate equals $1,500. (A secondary handling will minimally double the cost to $3,000 daily or $906,000 annually)

  - The cost of processing 30,000 tabbed mail pieces on automation one time at approximately 10,800 PPH at a $25 work hour rate equals $69. (A secondary handling will minimally double the cost to $138 daily or $41,676 annually)

  - The annualized cost variance of handling the mail on automation versus manual distribution equals $864,324 (Calculated using 302 processing days).

  - The approximate cost of processing the 30,000 pieces on the tabbing machine at the rate 7,500 PPH, at a $25 work hour rate, equals $100 or $30,200 annually.

  - Using $125,000 as the total purchase and installation cost of the tabbing machine, the annualized savings are calculated as follows:

Labor Cost	Current	Proposed	Variance
Manual	$864,324		
Automation		$ 41,676	
Tabbing		$ 30,200	
Total	**$864,324**	**$ 71,876**	**$792,448**
Cost of Tabbing Machine		$125,000	

Total Cost	**$864,324**	**$196,876**	**$667,448**

- Savings based on processing of 30,000 average daily pieces on tabbing machine and automation versus distributing in manual operations is realized in 48 processing days.

(See appendix for detailed information on procurement of tabbing machine and USPS policy on tabbing mail)

ISS IMAGE BINS
5D 503
5D 500-502
ALL OTHER

LOOP: RTS
ISS
VERIFIER OFF
BC READER OFF
LMLM BACK

2.5 Establishing Baseline Performance

Establish the baseline performance of all manual letter distribution operations of the processing facility. This includes:

030
040
043
044
150
160

- Conduct a MODS Audit for compliance and accuracy in volume recording procedures. If the audit proves successful and the workload accreditation to manual letter operations is accurate, then First Handling Piece (FHP) and Total Pieces Handled (TPH) volumes from daily Management Operating Data Systems (MODS) may be used to calculate the percentage of manual letter volume to the facility's total letter volume. (See MODS Handbook M-32 Chapter 6.).
  - %FHP = FHP Manual Letters divided by FHP Total Letters (Automated, mechanized, and Manual
  - %TPH = TPH Manual Letters divided by TPH Total Letters (Automated, mechanized, and Manual

If MODS data is skeptical or data integrity is questionable, then manual hourly volume counts for the manual operations are recommended for a period of not less than one MODS week to determine the actual workload. This process should not replace the required MODS Audit. (See MODS Handbook M-32 Chapter 7)

Assure proper handling of mails on MLOCR/ISS, AFCS/ISS, and MPBCS/OSS for proper mail flows to downstream manual operations. The enhancements to automated processing equipment have changed mail flows over the years. Training on the basic ways mailflow has changed is necessary for optimal handling efficiency. Some of the ways mailflow has changed is as follows:

- The processing of non-readable mail on automation LOOP ; RTS
- Flowing script mail from an AFCS Input Subsystem (ISS) to an Output System (OSS) LIFT ALL
- Separating up to 7 stackers of 5-Digit bar-coded mail on MLA* and MLB ISS
- Staging and holding non-readable and 5-Digit mail for OSS processing

- Flows involving the Letter Mail Labeling Machine (LMLM)
- Flows involving the Special Sort Stackers from the MLOCR/ISS and MPBCS/OSS

For detailed instructional, see appendix – *Managing Technology in Automated Letter Mail Operations*

OPENING UNIT

RUN ALL KICK OUT BEFORE 525 ARRIVES

TRAY MANAGEMENT (TAKE AWAY)

FROM ISS (AFCS : MLOCR) TO DBCS / OSS

LIFT ALL IF AFCS WILL NOT CLEAR By 9:30

ASSIGN:
ONE PERSON TO LMLM
ONE PERSON TO TABBER
ONE PERSON TO MAILFLOW

500 - 503 = 15
503 = 12
504, 6, 7 = 16
CR =
505 = 4
585 = 4

2.6 Determine the Mail Profile

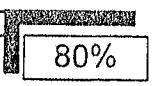
Determine the mail profile for automation operations. Ensure thresholds for the following are at acceptable levels:

- ⇨ Special sort stackers are at acceptable performance level and flowed correctly
- ⇨ ID tag error rate is at or below 5% level
- ⇨ AFCS Bypass rate is at or below 3% level
- ⇨ Return-to-Sender mail is processed on automation
- ⇨ All other system leakage
- ⇨ Sort programs are updated and accurate
- ⇨ Proper labeling of trays and containers
- ⇨ Letter mail hierarchy

Determine the mail profile for all manual operations, beginning with the Manual Outgoing Primary operation. This process includes the following:

- Perform a letter sampling to determine the amount (%) of each potential automation mail type arriving at the manual operation. (attachment A)
- Chart the identified mail types in order to establish the contribution level of each mail type to the total candidate volume.
- (See example below)

Mail Type	*% of Total Samples*
Folded (Largely Tri-fold)	*40%*
Extremely Flimsy	*12%*
Hard & Bendable	*10%*
Clear Zone Contains Noise	*10%*
Thin & Light Books	*8%*
Glossy/Shiny Paper	*3%*
Contains Compact Disc (CD)	*3%*
Poly-wrapped	*3%*
Hard, Not Bendable	*2%*
Small Newspapers	*2%*
Return to Sender	*1%*
Postnet Barcode	*1%*
Eligible Address	*<1%*
ID Tag Error	*<1%*
Damaged Mail	*<1%*



2.6.1 Letter Mail Sampling Procedures

Sample the letter at the staging area of the manual operation using random sampling methods for a period of five days.

- Each tray of mail should be sampled as follows -
  - Take five pieces of mail from the front, center and back of each tray
  - Determine the characteristics of each piece using the guidelines for machineable mail
  - Enter the result in the appropriate place on the tracking form
  - At the end of the period -
  - Total all pieces sampled = Total Pieces
  - Total all pieces in the machine categories = Machineable Pieces
  - Divide Machineable Pieces by Total Pieces = %Machineable
  - The last calculation represents the percentage of machineable pieces in the manual operation.

2.6.2 Mail Piece Specifications

Automation Dimensions

MLOCR-A/ISS & MLOCR-B/ISS (Without Manual Mail/Jam Reduction Modification)

- Height - minimum is 3 1/2" and maximum is 6 1/8"
- Length - minimum is 5" and maximum is 11 ½"
- Thickness – minimum is .007 and maximum is ¼"
- Weight – maximum is 2.5 oz. (Zip+4) 3 oz. (Bar-coded)

MLOCR-A/ISS & MLOCR-B/ISS Manual Mail/Jam Reduction Modifications (Bulky & Chunky)

- Height – minimum is 3 ½" and maximum is 6 ½"
- Length – minimum is 5" and maximum is 11 ¼"
- Thickness (Bulky) – minimum is .007" and maximum is 7/16
- Thickness (Chunky) – minimum is .007" and maximum is 5/8"

See Appendix –Publication 25 Pages 7-27 (Letter Mail Design Specifications & Templates

2.7 Establish "Gatekeeper" Process

Establish and train a "Gatekeeper" like position on the distinct differences of automation candidate mail pieces and their most efficient processing modes. The training includes how to identify potential automation letter volume that arrives at manual operations and where that volume should be processed. This key individual is then given instruction on how to separate, containerize, and forward the mail to its proper distribution operation. In-Plant Support must be instrumental in the training required to identify the distinctions of manual and automation mail types and their proper processing modes. The use of templates and descriptions that include mail piece dimensions and characteristics are recommended for visual display in the mail staging area of the manual operations.

2.7.1 Defining Roles and Responsibilities for the Manual Letter Volume Reduction Process

1. "Gatekeeper"

This key individual has the responsibility of trapping mail when it enters a manual operation. They must then identify and containerize the various mail types and redistribute these volumes to their designated next handling operations. They must be thoroughly trained on the distinctions between up-gradeable, automation candidate volume and actual manual letter mail. They will collect daily volume data that assists operations in identifying an incorrect mail flow. They have the responsibility to coach others (supervisors, craft level) on the proper methods of mail flow to the manual operations.

2. **Supervisor, Distribution Operations (SDO)**

The role of the SDO in this manual volume reduction program is that of a monitor and implementor. The SDO must support the functions of the "Gatekeeper" and assure the mail redirect process is properly administered. The SDO works in conjunction with the "Gatekeeper" in order to reduce the volume in their unit, since they have full responsibility of reducing the work hour usage of the unit.

3. **Manager, Distribution Operations (MDO)**

The MDO is recommended to have full responsibility of this program's administration. They must take the appropriate measures to assure the overall objectives of the program are achieved. The MDO assures the SDO works in conjunction with the "Gatekeeper" on the efforts to reduce the volume and work hours of his unit. They must insure that all associated data collection and program implementation is performed.

4. In-Plant Support (IPS)

IPS has the responsibility of tracking and monitoring (daily) the progress of the manual reduction process. They will prepare and analyze the baseline data, as well as, the ongoing performance data. They will prepare the necessary reports used to track and trend the performance indicators and share this information with Operations Managers. Templates (identifying visual aides) are recommended for placement by both the manual and machine operations and should be the responsibility of In-Plant Support.

5. Maintenance

Maintenance is required to modify the MLOCR and MPBCS to the specifications outlined in the manual reduction modification work orders. The maintenance of a tabbing machine belongs to maintenance personnel.

2.8 Collect, Track, and Analyze Process Data

Develop a daily tracking mechanism in order to monitor the manual volume levels and the overall progress of the mail redirect process. Managers and Supervisors should review the resultant performance and take corrective action when the indicators reflect a growth in manual volume. Managers/Supervisors of upstream operations should be equally informed of all aspects of the mail reduction process. The following tracking forms are in Appendix.

- Percentage of Letter Mail Finalized in Manual Operations (Attachment B)
- Tracking Sheet (Machineable Mail Found in Manual Operation (Attachment C)

2.8.1 Staffing and Scheduling

In order to attain a target productivity level it may be necessary to reduce the distribution work hours to the level appropriate to the workload. Reposition the work force to other distribution operations or reduce the number of positions for the operation as necessary. Perform Volume Arrival Profiles (VAP) for all letter operations and use the arrival profiles to create the appropriate staffing requirements. Use of the targeted pieces per hour (PPH) as the work hour conversion is recommended. Monitoring and reviewing of daily and ongoing PPH productivity will help maintain the proper staffing level. (See Scheduling and Repositioning of Workforce)

Ma... Letter Volume
Reduction Tracking Report

AP 6 **Incoming**

Modday >	1		2		3		4		5		6		7		Week 1		AP Period to Date	
Day/Date >	Sat	29-Jan	Sun	30-Jan	Mon	31-Jan	Tues	1-Feb	Wed	2-Feb	Thurs	3-Feb	Fri	4-Feb	Total		Total	
Automation	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's
275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
835	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
845	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
875	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
885	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
895	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
918	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
919	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
975	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Manual	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's
150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
% Manual	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%	

Incoming Manual Productivities

150	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

AP 6 **Outgoing**

Modday >	1		2		3		4		5		6		7		Week 1		AP Period to Date	
Day/Date	Sat	29-Jan	Sun	30-Jan	Mon	31-Jan	Tues	1-Feb	Wed	2-Feb	Thurs	3-Feb	Fri	4-Feb	Total		Total	
Automation	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's
271	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
831	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
841	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
881	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
891	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
892	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
971	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
Manual	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's	TPH	Hr's
030	000	0	000	0	000	0	000	0	000	0	000	0	000	0	-	-	-	-
040	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-
% Manual	0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%		0.0%	

Outgoing Manual Productivities

030	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
040	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

P&DC Performance

Auto TPH	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Man TPH	-	-	-	-	-	-	-	-	-	-	-	-	-	-
% Manual Goal 5.0%														
Manual TPH Goal	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ststus														
Savings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -

finalized.xls.xls Mods TPH

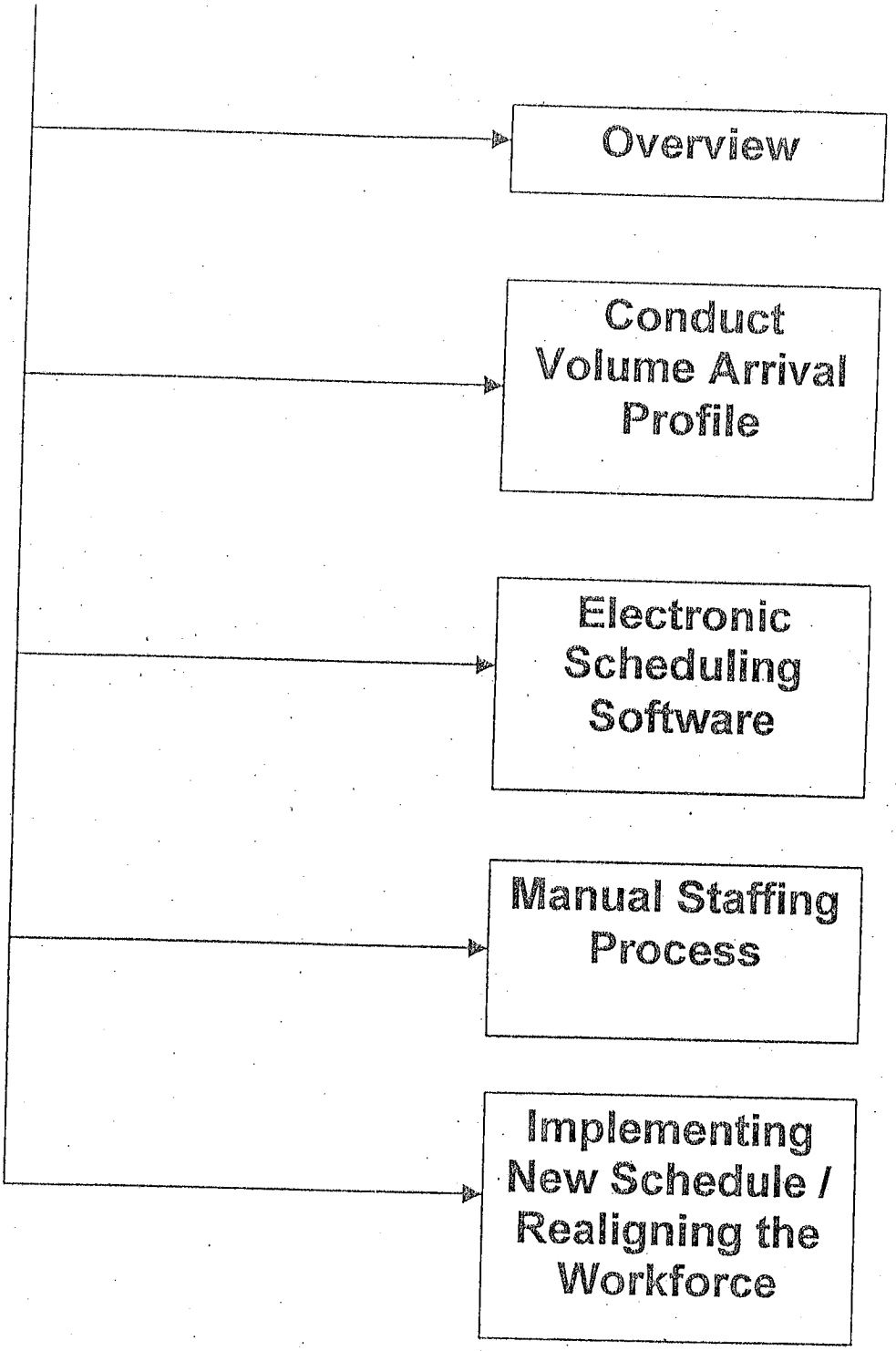
Machinable Mail Tracking Sheet for Manual Distribution Operations

DATE(M/D/Y):_____ TOUR:_____

GATEKEEPER:_____ OPERATION#:_____

TIME	MAIL TYPE	AMOUNT #TRAYS OR %OF TRAY	SOURCE (OPER# OR UNIT)	SOURCE SUPERVISOR NOTIFIED	FORWARDED TO WHAT OPERATION?	COMMENTS

3.0 Staffing/Scheduling



3.1 Overview

Complement management is key to the success of the organization. As we move through equipment deployments, volume adjustments, and productivity improvement, it is essential to make sure our people are in the right jobs at the right time.

The first step in understanding staffing and scheduling needs is to determine when mail is available for processing for a given operation. This requires a volume arrival profile (VAP) be completed. VAPs should be completed at least once a year or more frequent if changes occur due to technology, operations, or customer requirements.

The newly created electronic scheduling software will compare the VAP with the Operating Plan and provide a preliminary schedule of employee types by operation. This important component has been a missing link to matching workload with complement.

Once the scheduling has been completed, the next step is to implement the new schedule and realign the workforce. Enclosed in this section are the necessary steps to successfully implementing the new schedule that will comply with national agreements and provide minimal impact to affected employees.

3.2 Volume Arrival Profile

Conducting Volume Arrival Profiles for Manual Letter and Flat Distribution Operations

3.2.1 Basic Methodology

- Ideally, a volume arrival profile (VAP) should be conducted periodically over an extended period of time for maximized statistical reliability. One weekly test per quarter should provide results with a margin of error of around 5-8%. Therefore, the more data that is collected, the higher the confidence level.

- Volume data should be recorded every ½ hour for 24 hours for a minimum of seven days. Peak volume days should be avoided since they can skew the period average.

3.2.2 Data Collection

- Data collector's schedules should be made to reflect the operating window of the specific operation being studied.

- It is critical that the data collector understands what mail qualifies as manual mail, since the potential for up-the-ladder volumes to arrive at the operation is very likely. Although, it is not the data collector's responsibility to return the mail to its proper destination, it should be pointed out to the Supervisor in charge of the operation.

- The data collection sheet includes 48 lines for data entry based on the 24-hour clock beginning at 2400. The day and date entered on the

collection sheet should be the MOD day and date. The operation number of the manual unit where the study is being conducted should be entered as well as a brief operational description. If the operation is an Incoming Secondary operation, then add the specific city/scheme name.

- The data collection is performed at a centralized receiving area which should be established, if not already in existence. The data collector must count the working volume as it arrives, not the total volume on hand.

- The preferred data source is weighed volume in pounds converted to pieces. Scale weight records must be collected and the weight converted to piece counts. The piece counts by the ½ hour increments will be input into the VAP data collection form. Tray counts may be used if weight records are not available. The tray conversions to piece count must be accurate according to the tray type. If tray counts are used, then less than a whole tray should be recorded as ¼, ½, or ¾ tray on the manual collection form, and as .25, .5, .75 in the Excel data input sheets. The electronic VAP program (Excelvap.xls) use tray counts and performs the conversion from tray to pieces.

- When volumes are clearly identified as either First Class Mail (FCM) or Standard (STD), they should be separately and respectively recorded. The data collection sheet will have separate entry columns for both classes of mail.

3.2.3 Data Entry

- The data collection file (Manual VAP.xls) includes input sheets for each day of the week and a summary for the week for both letters and flats.

The daily sheets can serve for both flat or letter operations. There are two entry columns, one for FCM and one for Standard mail since the arrival times and conversion rates are different for each. When entering data, the tray count will automatically be converted to pieces after entering the appropriate conversion rate in identified cell.

The following conversion rates are for Non-Machineable, Mixed Preferential and Standard Mail trays

Conversion Rates	Interior Size (Inches)	Pieces Per Tray PREF	STD
Fiberboard MM Tray	21 x 10 x 4.62	260	233
White Plastic MM Tray	22.75 x 9.75 x 4.62	282	252
Extended MM Tray	21.75 x 11.5 x 6.13	270	241
Four Sided EMM Tray (1262)	24 x 11 x 4	298	266
Flat Mail Tray (775)	14.75 x 10.87 x 11.25	102	132
Mail Box Insert Tray	14.25 x 11.87 x 13.5	177	158

- The VAP process is to be conducted for a seven-day period and then summarized for the week. The electronic VAP data collection file will aggregate the days of the week to a weekly summary sheet. Each week's data should be saved under a different file name in order to keep it as historical data. Three separate weeks of Volume Arrival Profile studies are recommended during the year. The times selected should be during average, non-peak processing periods.

See Appendix for Volume Arrival Profile data collection forms and instructions on using Volume Arrival Profile Excel Workbook file EXCELVAP.XLS.

3.3 Electronic Employee Scheduler

UNITED STATES POSTAL SERVICE®

BREAKTHROUGH PRODUCTIVITY INITIATIVE

DISTRIBUTION OPERATIONS OPTIMIZER SCHEDULER

USER DOCUMENTATION

VERSION 1.0

Overview

This application was designed to:

1. Provide a mechanism for Operations Managers to efficiently staff the manual distribution operations of their facilities.

2. Provide employee information on current staffing of the facility as maintained by HRIS Payroll files (Datakeeper – MINNSC).

3. Use Mail Volume Arrival Profile data in various workload units and their equivalent piece count conversion factors.

4. Use a target productivity factor (Pieces Per Hour) as the denominator for work hours.

5. Use the Facility Operating Plan Clearance Time for a particular operation.

6. Provide the begin time and end time by employee type (FT, PTF, Casual) based on the mail arrival profile.

7. Optimize the work area schedule by day of the week.

8. Provide the optimal days off for the unit using the same algorithmic logic as the daily optimizer.

9. Demonstrate actual staffing in comparison to optimized staffing.

10. Display the work hours required to clear the operation if less than optimally staffed (actual scheduler).

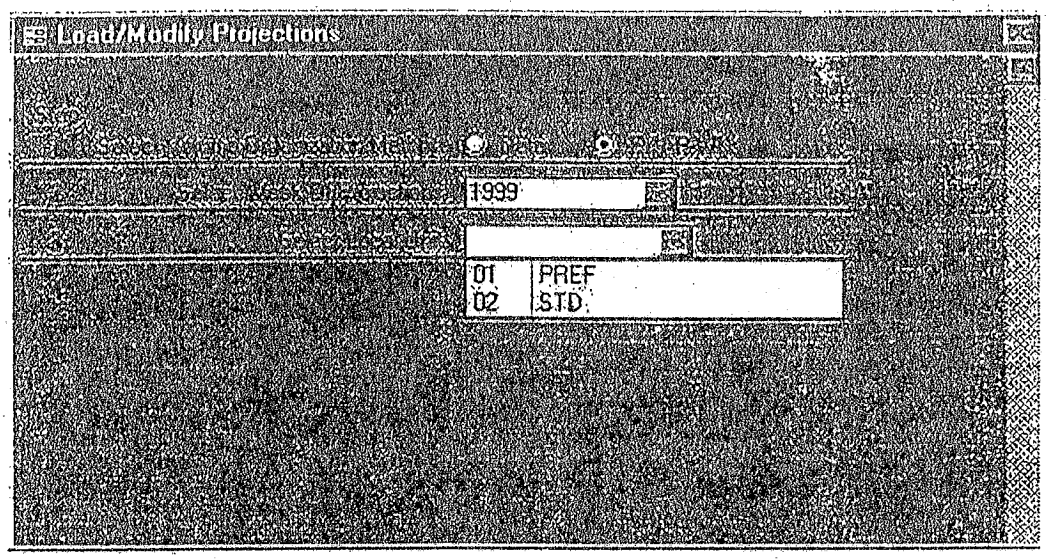
11. Clear mail volume by the Operating Plan Clearance Time (Optimizer).

User Requirements

Application was developed in MS-Access2000 software. The installation package includes MS-Access2000 and all required files and instructions to run the application. Total drive space required for these programs is approximately 2.1 MB. An active Minneapolis Data Center Login ID and access to Datakeeper files (TPX-MN03) is required for retrieval of Focus generated data files that are downloaded for use by this scheduler program.

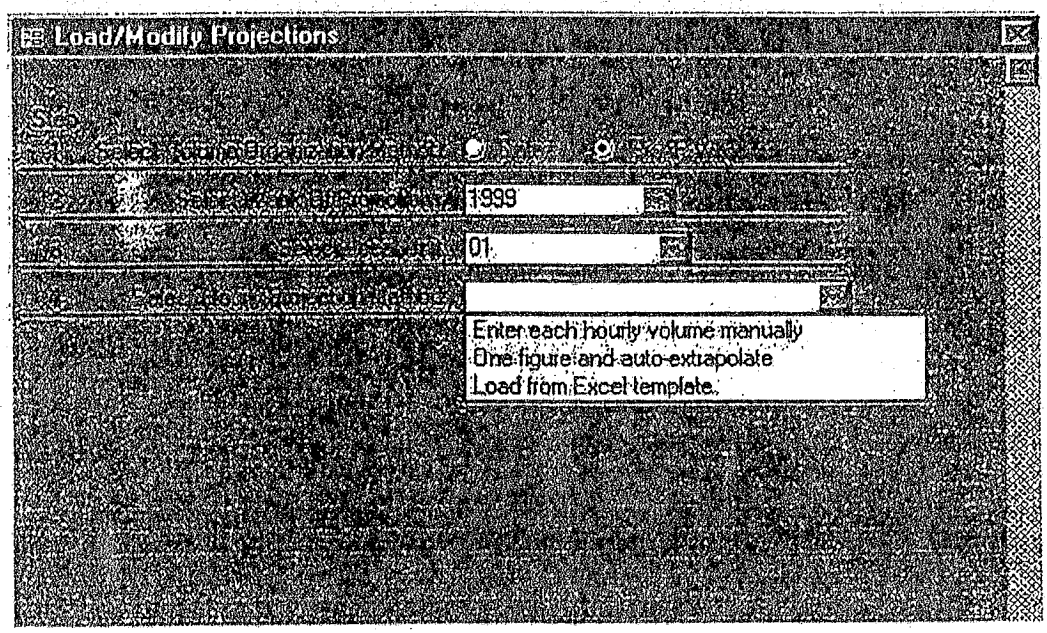
Required Hardware

A standard USPS Pentium processor with PCTCPWIN software for TN3270/FTP capabilities for downloading of Datakeeper files.



Step 4

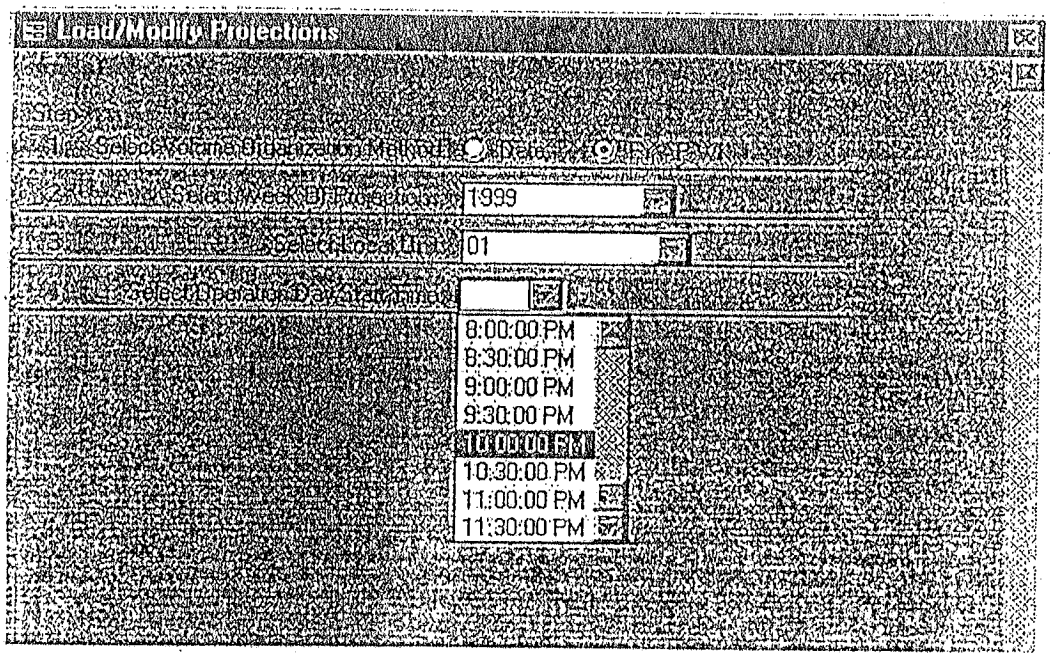
Select a local unit.



Step 5

Select Projection Import Method.

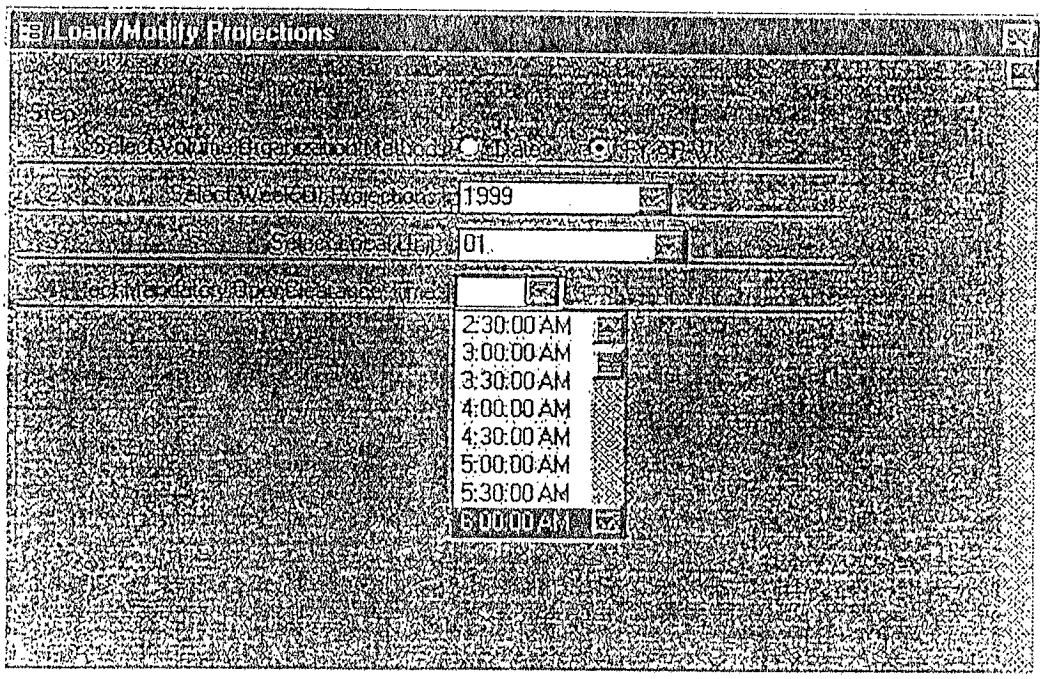
*auto-extrapolate is not available until 12 weeks of projections have been loaded for



Step 6

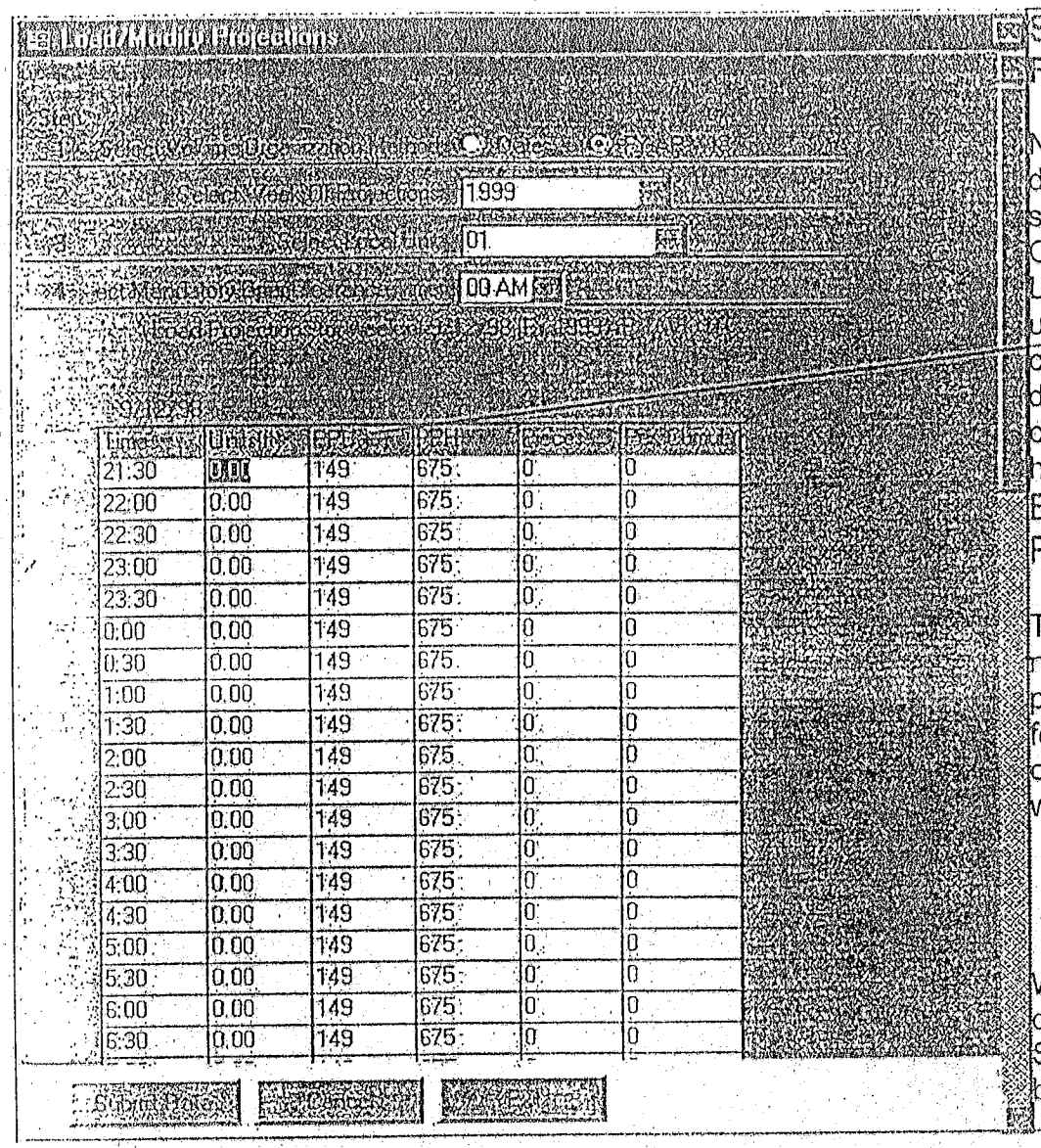
Enter an operation day start time (ie 22:00 for 150 mail).

Be sure to choose a time as early as the first volume is available.



Step 7

Select an operation mandatory clearance time.



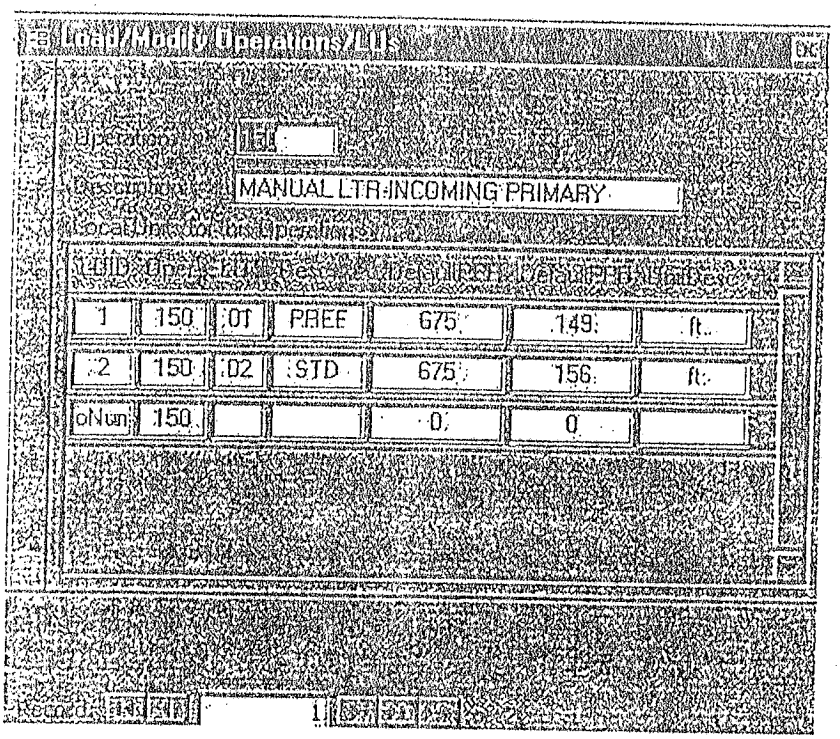
Step 8 — Final

Note that the defaults used in setting up the Operations and Local Units are used. To change the defaults, double-click the field heading.
Ex. Change PPU

Then enter number of Units per increment for entire operating window (VAP).

When complete, click on the Submit Data button.

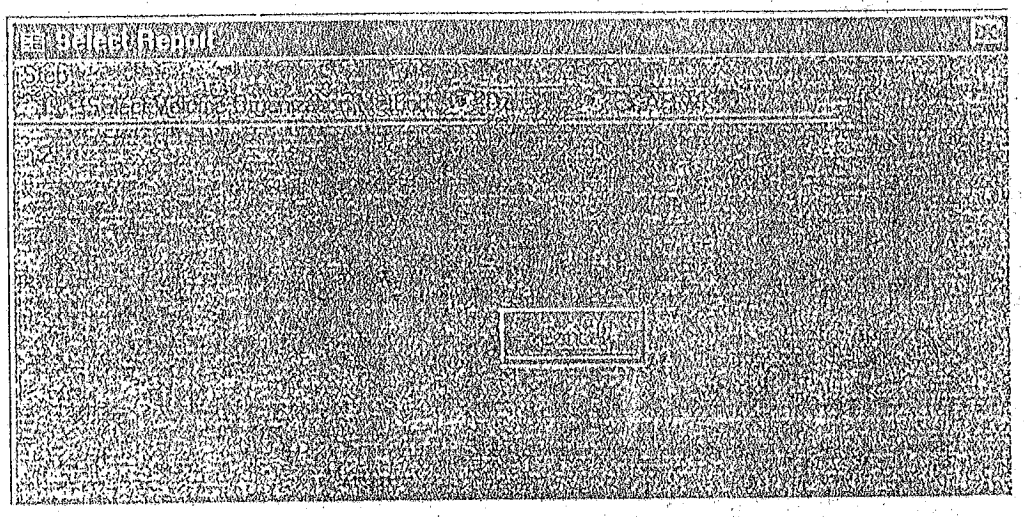
Load/Modify Operations/Local Units



This is a standard MS-Access data entry form.

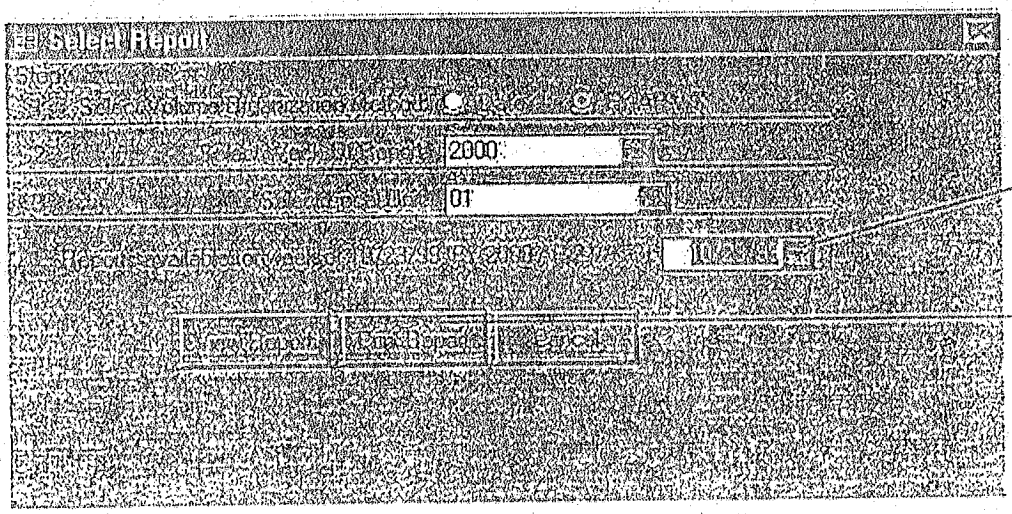
Use >* to enter a new operation, then complete data entry for all Local Units of that Operation.

View Reports



Step 1

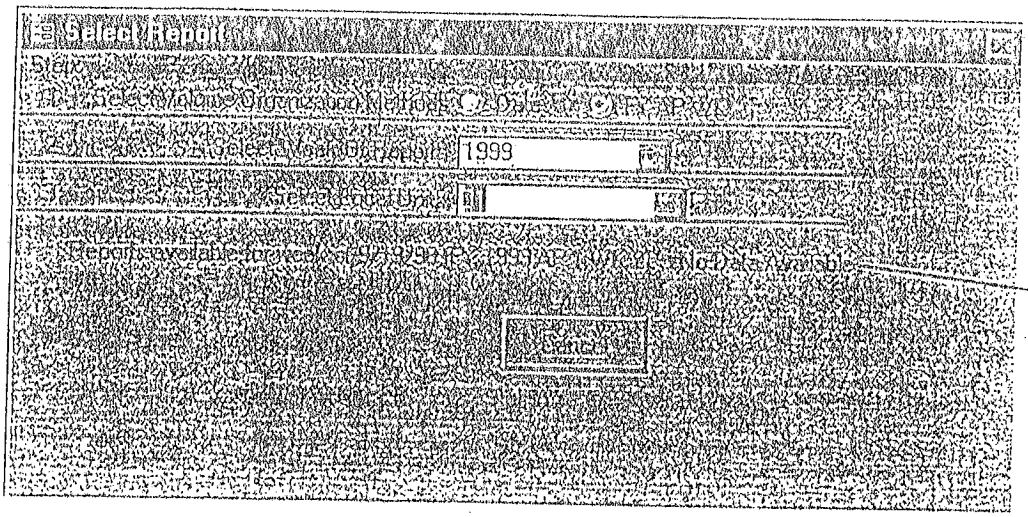
Follow the procedures used to select the appropriate week, operation, LU, as described in Loading Projections...



Step 2

From the reports available drop-down menu, select the day of reports appropriate.

Then click View or Print Report.



*Note

If no projections have been loaded for the selected week, the reports available drop-down will be replaced by "No Data Available."

Cancel, then enter the

Scheduler Glossary

- LUID – Designated identification code automatically assigned by program, do not write over.
- Operation – MODS Operation Number pertaining to unit being scheduled
  Description – MODS operational description of unit's work being performed
- LU – To be utilized for identification of mail type, is not required to match MODS Local Unit description. Useful for identifying mail classification.

  For example,
  - 01 – Preferential
  - 02 - Standard
- LU Desc – Description of mail type (FCM, PREF, STD)
- **Default PPH (Pieces Per Hour)** - Target productivity desired for work hour conversion factor.
- **Default PPU (Pieces Per Unit)** – MODS conversion rate for pieces per unit.
- **Unit Description** – Unit workload measurement (E.g. FT., LB, etc)

3.4 Employee Staffing

Staffing

Projected staffing should be based on the following:

- Mail volume.
- Mail arrival.
- Scheduled Clearance Time.
- Expected productivity.

Points to remember:

- The mail arrival profile will dictate how many cases are needed and when to start the operation to meet the Clearance Time. The closer to Clearance Time the mail comes in, the greater the requirement for additional resources will be to meet the Clearance Time.
- A constant or stabilized workforce increases the opportunity for increased productivity. Start work in an operation after there is continuous work available until Clearance Time. Make sure employees are supervised. Moving employees in and out of an operation causes poor productivity. Each time the employee moves, distribution time is lost.
- The hours of operation are determined by the number of cases, mail arrival, mail volume and expected productivity to meet the scheduled Clearance Time.
- Each additional case causes additional allied labor. Utilizing fewer cases in an operation results in less allied labor for both ledge loading and sweeping.
- Staff for what is needed only. The fewer the workhours the better the productivity.

Present day staffing

To figure out when and how many employees are needed to staff your operation, do the following:

1. Total your volume (actual and projected)
2. Divide volume by your expected distribution productivity
3. This gives you distribution hours
4. Know your dispatch schedule
5. How many hours until pulldown for dispatch
6. What is the least amount of cases you can use and make dispatch on time
7. Add in allied labor

Make staffing adjustments as volumes change.

Staffing Example:

1. 10 Trays Volume on hand
   5 Trays Volume at breakout operations and upstream operations
   45 Trays Volume projected for rest of operation
   60 Trays Total volume for operation

2. 4 Trays per hour Expected Productivity

3. VOLUME / PRODUCTIVITY = WORKHOURS

   60 total trays / 4 trays per hour = 15 total workhours needed

4. 0700 Dispatch
5. 3 Hours until pulldown for dispatch
6. 15 workhours / 3 remaining hours = 5 cases necessary
7. 1 Hour allied labor (included in distribution productivity)

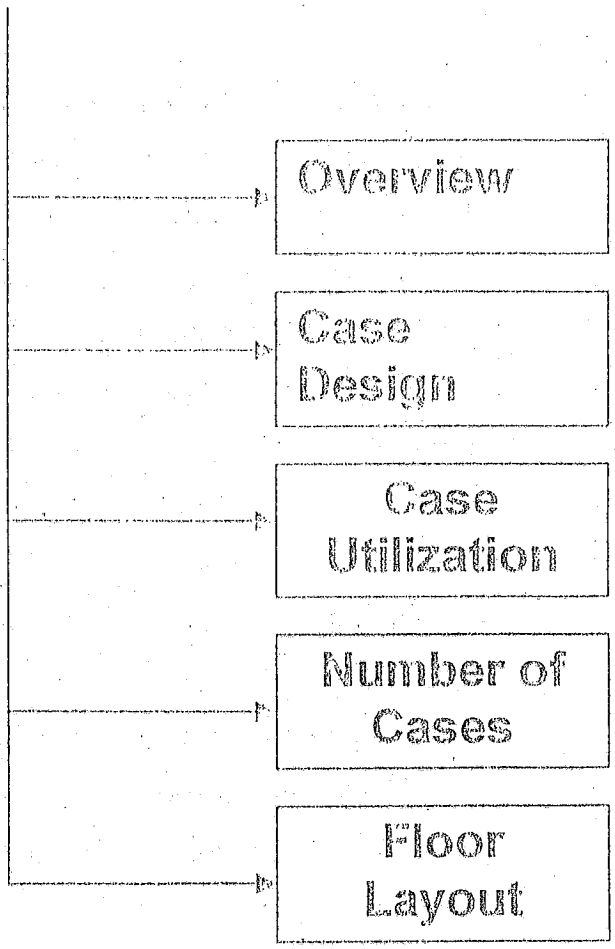
Total Employees	**5 Employees for 3 hours each**
Total Cases	**5**
Total Hours	**15**

Future Date Staffing

To figure out how many employees will be required to staff an operation on a future date do the following:

1. Get the Volume Arrival Profile for the date to be staffed
2. Total the Volume Arrival Profile for that day
3. Divide the total volume by the expected distribution productivity
   - These are your projected distribution hours for the day
4. Get the employee schedules
5. Get the Clearance Time for that operation
6. Find your heaviest volume hour
7. Shift volume into the remaining hours until Clearance Time
   - Even out the volume for each hour
   - This tells you how many distributors are required each hour from the heaviest hour until Clearance Time
8. Total the volume from the beginning of the day through the hour prior to the heaviest volume hour
   - Spread this volume evenly in the hours preceding the heaviest volume hour
   - Do not exceed the number of distributors per hour in # 7 above
9. This tells you the time you can schedule employees to start distribution in this operation.

4.0 Equipment and Configuration



4.1 Overview

Manual Letter operations provide a significant portion of savings opportunity in our plants. Several elements such as number of cases, case design and utilization, and floor layout can contribute to improved productivity in this operation.

Case design should be reviewed to determine if it fits the needs of the current workforce. Many sites have converted cases to a numerical sequence to accommodate a flexible and less skill based workforce. Some sites use a combined numeric and minimal core case design.

Case utilization should be reviewed to determine if the correct holdouts are being made and to determine the feasibility of combining operations such as 030 and 150.

Based on the VAP and Operating Plan, the number of cases needed for peak volumes are then determined. Minimal cases should be used to free-up floor space and to prevent a natural tendency to overstaff the unit.

Floor layout for manual cases and staging areas should then be determined. Several examples of layouts are provided to assist in maximizing the use of space and to allow for maximum supervisory visual coverage.

4.2 Case Design

There are several types of case design for manual distribution used in the field today. Listed below are three examples of case design.

4.2.1 Numeric

One of the most popular case designs used in the field for manual distribution is Numeric. The Numeric case has an easier learning curve and is ideal for operations with a transient work force. The cells for this type of case are labeled in numerical order; i.e. 1, 2, 3. Zip Codes would be in numerical order, lowest number to highest number.

4.2.2 Core

In distribution, there may be a few destinations or case cells that receive a major portion of the cased volume. To make this distribution easier and more efficient, these destinations are set in the cells directly in front of the distributor. This will reduce the amount of reach and return the distributor uses for those pieces of mail to be cased. This case distribution configuration is called a core.

A "core" is an area of a distribution case that has its cell separations sequenced separate from the rest of the case. Not every case design has a core concept.

Cases that are cored will have a small group of 6 to 20 separations clustered together in the approximate lower center of the main case

Usually, this group will be in the same type of sequence as the separations in the rest of the case that surrounds it. Each group will be placed in order with respect to their own grouping. Usually, the order principle is numeric by ZIP Code numbers.

For example, if, as on the '030' case, the other cells are in ZIP Code order, the 20 cells in the core area, are, to the extent possible, in ZIP Code order, also.

The core concept is used so the highest volumes receiving separations are placed in positions that are the easiest to reach when sorting mail to them.

4.2.3 Simplified Distribution

A Simplified Distribution case is used to speed up the distribution process. Also known as a "speed case", this case design uses only one number per cell; i.e. 0, 1, 2, 3 et cetera.

The distributor sorts the mail by the first number in the Zip Code. Zip Code 90210 would be sorted to the cell labeled "9". Zip Code 37928 would be sorted to the cell labeled "3".

To determine whether the Simplified distribution method is effective, do the following analysis:

For Regular Distribution:

- Total volume divided by the productivity for the operation equals Total Distribution Workhours.

For Simplified Distribution:

- The same total volume as above divided by the speed case (first pass) productivity equals first pass distribution hours.
- Take the same volume divided by the speed case secondary (second pass) productivity for second pass distribution hours.
- Add the first and second pass distribution hours together for the Total Simplified Distribution Workhours.

- Compare the Total Distribution Workhours with the Total Simplified Distribution Workhours to see which is more effective.

Sweeping/Dispatching Equipment

Sweep side or dispatch racks must be labeled identical to their counterpart cases in order to minimize allied labor, re-handling, and service impacts.

4.3 Case Utilization

In determining case design, number of cases needed and layout, consideration of case utilization is important.

Three areas need to be considered in case utilization:

1. Combining operations on the same case design (sort plan).
   Example: combining operation 150 with operation 030

2. Utilizing the same case for different operations.
   Example: using operation 030 cases for operation 160

3. Are the cases being used?
   How many cases are used on an average day?

   After determining the number of cases needed for an average day, a case utilization study should be conducted. The case utilization study should include a 24-hour profile that measures the number of cases utilized in half-hour increments. This will validate the proper number of cases are being used for a specific operation.

4.4 Number of Cases

To maximize benefits and utilization of equipment, manpower and volume must be matched with equipment for each manual distribution operation.
All extra casing equipment must be removed from the workroom floor

To determine the number of cases that will be necessary for manual distribution, the following will be needed:

1. Volume Arrival Profile (VAP)
2. Operating Plan
3. Productivity Target

How to figure:

1. Find the hour in the VAP that receives the largest volume. Including the heaviest volume hour, total the hours remaining until pulldown for final dispatch.
2. Total the volume from the VAP for all hours from the heaviest volume hour through all hours remaining until pulldown for dispatch.
3. Divide the productivity into the volume. These are total distribution hours remaining until dispatch.
4. Divide the hours from heaviest volume hour until final dispatch (#1) into the total distribution hours (#3) remaining. This is the maximum number of cases needed at any one time.

4.5 Case Layout

Case layout is described in Handbook PO-401, Section 219, Equipment Layouts. These layouts are illustrated in Exhibits 219.1a and 219.1b.

There are two basic layouts for manual distribution letter cases. The first (illustrated in Exhibit 219.1a) is preferred because it facilitates open-back sweeping; the second (illustrated in Exhibit 219.1b) requires less space but prevents open-back sweeping, and therefore should be used only where there is insufficient space for the first layout.

4.6 Support Areas

The support area(s) for retrieval and disposal of mail should be as close as possible to the distribution area, centered in the distribution area, if possible, to facilitate ease of walking to and from the cases.

Mail should be staged separately for each operation and each incoming secondary operation.

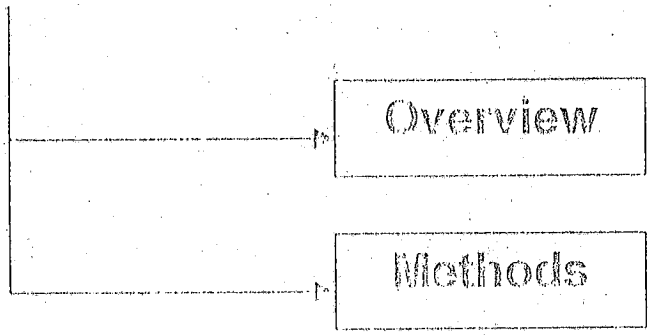
Ready access from main aisles to each staging device is required in order to facilitate the transport of mail to subsequent operations.

The supervisor stand-up desk should be placed where observation can occur without disrupting the flow of mail while loading ledges or sweeping cases.

Additional material handling equipment, such as platform trucks should be kept in a separate support area.

All areas should be clearly identified by marking boundaries on the floor with either aisle tape or paint.

5.0 Distribution Methods



5.1 Overview

Employees will perform at their greatest capacity when provided with the technical skills needed to perform the work along with being provided a safe and healthy workplace.

It is management's responsibility to assure all employees are using correct procedures for the distribution of letter size mail at a letter case. Using correct procedures leads to efficient, accurate, and safe working conditions.

5.2 Procedures for Manual Letter Distribution

This instruction addresses the correct procedures for distribution of letter size mail at a letter case. You will be expected to follow the methods as outlined herein. If you have any questions, be sure to ask for clarification. The following is written with the expectation that it will be applied by all distribution personnel so efficient, productive and accurate results are attained.

1. Clock into proper operation
2. Place card in proper timecard slot (take first available case)
   - Note: In all letter distribution operations, proper placement of mail on the case ledge and proper positioning of the restbar are very important.
3. Place mail on ledges, standing on edge, upside-down with stamps to the right.
   - Caution: Never load the ledge with more than one row of mail in height.
4. Position the restbar at the approximate center of the case and adjust for a comfortable position. Utilizing a restbar in the distribution of mail requires that at least one foot be kept on the base or on the foot plate...*never on the case ledge.*
   - Note: It is recommended that a thumbstall be used in distributing mail, as this is an indispensable aid to faster distribution.
5. Pick up a solid handful of mail with left hand from the left end of the row of mail on the edge.
6. Hold mail in an upright position, about 10-12 inches in front of you for quick reading.
7. Follow the path of distribution. This makes for a less time-consuming motion.
   - Note: In peeling off letters for sorting, the thumb of the right hand should be used to work one piece of mail off the handful at one time.
8. Take each letter between the thumb and first two fingers of the right hand.

Procedures for Manual Letter Distribution (continued)

- The right thumb covers approximately the stamp and the fingers curve behind the letter.
- Toss the letter in the proper separation with an easy wrist motion. *Do not place in cell – TOSS into cell.*
- While your hand moves the letter to that cell and begins to toss it into that cell – immediately move your gaze to the next letter. This allows a complete and thorough determination as to what location the next letter will be sorted.
- Move the bundle (in your left hand) toward that location on the case while your right hand is still moving back to grasp the letter.

5.3 Techniques for Distribution Letters

The technique to be used, is summarized as follows:

1. The letter on top of the bundle is removed by sliding the right thumb across the stamp area while the thumb and first and second fingers of the right hand grasp the upper right edge.

2. Right hand holding the letter reaches to the correct cell and then tosses/flicks the letter into that cell.

3. Right hand disposes of the letter and reaches back to the bundle.

4. Simultaneously, eyes glance to the next letter on top of the bundle, while.....

5. ...moving the bundle toward the general location in the case where that letter goes. The cycle then begins at "1" again, or ...

6. ...As soon as the last letter is sorted, immediately obtain another solid handful of mail from the case ledge so the sorting can be continued right away.

7. The distributor's motion must be fluid and constant (e.g., always return the sorting, or right hand, to the bundle of mail for the next letter as quickly as possible).

8. All cases have each cell separation identified with a label. The label (also called the "header") is **always above** the cell to which it applies. Report any instances of a missing or incorrect case label.

An important principle to remember is to work the first mail received before working mail received at a later time.

FIRST IN---FIRST OUT

5.3.1 Riffling Letters

Riffle mail (or mail to be riffled) is that mail, which, prior to sorting, consists of several pieces of consecutively addressed mail each of which goes to the same case cell separation.

All distributors are to be alert for this type of mail. When it is discovered, use the following method of sortation:

1. Isolate the mail if more than one tray is identified.
2. "Ledge" the letters and begin to process them.
3. Pick up a solid handful of mail with the left hand.
4. Retain in the left hand with the left thumb at the bottom of the handful of letters.
5. Place the right hand at the top of the bundle, with the hand and fingers firmly in contact with the letters.
6. Then, by using the left thumb, running down the bottom edges of the letters in the bundle, separate the letters just enough to quickly scan the address on each one.
7. Continue bringing the left thumb down (i.e., riffling the letters) until the final piece bearing the same address for the same separation is reached.
8. While the left hand holds the rest of the bundle, using the right hand, take control of those pieces already separated by the left thumb, and place them in the proper cell.

NEVER SORT THIS TYPE OF MAIL PIECE-BY-PIECE.

5.4 Sweeping Letters

Sweeping is the withdrawal of mail from a case in preparation for either placing the mail in trays or applying a pressure sensitive label and wrapping the bundle with rubber bands (tying out).

Accurate, careful disposition of the mail (trays, bundles, etc.) is critical in getting it to its correct destination on time.

The effectiveness of the sweep activity has a major influence on the productive performance of a manual letter distribution operation. Efficient sweeping ensures meeting dispatch schedules, improved flow of mail to secondary operations and enhanced distribution by preventing cells from becoming too full.

5.4.1 Sweep Procedures

A. Tray Usage Methods

1. Always sweep with the tray in the left arm while withdrawing mail with the right hand.
2. Face mail in one direction (postage down and toward the open side in 3-sided trays, postage up in 4-sided trays).
3. Sweep until the tray is full, unless directed otherwise by the supervisor.
4. Read and understand signs on tray carts before putting trays on them.
5. Make sure trays requiring a label have the correct label.

B. General Instructions

1. Sweep each cell when full, unless directed otherwise by the supervisor or at dispatch time.
2. Never, for convenience sake, withdraw mail from a full cell in your case and put it into the same separation in a nearby case.
3. Do not mix cells.
4. When banding mail, use rubber bands heavy or thick enough to hold the bundle
5. Make sure the letter on top of a banded bundle has the correct city/state/ZIP Code on it.
6. Do not disturb the distributors any more than absolutely necessary.

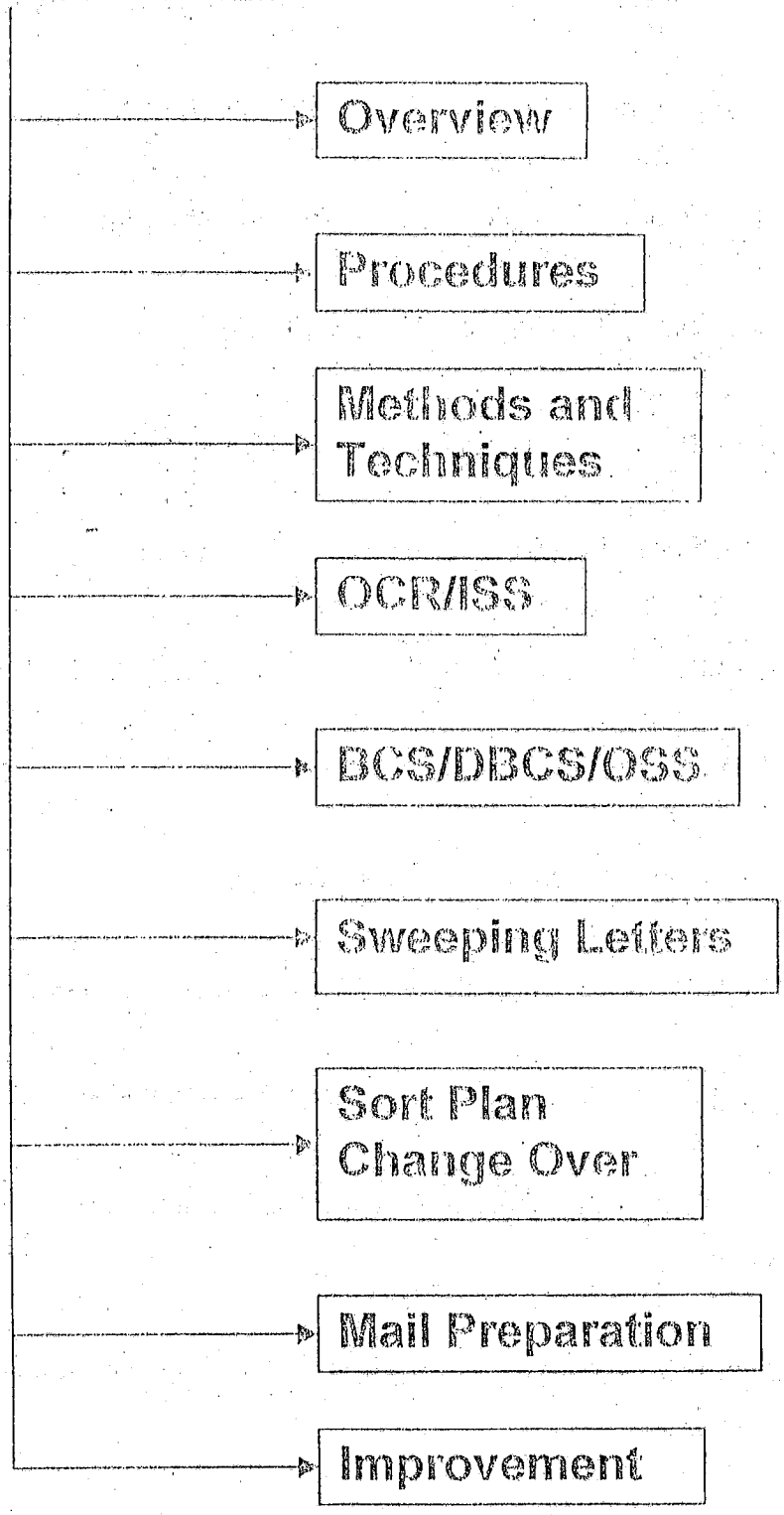
5.5 Proper Distribution Checklist for Letters

- ☐ Stamps down and to the right.
- ☐ Positions restbar at center of case.
- ☐ At least one foot remains on the base or footplate.
- ☐ Thumb pushes piece up to grasp with right hand.
- ☐ Removes the top letter using thumb and first two fingers of right hand.
- ☐ Right hand moves to cell destination with short glance at position placement.
- ☐ Releases piece of mail with a toss or flick into the case.
- ☐ Left hand moves toward next destination cell as right hand deposits previous piece of mail.
- ☐ IS ACCURATE – ENSURES EVERY LETTER GOES INTO THE CORRECT SEPARATION.
- ☐ Distributes to the finest depth of sort.
- ☐ Follows proper procedure for handling "riffle" mail.

5.6 Common Errors in Manual Letter Distribution

1. Placing the piece of mail in a cell instead of the toss or flick method.
2. Loading the ledge with more than one row of mail in height.
3. Restbar not positioned at proper height.
4. Restbar not positioned at the center of the case.
5. Restbar being used as a stool to sit on and not as a leaning device.
6. Piling letters for hard to reach cells on the ledge of the case.
7. Not using thumb to push up letters.
8. Not using a thumbstall on right thumb.
9. Failure to move bundle in left hand to general location where the next letter goes.
10. Slowness in moving the right hand back to the next letter.
11. "Whipping" the letter before disposing of it to correct cell; instead of going to cell directly.
12. Distractions such as indulging in extraneous conversation with another employee.
13. Sorting to a residue cell when the letter could be sorted to a cell that would allow for a finer sort.

6.0 Automated Letters



6.1 Overview

This instruction addresses the correct procedures for sortation of letter mail on an automated machine. You will be expected to follow the methods as outlined herein. If you have any questions, be sure to ask for clarification. The following is written with the expectation that it will be applied by all automation personnel so efficient, productive and accurate sortation is attained.

Employees are required to clock into the proper operation, place their timecard in the proper timecard rack, and report to the appropriate machine.

Automated letter machines require 2 persons to operate efficiently. The operators are referred to as the loader and the sweeper.

In all automated letter operations, proper placement of mail on the ledge including proper jogging and edging of the letters are very important. Proper sweeping of the sorted letters into trays for subsequent handling is imperative.

6.2 Loader Procedures

The container of letters is to be positioned facing the feeder ledge closest to the jogger. The jogger is a vibrating ledge that aids in the effective edging and culling of the letters to maximize read rates and sortation.

Mail is to be placed on the jogger, standing on the edge, right side up with the front (address, stamp, indicia) of the letter to the right. All letters must be jogged and edged properly, culling out all mail for the automated "Bulky and Chunky" machines and for manual operations.

The loader should also look for letters with "noise" or interference in the bar code clear zone. The bar code clear zone is the bottom right hand portion on the front side of the envelope. These letters should be extracted at the earliest time they are identified in the automation process and sent directly to the Letter Mail Labeling Machine (LMLM).

6.3 Loader Methods and Techniques

1. Take a tray of letters from the container and place either on a stand or on the ledge above the jogger.
2. With both hands, reach into the tray cupping approximately one foot of letters. Place the letters onto the jogger ledge.
3. After loading the jogger, turn on the jogger and cull out (remove) all non-machineable letters from the jogger. Place the culled letters in one of two letter trays stationed on the ledge right above the jogger. The letters should be placed onto the trays and faced in one direction. One tray should be for Bulky Mod machineable letters and the other for manual distribution. If the processing facility does not have a Bulky Mod OCR then use only one tray for all OCR/ISS non-machineable letters for manual distribution.
4. When jogging the letters, it is imperative that all letters have the address, stamp and/or indicia facing to the right. The process of jogging requires all letters to be edged. Edging is the term used for aligning the letters so the right edge of the letter is straight. Edging is important in order to reduce the number of jams and double feeds. Letters that are torn or mutilated should be removed. Letters that are too tall, thick, or too long as depicted using the automated letter template should also be removed. Keep an automated letter template close by to use as a reference tool.
5. After the letters have been jogged, edged and culled, slide the letters onto the transport belt between the friction separator of the feeder mechanism and the transport blade.
6. After removing all of the letters from the tray onto the jogger ledge, remove any label in the label holder of the tray and place the empty tray onto the top shelf of a GPMC. The trays should be stacked one inside of the other so the end of the tray with the label holder is facing the loader. When the height of the stack of

empty trays impairs the loader from seeing over it, place the stack onto the bottom shelf of the GPMC or hand them to the sweeper to use.

7. Do not re-use trays that are either damaged or collapsed in the middle. If these trays are used, they could result in an injury. Discard these trays into the proper receptacle for damaged/unusable trays. If there is not a receptacle in the area, contact your supervisor to have one put in the work area.
8. When the feeder ledge is full, it is time to start mail processing.

Warning

Do not start the system before checking to see if other personnel are working on or near the equipment. Failure to comply may result in injury or death to personnel and/or damage to the equipment.

6.4 OCR/ISS

START MAIL PROCESSING

Use the following procedures to start mail processing:

1. On the operator panel, select the sort plan to be used and press ENTER.
2. Press START switch and observe the start warning audible alarm sounding for 5 seconds, the start warning indicator flashing for 10 seconds and the system starting operation.

STOP MAIL PROCESSING

To stop mail processing, perform one of the following:

A. Normal Stop

At operator panel, press STOP and observe the following

- Mailpiece pick-off stops
- All mailpieces in transport reach destination pockets
- OCR/ISS stops

NOTE:

If there are mail pieces in transport, the system belts and motors do not immediately stop when the STOP switch on the operator panel is pressed. The system will continue to run until the mailpieces are sorted to their destination pockets.

B. Emergency Stop

Pressing any EMERGENCY STOP switch/indicator on the system immediately stops all belts and motors, but does not remove electrical power. In case of electrical shock, fire, or other electrical emergency, call the Supervisor or ET.

Use the following procedure to stop in an emergency

Press the nearest EMERGENCY STOP switch/indicator and observe the following:

- EMERGENCY STOP indicator lights
- All belts and motors stop

NOTE:

Even though not designed or recommended for use during emergency conditions, interlocked covers, panels, or doors will stop system belts and motors.

6.5 BCS/ BCS/ OSS

SYSTEM LOG-ON

At the system operator terminal, observe software start-up data displayed until ECA BAR CODE SORTER log-on appears

Use the following procedure to log onto the system .

NOTE

All user identification (ID) and password entries must be entered exactly as assigned (including correct uppercase and lowercase letters). Passwords are hidden as they are entered.

1. At the operator terminal, on the ECA BAR CODE SORTER log-on screen, enter user ID and password and observe one of the following:
   A. BCS Main Menu appears
   B. If "Invalid User ID/Password – Retry" warning appears, select "OK" icon, and re-enter correct user ID and password.
2. **Perform start mail processing as required.**

START MAIL PROCESSING

NOTE:

When standing in front of the feeder, the bottom edge of all letters must be positioned on the transport belt with the front (address, stamp, indicia, etc.) of the letter facing right.

1. Place letters on the transport belt between friction separator and the transport blade.
2. Close slide arm as required, and observe the FEED OPEN indicator on operator panel goes out.
3. On MAIN MENU, select "Mail Processing" icon and observe MAIL PROCESSING MENU appears.
4. Select "Load Run Information Header" icon and observe as the RUNINFORMATION MENU appears
5. Type appropriate information, select "Enter" icon, and observe as the MAIL PROCESSING MENU appears.
6. MAIL PROCESSING MENU, select "Load Sort Plan" icon and observe as the MAIL PROCESSING MENU appears.
7. Select appropriate sort plan and observe as the MAIL PROCESSING MENU appears.
8. Select "Start Mail Processing" icon and observe the Standby Mode Indicator on operator panel lights and the ON-LINE MAIL PROCESSING MENU appearing.

Warning

Do not start the system before checking to see if other personnel are working on or near the equipment. Failure to comply may result in injury or death to personnel and/or damage to the equipment.

9. On operator panel, press START switch and observe the start warning audible alarm sounding for 5 seconds, the start warning indicator flashing for 10 seconds and the system starting operation.

6.6 Sweeping Letters

Sweeping is the withdrawal of mail from a bin or stacker in preparation for either placing the mail in trays, or applying a pressure sensitive label and wrapping the bundle with rubber bands (tying out). Accurate and careful disposition of the mail (trays, bundles, etc.) is critical in getting it to its correct destination on time.

The effectiveness of the sweep activity has a major influence on the productive performance of an automated letter mail operation. Efficient sweeping ensures meeting dispatch schedules, improved flow of mail to secondary operations and enhanced distribution by preventing bins or stackers from becoming too full. When the bin or stacker becomes full, it will stop the machine until the letters from the bin or stacker are swept.

6.6.1 Sweeper Procedures

A. Tray Usage Methods

1. Do not use trays that are either damaged or collapsed in the middle. If these trays are used, they could result in an unnecessary injury. Discard these trays into the proper receptacle for damaged/unusable trays. If there is not a receptacle in the area, contact your supervisor to have one put in the work area.
2. The letters are placed into the trays in an upright position. Face letters in the direction within the tray and ensure all trays on the machine have the letters faced in the same direction.
3. Each bin/stacker on the machine corresponds to a specific tray. Sweep letters into the tray until the tray is full, unless otherwise directed by the Supervisor.

4. Read and understand signs on tray carts, GPMC's or U-carts before placing trays on them.
5. Make sure trays requiring a label have the correct label.

B. General Instructions

1. Sweep each cell often to prevent the machine from stopping. A flashing red light will appear by the bin when that bin becomes 75% full, but the machine will keep running. However, when a solid red light appears, the bin/stacker is full and the machine will stop running. This will have a major impact on the throughput and performance of the automated machine.
2. Do not combine letters from one bin/stacker with letters from another bin/stacker, unless otherwise directed by the supervisor.
3. Do not mix trays, unless otherwise directed by the Supervisor.
4. When banding mail, use rubber bands heavy and thick enough to hold the bundle together.
5. Make sure the letter on the top of a banded bundle has the correct city/state/ZIP Code on it.

Standard Operating Procedure (SOP) — Sample Narrative Format

In addition to the SOP requirements outlined on the first page of the SOP model, you also must address the following items in a brief narrative on a separate page.

a. State whether the operation is a continuation from a previous tour or begins and ends within the same tour.

b. Under Critical Entry and Clearance Times, include Input and Output Process indicators to compare the actual normal conditions during these time periods against the objectives of the overall operations.

c. Document proper and safe work methods for performing all the tasks within the operations. Develop a methods guide or a user's manual that is easily accessible to anyone supervising the operation.

d. Add a separate attachment to identify the internal customers of this particular operation. Address the requirements expected by these customers and the benefits they derive from an effective and complete operation. This list should include indicators used to assess performance against the internal customer requirements (for example, "customers require 24-hour response time") to measure how well the customer's requirement are met.

Standard Operating Procedure (SOP) — Sample

Model

1. General Information
   - A. SOP Control Number
   - B. Date
   - C. Office
   - D. Important Phone Numbers

2. Operation Information
   - A. Operation Name
   - B. Operation Location
   - C. Operation Number(s)
   - D. Operation Description
   - E. Operation Objective

3. Hours
   - A. Critical Entry Time (CET)
   - B. Clearance Time (CT)
   - C. Hours of Operation (See Operating Plan)
   - D. Peak Hours

4. Volume and Productivity
   - A. Average Daily Volume
   - B. Productivity Targets

5. Flow of Mail
   - A. Sources of Mail (Operations & Locations)
   - B. Downflow/Destination of Mail

OPERATING PLAN CHECKLIST

DATE:	PREPARED BY:

SERVICE STANDARDS	YES	NO
Is the overnight service area defined by ZIP codes (originating and destinating)?		
Is the service standard defined for all classes of mail (originating and destinating)?		
CAPACITY TO PROCESS:	**YES**	**NO**
Are the average daily volumes for outgoing and incoming operations accurate? (Use peak days of the week)		
Are the mail arrival profiles accurate?		
Does existing equipment have sufficient capacity to process these volumes? (Check against pieces processed per hour on the AFCS, MLOCR, MPBCS, etc.)		
If volumes are beyond processing capacity in automation/mechanization, are there efforts to move volumes down the ladder to operations currently underutilized? (If this happens with any regularity, higher management must be informed)		
Is mail processing equipment utilized efficiently to process all the mail whthin the operation's window?		
Is staffing adequate but not greater than required to handle manual volumes?		
Was the planned start time calculated when sufficient volumes are available for processing at each operation?		
Are operations begun on time (at planned start)?		
start of all operations? Are those volumes staged in the operation prior to the planned start?		
Are scheme assignments minimized except where staffing with level 5 and 6 clerks is required (associate offices/stations)?		
MAIL FLOW:	**YES**	**NO**
Is there a team effort to finalize each operation at the approved CT (clearance time) for that operation?		
Is there an effort to send all mail downstream operations and to meet the approved critical entry time (CET) in those operations?		
Are advance volumes continuously sent downstream to outbound dock operations?		
Are timely sweeps performed in all operations generating volume to support the Dispatch Plan?		
Before an operation runs out of mail, is an attempt made to locate mail in upstream operations?		
Do any of the plan's downstream flows (operations) overlap CETs with another operation's CT (plan to fail)?		
Is the time it takes to move mail between operations considered when developing operational targets (e.g. inbound dock to first operation, movement between floors)?		
Are bullpen operations (container consolidation) taken into account when deciding the final CT for dock operations? Are bullpens part of the operating plan?		
Is worked mail staged for any length of time in operations, prior to sending it downstream to banding, scanning, and bullpen operations?		
Is worked mail held because replacement equipment is hard to find?		

OPERATING PLAN CHECKLIST (PAGE 2)

Is the flow of mail fluid through all operations, with the collective goal of meeting the final clearance time?		
When updating operating plans, is the impact on upstream and downstream operations considered, and are appropriate changes made if necessary?		
Are efforts made to process all mail in automation and/or mechanization and move mail out of the manual mailstream?		
TRANSPORTATION:	**YES**	**NO**
Is transportation adequate to support advanced volume to coincide with the planned start time of an operation at the destination plant?		
Is transportation in place to support the incoming CETs and outbound CTs for all categories of mail?		
Is extra transportation used to support volumes that were not available for the scheduled transportation?		
Is extra transportation consistently used to support plan failure mail?		
Is capacity adequate to handle the CET and CT volumes on transportation?		
Are there procedures for identifying mail that arrives on transportation after the CET for any class of mail (delayed volume)?		
Is transportation reviewed regularly to support operational changes?		
MAIL TRANSPORT EQUIPMENT:	**YES**	**NO**
Is there sufficient MTE in the operations prior to planned start?		
Does lack of MTE affect an area's ability to move mail between operations?		
Are volumes collected and moved only when the MTE used becomes full?		
Is all MTE containing mail identified with a placard/		
dispatches?		
Are there procedures for repairing damaged MTE?		
Is damaged MTE that cannot be repaired locally sent promptly to the MTESC?		
ALL " NO " ANSWERS REQUIRE A RESPONSE AND ACTION		
ACTIONS TAKEN:		
ACTION NEEDED:		

6. Equipment
   A. Initial Support Equipment
   B. Number & Type of Machines Used Daily (Weekday/Weekend)

7. Processing Tools
   A. Auto/Mechanization/Manual-Sort Plans/Case Diagrams

8. Routine Operation
   A. Begin Tour Routine
   B. Site Specific Information
   C. Safety
   C. Scheduling of Breaks & Lunches
   D. Staffing
   E. End Tour Routine

9. Unit(s) of Count

10. Contingency Plan

STANDARD OPERATING PROCEDURES (SOPS) — SAMPLE MODEL	
1. GENERAL INFORMATION	
SOP Control Number	
Date	
Office	
Important Phone Numbers	
2. OPERATION INFORMATION	
Operation Name	
Operation Location	
Operation Number(s)	
Operation Description	
Operation Objective	
3. HOURS	
Critical Entry Time (CET)	
Clearance Time (CT)	
Hours of Operation (See Operating Plan)	
Peak Hours	
4. VOLUME AND PRODUCTIVITY	
Average Daily Volume	
Productivity Targets	

6.6.2 Sweep Methods and Techniques

1. Before starting the machine, ensure that all stackers (bins where the mail sorts to) have a tray to sweep the mail into. Ensure that each tray has a correct label in the label holder.
2. Pull out the tray for the stacker that is to be swept. Make sure the stacker number matches the tray number.
3. Place your left hand on the face of the first piece of mail in the stacker. With your right hand, lift the stacker blade up and put it back down leaving 2" of mail in the stacker between the blade and the auger. For safety purposes, it is important to leave 2" of mail in each stacker to prevent injury to hands and fingers.
4. Use both hands to slide the mail towards you. Use pressure from both hands to pick the mail up and place it into the tray.
5. The letters should be placed into the trays in an upright position and faced in one direction.
6. The sweeper makes periodic checks of bar code print quality on all bar code printing systems (OCR/ISS, BCS/OSS, and DBCS/OSS) throughout all processing runs.
7. The print quality check should include the Verifier Reject stacker as well as spot checks of other sortation stackers.
8. If the ID tag quality is poor (smeared or illegible), contact your supervisor and call an ET to clean the ID tag IJP.
9. Conduct periodic checks to ensure the letters are sorting into the correct bin. Match the address against either the label or LCD display for that stacker.

6.7 Proven Practice: Sort Plan Change Over

During the course of each day, it is necessary to change sort plans for particular types and classes of mail. Changing sort plans affects productivity because the machine is not processing mail. In order to minimize the negative affect on productivity, we must change the sort plan in the most efficient manner.

Before mail processing stops on the present sort plan

SDO

- Estimate the amount of run time for the current sort plan
- Inform clerks 15 minutes prior to change over
- Verify all committed mail is in operation
- Start planning next operation or sort plan
- Inform operators of next sort plan and estimated time for current one to end
- Verify the last piece is processed and stop the machine

Loader

- Continue loading the machine using current sort plan until all mail is processed
- Inform sweeper when the last piece is cleared
- Start organizing empty equipment

Sweeper

- Lets bins and stackers fill up, but not to the extent the red overflow light comes on and mail goes to the last stacker
- Start collecting empty equipment for the next run

Once the mail is processed and machine stops

SDO

- Pull EOR and change sort plan
- Start label program printing labels, or if there is not printer, have the labels available for sort plan

Loader

- After the last piece is run, loader collects all culls and rejects for down-flow to next operation
- Collect mail for next operation or sort plan
- Assist sweeper with pull down of operation or sort plan that was completed and start to replace trays
- When all trays are replaced, loader starts to process mail through the machine
- Help sweeper label the machine (if needed)

Sweeper

- Once notified the last piece was processed, blade all stackers, sweep all stackers, then drop trays for dispatch or hand-off to next process
- Complete the set-up for next operation/sort plan

6.8 Mail Preparation

This is a very important part of timely and efficient processing and clearance of each operation. It is also an integral part of throughput improvement. Although this process may begin prior to arriving into the plant, we will concentrate on mail preparation within the plant.

Outgoing Mail picked up from the stations and collection boxes or dropped off by mailer or company:

On the Platform

1. There should be a separate tray for non-bar-coded metered letters. This includes trays of non-bar-coded metered bundles. These letters should be weighed and flowed directly to the OCR/ISS. If many of the letters are not faced correctly in the tray, do not run the tray. Put the mail aside and process with procedures for "020 Loose Letters".

2. Loose and bundled metered letters in tubs should be isolated and send to an opening unit located close to the OCR/ISSs. Follow the attached procedures for the "020 Loose Letters".

Incoming Opening Unit

Before letter trays are processed on automation, all non-machineable letters should be culled out.

6.9 Throughput Improvement

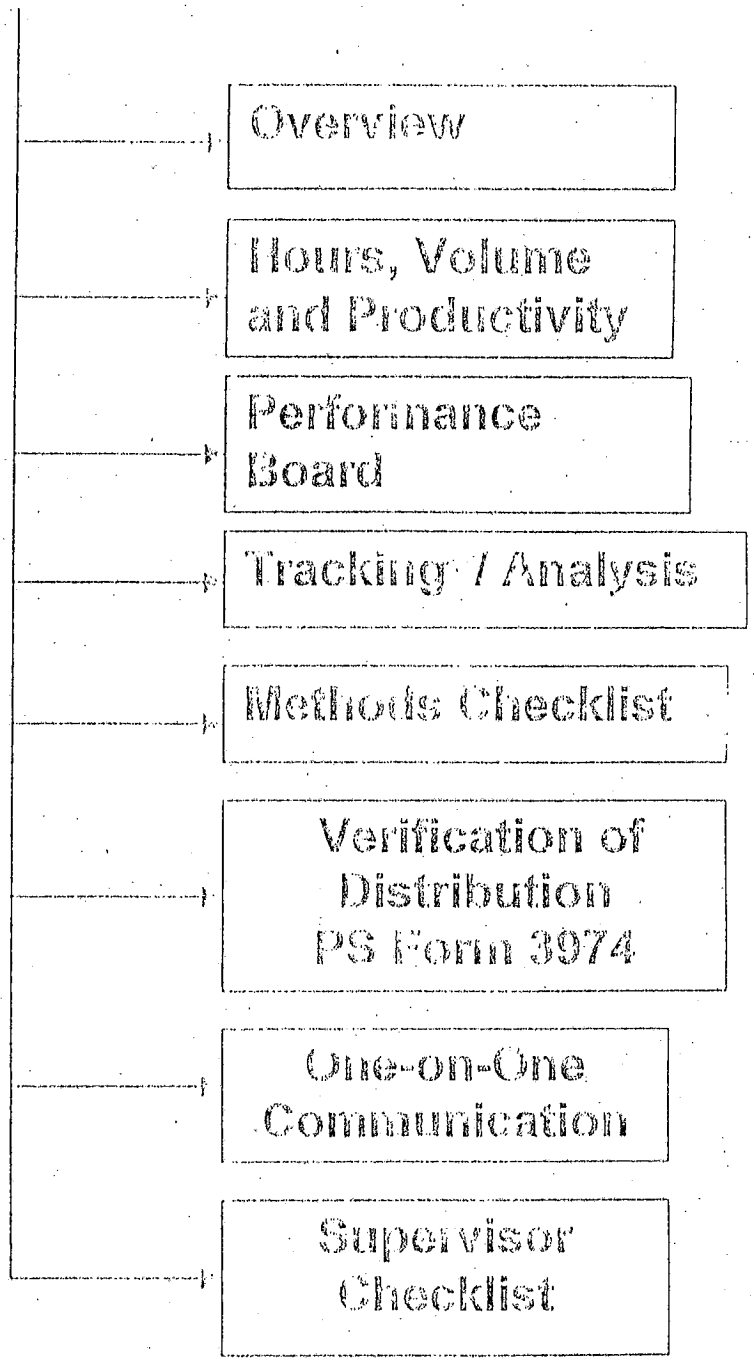
Three things largely affect throughput:

- **Mail availability**
- **Methods**
- **Number of jams**

1. **Mail availability**
   - Timely mail flow to the machines is necessary for the loader to keep the machine running and processing. Knowing the sources and where they are located is important. The Supervisor and the person designated to bring the letters to the machines must communicate often.
   - Mail handlers should be assigned specific duties. Create a routine that will enhance productivity. Each mail handler should be held accountable for certain flows and for keeping the machines from running out of mail.
   - Robbing up needs to be timely and continuous. This will reduce the amount of time the machines are idle (anytime clerks are on a machine and that machine runs out of mail).
2. **Ability to keep the ledges loaded**
   - The loader on any automated machine must keep the ledge loaded. This can be accomplished with proper methods and techniques. During training, these methods and techniques should be explained. It is important to work efficiently and be organized.
3. **Number of Jams**
   - Reducing the number of jams will allow the machine to process more mail in less time. To reduce the number of jams, all non-machineable letters must be jogged, edged and culled. Torn letters and letters with the flap opened should be removed during the jogging process. It is also important to cull out all letters either too thick, tall or too long for the machine.

End of Run reports should only be pulled when the sort plan is to be changed or at the end of tour. When reports are pulled at other times (run out of mail, jam or break time), it masks inefficiencies and real productivity, making it difficult to improve efficiency and productivity. Once a machine starts, it should not run out of mail.

7.0 Performance and Visual Management



7.1 Overview

The Postal Service must improve operational efficiencies in order to remain competitive in today's environment. It is management's responsibility to streamline operations, control costs, and improve productivity. Monitoring performance and making sound business decisions are part of a manager's daily responsibilities.

A common characteristic of high performing operations is the ability of the manager to communicate to employees, expectations and to monitor and communicate results or outcomes of their efforts. The following section provides tools for managers to communicate targets (expectations), and a format in which to convey to employees, daily performance towards these targets.

7.2 Automation Operations Performance Summary

Automation Operations Performance Summary

Machine Number:_____ Supervisor:_____

Date:_____ A/P:_____ Day:_____ Tour:_____

	Pcs/Hr goal	Time	A	B	C	Time	A	B	C	Time	A	B	C	Time	A	B	C
		:00				:00				:00				:00			
		:06				:06				:06				:06			
		:12				:12				:12				:12			
	A= Feeders	:18				:18				:18				:18			
	B= Sweepers	:24				:24				:24				:24			
	C= Set up	:30				:30				:30				:30			
		:36				:36				:36				:36			
		:42				:42				:42				:42			
		:48				:48				:48				:49			
		:51				:54				:54				:51			
2.1	Sub totals	Σ(1)				Σ(3)				Σ(5)				Σ(7)			
3.1	otal Hrs 2a+2b+2c																
		:00				:00				:00				:00			
		:06				:06				:06				:06			
	A= Feeders	:12				:12				:12				:12			
	B= Sweepers	:18				:18				:18				:18			
	C= Set up	:24				:24				:24				:21			
		:30				:30				:30				:30			
		:36				:36				:36				:36			
		:42				:42				:42				:42			
		:48				:48				:48				:48			
		:54				:54				:54				:54			
2.2	Sub totals	Σ (2)				Σ(4)				Σ(6)				Σ(8)			
3.2	otal Hrs 2a+2b+2c																
4	rand Total All Hrs.					Total "A" Hrs.				Total "B" Hrs.				Total "C" Hrs.			

	Hour Beginning	Beginning Reading	Ending Reading	Each Hour: Pieces Fed	Each Hour: Work Hours	Each Hour: Fed per Work Hour	Cumulative: Pieces Fed	Cumulative: Work Hours	Cumulative: Fed per Work Hour
(1)									
(2)									
(3)									
(4)									
(5)									
(6)									
(7)									
(8)									

(1) Enter the beginning hour in each row. (I.e. 15:00 would be noted for the hour from 15:00 - 16:00.)
(2) Enter the pcs fed reading from the MLOCR control panel or from the BCS or DBCS monitor at the beginning of the hour.
(3) Enter the pcs fed reading from the MLOCR control panel or from the BCS or DBCS monitor at the end of the hour.
(4) Use the Ending Reading from the previous hour as the Beginning Reading for the current hour.
(5) Subtract the Beginning and Ending Readings & place the result in Pieces Fed.
(6) Enter the Work Hours from the worksheet above.
(7) Divide Pieces Fed by Work Hours and enter the result in Fed per Work Hour.

7.3 2345 – Hours, Volume & Productivity Tracking Form

Manual Operations Performance Summary

Operation: _____ Supervisor: _____

Date: _____ A/P: ____ Day: _____ Tour: ___

1 Goal (pc/hr) =	0 - 2 Hrs			2 - 4 Hrs			4 - 6 Hrs			6 - 8 Hrs			Total	
	Time	A	B	Time	A	B	Time	A	B	Time	A	B	A	B
	:00			:00			:00			:00				
	:06			:06			:06			:06				
	:12			:12			:12			:12				
Distribution =	:18			:18			:18			:18				
Employee count	:24			:24			:24			:24				
	:30			:30			:30			:30				
	:36			:36			:36			:36				
Allied =	:42			:42			:42			:42				
employee count	:48			:48			:48			:48				
	:54			:54			:54			:54				
	:00			:00			:00			:00				
(1 count = 0.1 hour)	:06			:06			:06			:06				
	:12			:12			:12			:12				
	:18			:18			:18			:18				
	:24			:24			:24			:24				
	:30			:30			:30			:30				
	:36			:36			:36			:36				
	:42			:42			:42			:42				
	:48			:48			:48			:48				
	:54			:54			:54			:54				
2 Sub totals														
3 Total (2A+2B)														

Record Volume as Received in Pcs.				Hour	Tot. Vol.	Workhour	Productivity

7.4 Performance Board

Operation _____ Date _____

	HOURLY			CUMULATIVE		
Hour	Volume	Work-Hours	Productivity	Volume	Work-Hours	Productivity

7.5 Tracking and Analysis

PRODUCTIVITY PERFORMANCE TRACKING REPORT

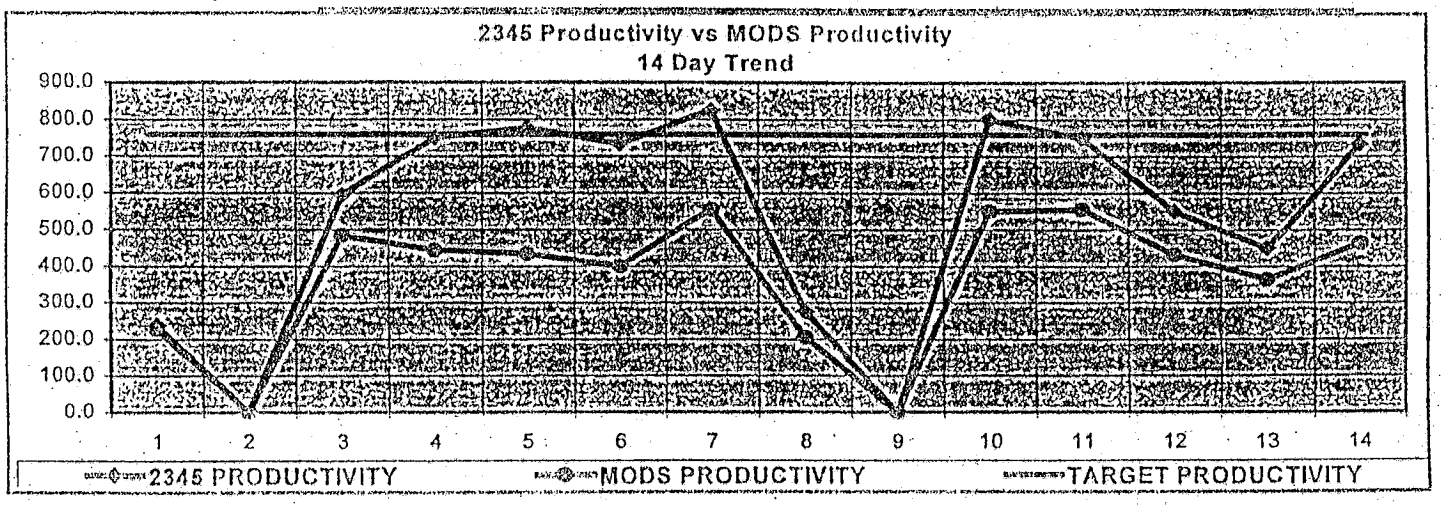
OPERATION NUMBER 030

MODS PERIOD BEGIN DATE: 4/8/00

	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	TOTAL
2345 TPH WKLD (000)	18.0	0.0	70.0	60.0	70.0	66.0	66.0	22.0	0.0	80.0	60.0	44.0	44.0	66.0	666.0
2345 WORKHOURS	76.0	12.0	118.0	80.0	90.0	90.0	80.0	80.0	0.0	100.0	80.0	80.0	98.0	90.0	1074.0
2345 PRODUCTIVITY	236.8	0.0	593.2	750.0	777.8	733.3	825.0	275.0		800.0	750.0	550.0	449.0	733.3	620.1

	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	TOTAL
MODS TPH WKLD (000)	20.0	0.0	60.0	44.0	52.0	44.0	50.0	18.0	0.0	66.0	50.0	38.0	40.0	52.0	534.0
MODS WORKHOURS	88.0	0.0	124.0	99.0	120.0	110.0	90.0	88.0	0.0	120.0	90.0	88.0	110.0	112.0	1239.0
MODS PRODUCTIVITY	227.3		483.9	444.4	433.3	400.0	555.6	204.5		550.0	555.6	431.8	363.6	464.3	431.0

	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	TOTAL
DIFF WORKLOAD (000)	-2.0	0.0	10.0	16.0	18.0	22.0	16.0	4.0	0.0	14.0	10.0	6.0	4.0	14.0	132
DIFF WORKHOURS	-12.0	12.0	-6.0	-19.0	-30.0	-20.0	-10.0	-8.0	0.0	-20.0	-10.0	-8.0	-12.0	-22.0	-16
DIFF PRODUCTIVITY	9.6	0.0	109.3	305.6	344.4	333.3	269.4	70.5	0.0	250.0	194.4	118.2	85.3	269.0	189.1



	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	TOTAL
TARGET PRODUCTIVITY	759	759	759	759	759	759	759	759	759	759	759	759	759	759	75

7.6 Methods Checklist

UNITED STATES POSTAL SERVICE

EMPLOYEE OBSERVED: DATE OBSERVED:

EMPLOYEE SIGNATURE: OBSERVER:

MANUAL DISTRIBUTION LDCs14/43 OBSERVATION SHEET

	DEFICIENCY	PROBLEM	COMMENTS
1	**Wasted Motion**		
	Unnecesary body motion while casing		
	Shuffling mail before casing		
	Casing from separate piles of mail rather than picking up handfuls		
	Picking up less than a handful of letters or an armful of flats		
2	**Rest Bar**		
	One foot on platform at all times		
	Proper positioning for distribution of mail		
	Proper use of rest bar		
3	**Ledge-Loading Mail**		
	Single level of mail on ledge		
	Stamps down and to the back for letters		
	Addresses facing the distributor for flats		
4	**Distribution Fluidity**		
	Left hand held at center of body at 45 degree angle about 5 to 8 inches from case		
	Does not tap letters before casing		
	Right hand used properly to distribute letter/flat		
	Holds flats in left arm for distribution		
	Excess time scanning address before casing		
5	**Color Coding**		
	Standard Mail Color Code used *(if applicable)*		
	Color Code strips disposed of properly		
6	**Case Assignment**		
	Taking first available or adjacent case		
	Non-mixing of Pref and Standard Mail		
7	**Case Sweeping**		
	Proper placement of tray		
	No talking with distributors		
	Pulls all mail from separation		
8	**Housekeeping**		
	Stores trays after completion (nest like trays, label end to front)		
	No personal items at case		
	Removes strip labels from tray		
	No trash on case or floor		
	No displaying of postcards or mail		
9	**Talking**		
	Keeps talking to a minimum		
	Continues distribution while talking.		
	Uses a lowered voice so as not to disturb others.		
10	Other items observed		

7.7 Verification of Distribution Performed, PS Form 3974

U.S. POSTAL SERVICE
VERIFICATION OF DISTRIBUTION PERFORMED

1. YEAR

2. EMPLOYEE NAME (LAST, FIRST, MI)

3. SOCIAL SECURITY NO.

4. SCHEME

5. TOUR

VERIFICATION
(Proficiency check not less than once an accounting period for each schemeemployee)

DATE OF CHECK a	SCHEME PRO-FICIENCY (✓) b	NON-SCHEME ACCURACY (✓) c	NO. OF PIECES d	% CORRECT e	CHECKED BY (INITIALS) f	CHECK (✓) PASS g	CHECK (✓) FAIL h	REMARKS i

7. SECOND PROFICIENCY CHECKS
(Two weeks after a scheme proficiency check failure)

FAILURE DATE	DATE OF SECOND CHECK	NO. OF PIECES	% CORRECT	SUPERVISORS NAME	CHECK (✓) PASS	CHECK (✓) FAIL	REMARKS

PS FORM 3974
Nov. 1979

7.8 One-on-One Communication

Communications

Communications with employees at all levels is essential for a company to prosper in today's fast paced environment. The company's goals and expectations must be communicated as well as individual expectations of employees.

Communication works best if it both parties have an opportunity to share and voice expectations, concerns and recommendations.

7.8.1 Definition

A "one-on-one discussion" is defined as individual communication lasting at least one minute between the supervisor and employee that discusses current performance, expectations and goals.

One-on-one communication should take place at least once per week with each employee.

This can take place most anywhere while the employee is on the clock.

Some rules to remember are:

Be honest to yourself as well as the employee
Let the employee know exactly how they are performing
Let the employee know what is expected of them
Let the employee know the goals of the unit, tour and office
Let the employee know what role they play in achieving these goals
Offer assistance where applicable
Give the employee an opportunity to respond
Listen to the employee

ONE-ON-ONE COMMUNICATIONS

Office / Plant: _____

Unit/Pay Location: _____

Date: _____

Manager / Supervisor (Print Name): _____

Brief summary of unit/office goals and expectations presented to employees:

_____

_____

_____

_____

_____

_____

Manager / Supervisor's signature: _____

ONE-ON-ONE COMMUNICATIONS (please print employee's name):

Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____
Employee name & Date: _____ _____

Manager / Supervisor's signature: _____

Return to:

Due COB each Friday
(Copies of this form are to be duplicated within individual offices / units.)

7.9 Pre-Tour Operational Checklist

DATE:
SUPERVISOR NAME:

	YES	NO
Determine available staffing		
Check for unscheduled absences		
Make necessary adjustments		
Count on-hand volume in operation and opening/upstream		
Determine whether anticipated volume is over or under daily projected operation		
Communicate with prior operational supervisor about tour turnover rat ional		
Communicate with prior operational supervisor about staffing problems		
Ensure necessary paperwork and forms are available		
Check for proper equipment set-up and labels		
Meet employees to ensure they are ready to work after clocking in		
Give employees their assignments		
Make arrangements for mail flow from all sources		

All "NO" Answers Require a Response and Action

Actions Taken:

_____

_____

Actions Needed:

_____

_____

7.10 On-Tour Operational Checklist

DATE:

SUPERVISOR NAME:

	YES	NO
Process mail in proper sequence		
Check that all personnel are working safely		
Perform case checks of employees		
Communicate expectations to employees		
Monitor distribution practices		
Communicate performance needed toward achieving expectations to employees		
Ensure staffing needs meet, but do not exceed, volume		
Check and post hourly volume, work-hours and productivity for the operation		
Check that machineable mail is culled and faced in trays for automation		
Ensure only non-machineable and nixie mail is processed in the operation		
Check for proper labeling of trays and containers		
Check that full cells are swept		
Ensure mail coming from upstream operations arrives as required		
Ensure mail going downstream operations is moved as required		
Ensure dispatch schedules are followed and all available mail is pulled for each scheduled dispatch		
Keep up with all required paperwork		
Ensure good housekeeping is maintained		
Continually verify volumes and staffing		

Communicate the status of the operation throughout the tour with other supervisors		
Supervise the operation – Keep unauthorized persons out		
Supervise employees to ensure they return from breaks as scheduled		
Supervise employees to ensure they return from lunches as scheduled		
Minimize allied labor		

All "NO" Answers Require a Response and Action

Actions Taken:

Actions Needed:

7.11 Post-Tour Operational Checklist

DATE:

SUPERVISOR NAME:

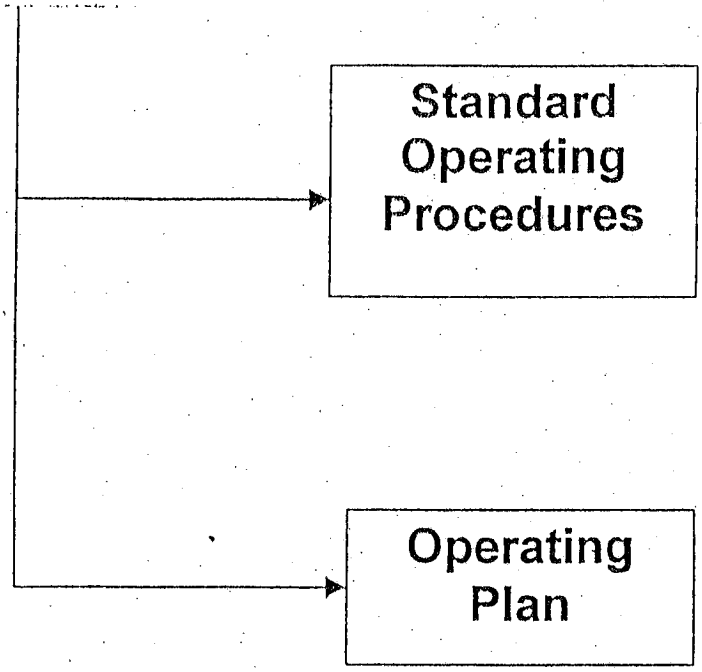
	YES	NO
Ensure all mail has been processed; if the next tour will continue the operation, make sure the operation is prepared		
Check case cells, containers and any other equipment used to verify that no mail remains		
Verify that all dispatches were made as scheduled		
Maintain good housekeeping and leave the operation in a condition that will allow for safe operation by next crew		
Set up the next operation/ tour		
Reassign employees as necessary		
Discuss operation condition, mail availability and any problems with the next supervisor		
Complete all required reports and paperwork. Disseminate as required		

All "NO" Answers Require a Response and Action

Actions Taken:

Actions Needed

8.0 Management Tool



8.1 Standard Operating Procedures Model

A standard operating procedure (SOP) is an organized and detailed account of processing activities performed within an operation. SOP development should be a joint effort between Plant Operations and In-Plant Support.

An SOP should have a standardized format and should contain information that is tour specific. Each tour should know the following:

- Which mail types it is responsible for processing and finalizing
- Where its mail comes from
- The expected arrival time of the mail
- The average daily volume
- The planned start of operations

An SOP should contain contingency plans.

An SOP should contain operational set-up diagrams:

- What equipment is needed
- Where it should be placed
- What time it needs to be set up
- Who is responsible for setting it up

Supervisors should review the SOP periodically and update as necessary. Sops should be reviewed with employees to ensure clarity and understanding of the duties and responsibilities of the operation.

5. FLOW OF MAIL	
Sources of Mail (Operations & Locations)	
Downflow/Destination of Mail	
6. EQUIPMENT	
Initial Support Equipment	
Number & Type of Machines Used Daily (Weekday/Weekend)	
7. PROCESSING TOOLS	
Auto/Mech/Manual-Sort Plans/Case Diagrams	
8. ROUTINE OPERATION	
Begin Tour Routine	
Site Specific Information	
Safety	
Scheduling of Breaks & Lunches	
Staffing (Refer to attached employee roster, including craft, overtime desired list and sources for relief)	
End Tour Routine	
9. UNIT(S) OF COUNT	
10. CONTINGENCY PLAN	

8.2 Operating Plan

The operating plan provides an approach for planning mail-processing operations to meet service commitments. It provides a method for examining the interrelationship of each operation. A facility uses its operating plan to efficiently process and move mail from one operation to the next. It takes into consideration the equipment being utilized and it's processing capabilities.

An operating plan includes the following for each operation:

- **Current mail arrival profile** is determined by the time the mail is received. This is used to determine the operational start-ups and staffing levels.

- **Average daily volumes** are determined by a collection of data over a minimum 30-day period. This is used to establish staffing, processing time, dispatch time and transportation.

- **Planned start time** is the time an operation should normally begin, based on inventory and mail arrival profile data.

- **Critical entry time (CET)** is the latest time committed mail can be received in an operation and still be processed before clearance time. CET impacts staffing and mailflows.

- **Clearance time (CT)**is the latest time committed mail can clear an operation for Proper dispatch or delivery.

UNIT 3
MANAGING MAIL FLOWS

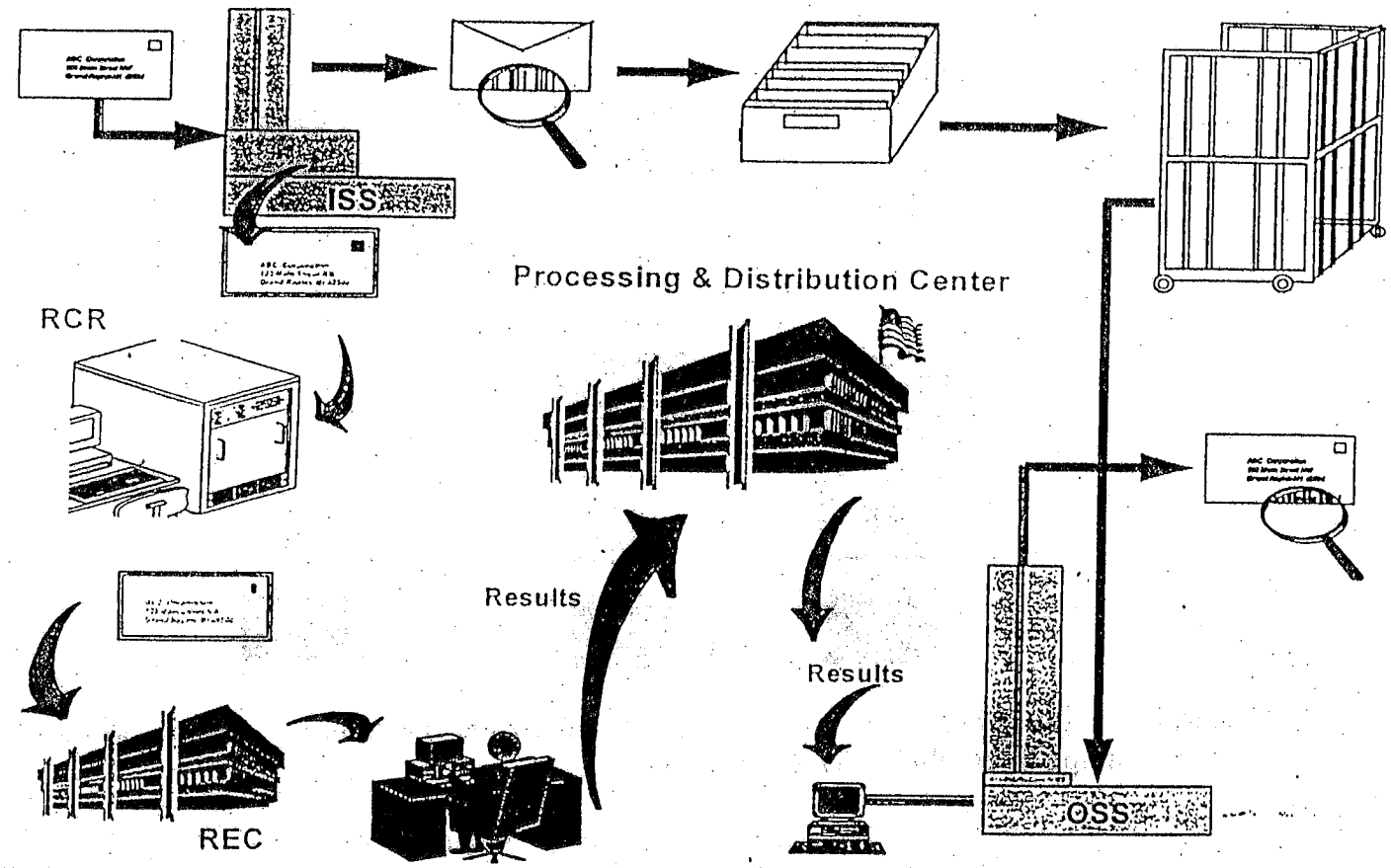
Managing Technology in Automated Letter Mail Operations

Operational Image Management and Mail Flow

An Operational Overview includes the following:

- Show the changes in mailflow at the Plant.
- Describe RBCS candidate volumes
- Discuss effective placarding techniques
- Discuss effective staging techniques
- Identify ISS and OSS special handling requirements
- Discuss IPSS System Leakage
- Discuss LMLM operations

IMAGE FLOW & MAIL FLOW



BASIC WAYS MAILFLOW HAS CHANGED

Processing nonreadable mail on automation;

Flowing script mail from an AFCS Input Subsystem to an Output Subsystem;

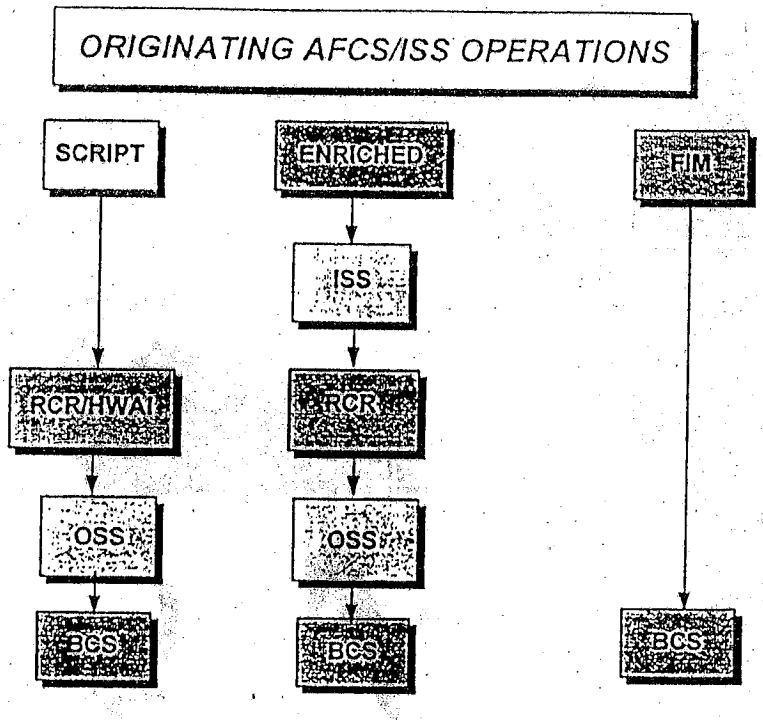
Separating up to 7 stackers of 5-Digit barcoded mail on MLA* and MLB Input Subsystem;

Staging and holding nonreadable and 5-Digit mail for Output Subsystem processing;

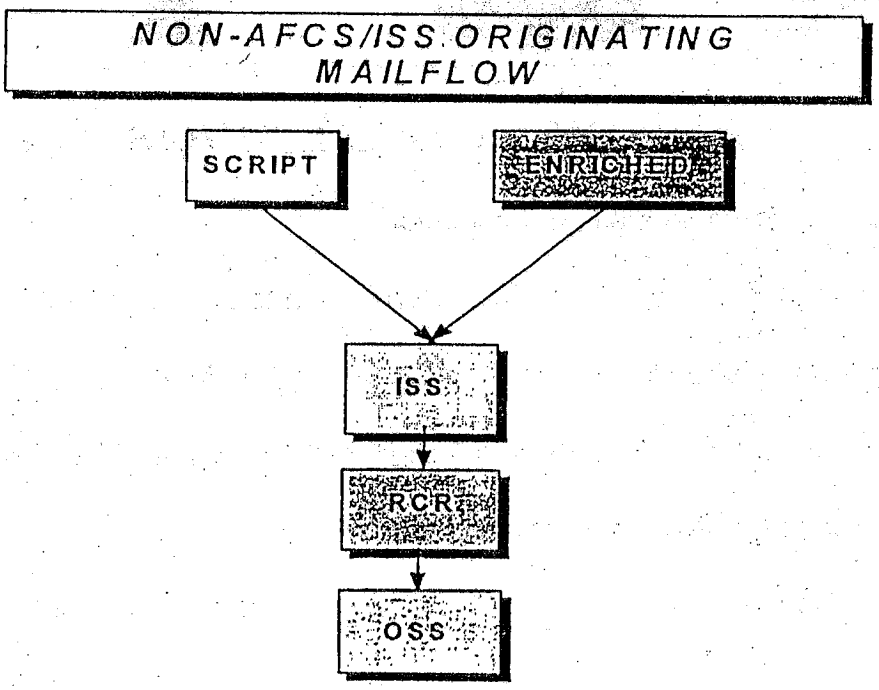
Flows involving the Letter Mail Labeling Machine;

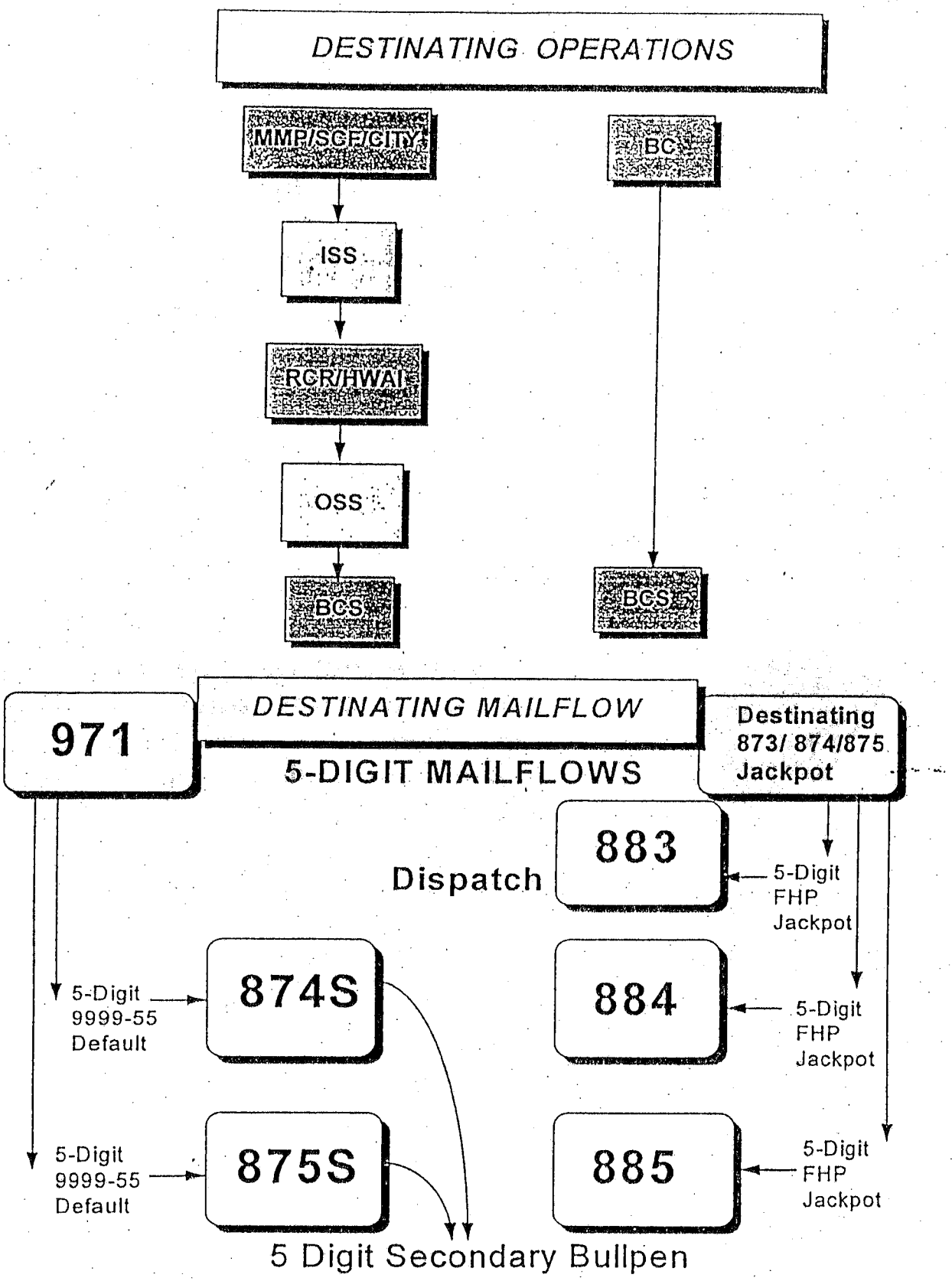
Flows involving the Special Handling Stackers from the MLOCR Input and MPBCS Output Subsystems.

The first major flow change involves the flow of script mail from Advanced Facer/Cancellers. Volumes should receive image lift at the AFCS, as is illustrated below, and flow to OSS as FHP.



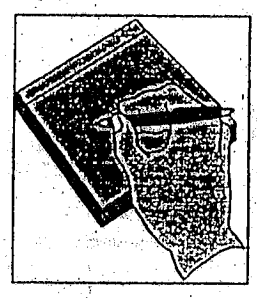
A similar change occurred in the ISS flow of unresolved mailpieces. These mailpieces no have their image lifted, they flow to an OSS.




DESTINATING OPERATIONS
MMP/SCF/CITY
ISS
RCR/HWAI
OSS
BCS
BCS
971
DESTINATING MAILFLOW
5-DIGIT MAILFLOWS
Destinating
873/ 874/875
Jackpot
Dispatch
883
5-Digit
FHP
Jackpot
5-Digit
9999-55
Default
874S
884
5-Digit
FHP
Jackpot
5-Digit
9999-55
Default
875S
885
5-Digit
FHP
Jackpot
5 Digit Secondary Bullpen

CANDIDATE MAIL FOR RBCS IMAGE LIFT

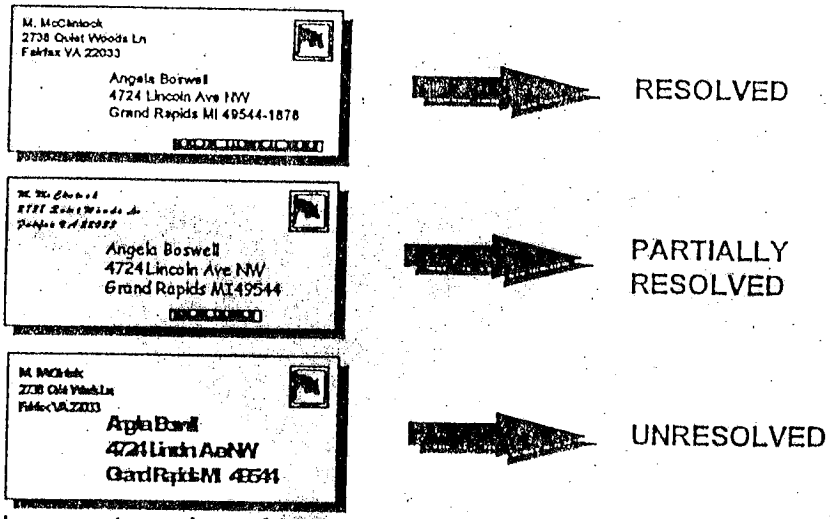
ORIGINATING MAIL	DESTINATING MAIL
ALL Machineable Volumes	ALL Nonbarcoded Mail ALL 5-Digit Barcoded Automated Zone Mail



Have mailhandlers in the breakdown area keep an eye out for trays containing no ID tags. These non-barcoded trays are considered candidate mail for image lift on your OCR / ISS!

Mailpiece image flow in RBCS begins with the first component - the ISS

THREE CATEGORIES OF MLOCR / ISS MAIL



There are three categories of ISS mail:

- RESOLVED
- PARTIALLY RESOLVED
- UNRESOLVED

What would a Resolved mailpiece be?

One that has reached its finest Depth of Code either 9-Digit, 11-Digit, 5-Digit Uniques or 5-Digit Non-Automated Zones with a barcode, and finalized to an accept stacker.

What are Partially Resolved Mailpieces?

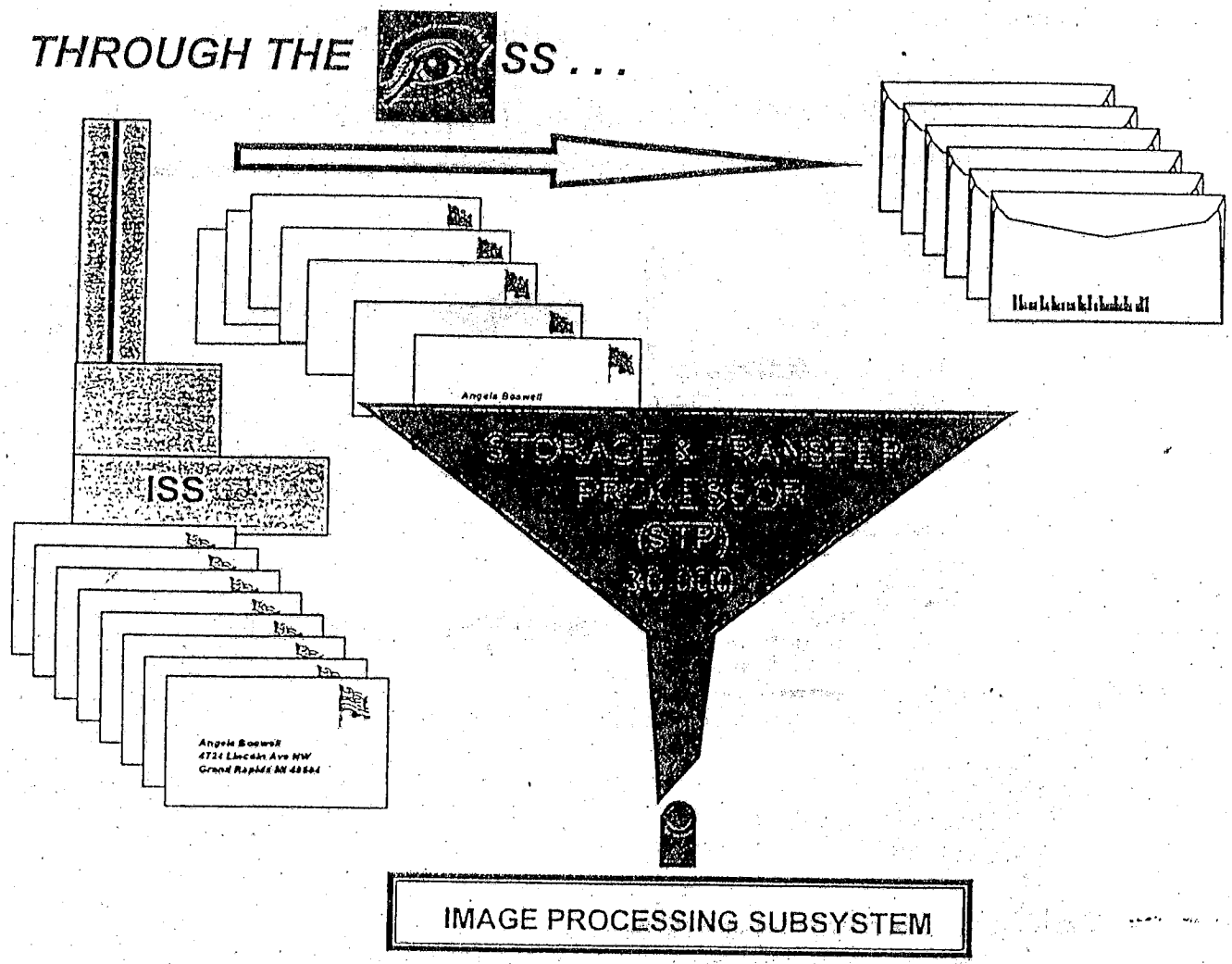
5-Digit Results on Mailpieces

What are Unresolved Mailpieces?

Read Rejects. Mail with no Partial Results

5-Digit results come in 3 categories. What would they be?

UNIQUES	OCR / ISS identifies and does not send to the REC.
AUTOMATED	All are sent to the REC for coding.
NON-AUTOMATED	OCR / ISS identifies and does not send to the REC, as these are considered resolved.



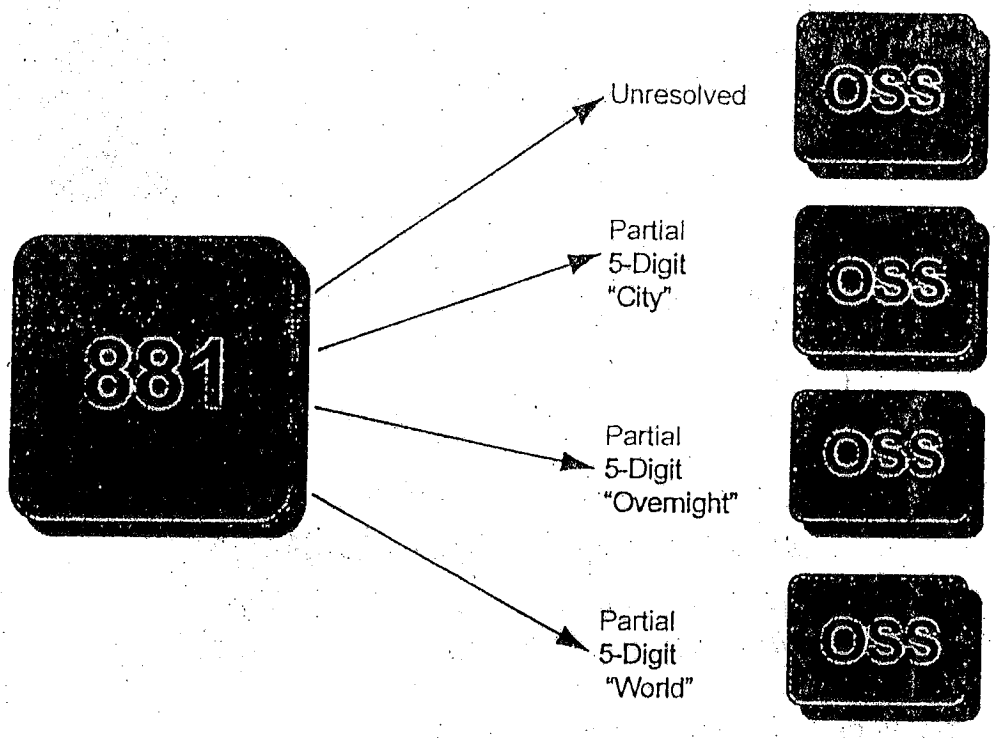
Remember mailpieces that go through an ISS get an ID tag printed on the reverse side (except for FIM mail on the AFCS/ISS), and ALL MAILPIECE INFORMATION is compressed into a file by the STORAGE AND TRANSFER PROCESSOR (STP) on the ISS. The STP compressed image files contain image information and their assigned ID Tag. These files are temporarily stored in the STP until the OCR lookup result is determined.

Images will be deleted from the STP for mailpieces finalized in the lookup process. OCR / ISS software has the ability to determine which zones are Non-Automated or Unique and considers them as "finalized" so that the image does not go to IPSS.

The STP can buffer up to how many images?

28-35,000 Images can be buffered. Based on average image size, expect approximately 30,000 images.

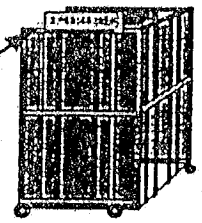
"STACKER KINDS" PROVIDE FLEXIBILITY



At the Plant, (depending upon the OCR / ISS sort program) normally all mail that receives 5-digits fall into a bin designated as an IPSS image lift bin. MLA* and MLB-ISSs can separate 5-digit into multiple stackers so Uniques, Non-Automated, etc., can be held out.

Unreadable letters or unresolved mailpieces are sent to a separate stacker and staged to await further processing. There can be separate containers for these two mail types labeled with placards.

Containers
- Mail Type
- ISS Number
- Time of Last Tray
- High or Low Priority



2 19:45 OTG

EFFECTIVELY PLACARDING MAIL FOR STAGING IN AN RBCS ENVIRONMENT

Placarding mail containers, labeling trays and labeling stackers on Automated equipment is a significant step in RBCS mailflow management.

At a minimum, the placard for the container should identify the following:
1. Mail Type
2. ISS Number
3. Time of First & Last Tray Processed
4. Next handling
5. High or Low Priority

Coordinate colors for placards on the staging containers with the stackers on Automated equipment and possibly next handling flows as well.

- Label the first and last tray in each mail container with the time they were processed on the ISS. This will allow informed decisions on when to begin processing the mail on the OSS. All clocks chosen to "time" the trays of the placards should be synchronized to the ISS/IPSS System clocks.

- When placing trays of mail into mail containers from the ISS, consistency is the key whether containers are filled from the top down or the bottom up.

Now that the mail has been run through the ISS, and is isolated, it is time to wait for the image to flow through the RCR and the IPSS.

Staging Mail for RBCS Processing

There are two methods of staging Rejects and 5 Digit coded mail from the ISS for processing on the OSS:

1. Jackpot Staging
   - Every Reject tray and 5 Digit coded tray is jackpotted into the same mail container for staging.
   - Each tray is identified as Non-barcoded or 5 Digit coded.
2. Stacker Staging
   - Two mail containers exist.
   - One for Non-Barcoded mail.
   - The other for 5 Digit coded mail.
   - It can assist with contingency planning.

Other Sources of Mail for Staging

5- Digit Jackpots from destinating primary/secondary for ISS Processing
LMLM candidate (noise in barcode clear zone)
Labeled mail (from LMLM) for OSS Processing
AFCS ISS Mail
Mail Processed on High Priority through the ISS
Return-to-Sender volumes

MLB/A* ISS SPECIAL HANDLING NOTES

The A* has the ability to assign "stacker kinds". Every stacker on the A* is assigned either an "N" for Normal processing or an "R" for RBCS processing.

In the ISS mode, with "N" stacker kinds designated, 3 and 5 Digit mailpieces will sort as if they were in the OCR mode. (i.e. No image will be sent to the Remote Encoding Center.) In the ISS mode, with "R" stacker kinds designated, 3 and 5 Digit mailpieces will sort into the assigned stacker and images will be lifted and sent to the RCR and then to the Remote Encoding Center.

Up to seven bins may be assigned with the "R" stacker kind to allow processing priorities and mail flows from the ISS to the OSS.

MLB/A* ISS SPECIAL HANDLING CODE REFERENCE CHART

SORT CODE	NAME OF SPECIAL SORT	DESCRIPTION	PROBABLE CAUSE	SPECIAL CONSIDERATIONS	*NEXT HANDLING
C	ISS Reject	Unreadable Fluorescent ID Tag	Hot envelopes, faulty ID Tag Printer or ID Tag Reader	Flows to LMLM and label is on reverse side of mailpiece for reprocessing on ISS; Same as Read Reject Stacker in OCR Mode.	LMLM back and OCR / ISS
F	Foreign	OCR recognizes Foreign Address on Mailpiece	Mailpiece has foreign address	This flag is no longer valid in ISS mode. Parameter settings and/or software enable image lift for Foreign Mail.	Unassigned Bin (if flag disabled)
I	ID Tracking Errors	Tracking Errors through the OCR	Mailpiece is lost by the tracking function of the ISS	Note: Not caused by PostNET or ID Tag Quality; similar to Mechanical Rejects.	OSS
J	Jet Printer Reject	Printer lock (no PostNET barcode sprayed on mailpiece)	IJP is inhibited until Mail Transport is at correct speed	Examples: Jams, Frequent Stops and Starts.	OSS
J	PostNET Verifier Errors	Unreadable barcodes in barcode clear zone	Faulty IJP and smeared barcodes	Examples: Jams, Frequent Stops and Starts.	OSS
N	ISS Non PostNET	Mailpiece that the OCR could not read	Unreadable due to mailpiece characteristics	Up to three Overflow stackers can exist.	OSS
R	OCR Reject	Read Reject in the OCR Mode	Mailpiece that the OCR could not read due to mailpiece address characteristics	This flag is not used in the ISS mode, however volumes should be validated.	OSS
T	Old ID Tag	The date in the ID Tag exceeds the expired date programmed into the ISS.	Loop Mail.	Threshold default on ISS is 5 days. Can be adjusted by Maintenance. Old ID Tag mail must be isolated and verified.	Manual
U	Unassigned	Barcoded mailpieces and Special Sort Codes that are not assigned to a bin in a given sortplan	Programmed by In-Plant Support personnel; Also known as Out-of Sortplan	Note: All ZIP Codes and Special Sort Codes should be assigned to a sort program.	Sortplan with all ZIP Codes assigned

* Combinations of Special Sort categories may be jackpotted at each site by subsequent handling.

OSS SPECIAL HANDLING CODE REFERENCE CHART 1

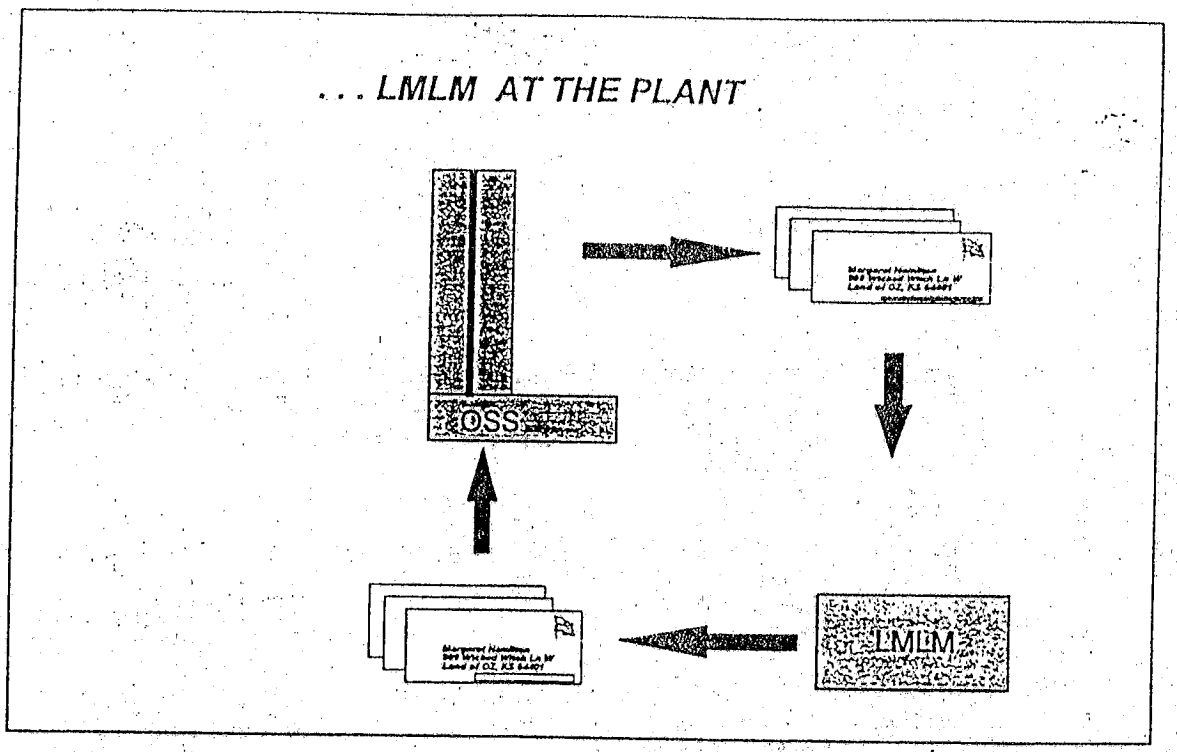
SPS Flag	OSS Code	Name of Special Sort	Description	Probable Cause	Special Considerations	*Next Handling/ Tolerance
A	NOT	No ID Tag found in DSU	OSS could not locate ID Tag when it queried the DSU	Mailpiece has not been through the local IPSS, data has been lost by the system, purged by the user, misread by the OSS.	Large volume may indicate an internal mailflow problem, procedural error or system malfunction. Note: Mail will be routed to this stacker if ISS STP disconnect occurs.	OCR / ISS < .5%
B	MSF	Misfaced	DCO keyed mailpiece as misfaced	Misfaced mail fed into ISS; Could indicate a problem with AFCS Mail Preparation	Must be faced prior to subsequent handling; Ensure proper jogging procedures.	Reface and ISS < 2-4%
C	DBF	Double Feed	DCO keyed mailpiece as a double	Problem in ISS feed section or mailpiece is physically attached	Large volumes may signal ISS feed problem or jogger problem.	OCR / ISS < 1%
D	NOZ	No ZIP Found by IPSS	IPSS could not obtain a ZIP match using the national directory with the address and city/state information keyed by the DCO.	Deficient directory or customer addressing problem	Problem mailpieces should be copied and given to DAS so they can determine directory related problems vs. customer addressing problems.	Manual < .5%
E	TMO	Time-out	OSS queried the DSU and did not receive results in time to spray a PostNET barcode on the mailpiece	Possible system problem due to communication error with DSU	Large amount can exist, if so notify Maintenance.	OSS < 1%
F	URT	Unreadable ID Tag	OSS ID Tag Reader could not read ID Tag	Interference in ID Tag area, faulty ID Tag printer at ISS or problem in ID Tag Reader	Large volume could signal problem with ISS ID Tag Printer or OSS ID Tag Reader. The back of mailpieces would be labeled through the LMLM.	LMLM back and OCR / ISS < 2%
G	VER	PostNET Verifier Error	Incomplete or poor quality barcodes are rejected by the OSS WABCR	Interference in Barcode Clear Zone or malfunction in ISS or OSS IJP or WABCR	High Volume may signal problem with ISS or OSS IJP or WABCR.	LMLM front and OSS 9.5%
H	HDR	Header Only	DSU contains Header information only	System problem: Used internally by IPSS	Very rare occurrences.	OCR / ISS

OSS SPECIAL HANDLING CODE REFERENCE CHART 2

SPS FLAG	OSS CODE	NAME OF SPECIAL SORT	DESCRIPTION	PROBABLE CAUSE	SPECIAL CONSIDERATIONS	*NEXT HANDLING/ TOLERANCE
I	FGR	Foreign Mail	DCO keyed mailpiece as Foreign	Mailpiece had foreign address	Flag is no longer valid in OSS mode. MLOCR Parameter settings and/or software enable image lift for foreign mail.	Unassigned Bin (if flag disabled)
J	NOI	Unreadable Image	DCO identified mailpiece as having an unreadable address	Problem with image transfer, ISS scanner, unreadable to human eye.	Image monitors on ISS can reduce these volumes.	Manual < 2%
K	ZNR	ZIP Not Yet Resolved	OSS requested a ZIP Code and no result yet exists in DSU	Mail was fed too early at OSS	High volume signals a problem with internal mailflow control or incorrect placarding of staged mail.	OSS
L	ZPR	ZIP Partially Resolved	OSS requested a ZIP Code and only a partial (5 Digit) existed in DSU producing a 5 Digit result	Mail was fed too early at OSS	High volume signals problems with internal mailflow control or incorrect placarding of staged mail.	OSS
M	OLD	Old ID Tag	The date in the ID Tag exceeds the expired date programmed into the OSS computer	Loop mail	Threshold default on OSS is 6 days. Can be adjusted by Maintenance. Old ID Tag mail must be isolated and verified.	Manual < 1%
N	OTH	Other	Not Implemented	N/A	Reserved for future use.	N/A
*	NOC	No PostNET Barcode and No ID Tag	Mail that the OSS could not see an ID Tag or PostNET Code	Incorrect mail processed on OSS, double feed mail or improperly fed mail	OSS ID Tag Reader or WABCR may need adjustment; Could also signal internal mailflow problem or operating discipline.	OCR / ISS
*	NOR	PostNET Barcode Error and No ID Tag	Mail that the OSS could not see an ID Tag and PostNET Code was a Read Error	Incorrect mail processed on OSS, double feed mail or improperly fed mail	OSS ID Tag Reader or ISS ID Tag Printer may need adjustment; Could also signal internal mailflow problem; Poorly printed pre-barcoding may be a factor.	OCR / ISS

* Combinations of Special Sort categories may be jackpotted at each site by subsequent handling.

Note on URT, NOC, NOR: If ID Reader problems are suspected, volumes should be reprocessed after mechanical adjustments to avoid System Leakage.



Another piece of equipment that is critical to RBCS is the Letter Mail Labeling Machine or LML The LMLM allows mailpieces rejected because of non readable barcodes or ID tags to b reprocessed through Automation.

The LMLM applies plain white removable labels to the barcode clear zone on letter mail. All OS Postnet Verifier Rejects should be processed on the LMLM.

The design of RBCS allows mail that cannot be successfully sprayed with a PostNET barcode, rea and verified on the first pass by an OSS to fall into a Special Handling bin to be rerun aft application of a label from the LMLM. This keeps these letters in the automated mail stream. On operator is required staffing for the LMLM.

The LMLM is normally the direct responsibility of the Automation Supervisor and is operated by ma processors.

The LMLM is an integral part of RBCS mail flow and failure to effectively use this equipme increases system leakage. The LMLM mail flows and all other RBCS associated flows are to b monitored to assure service is not negatively impacted.

Besides extraneous print or customer writing in the barcode clear zone, a great deal of PostNE Verifier Errors come from bad barcodes. For example:

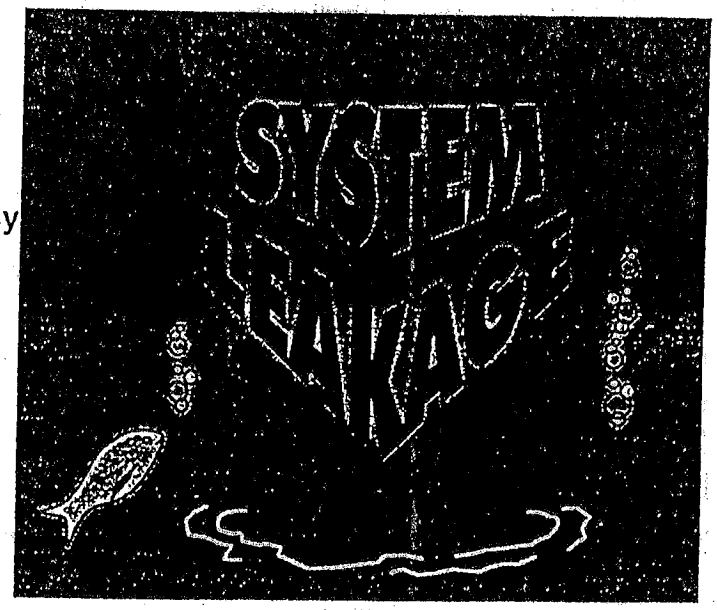
- The "A" Field being printed low on the OCR/ISS and the "B" Field too high on the OSS.
- "B" Fields overlapping or too close to "A" Fields.
- Feeder problems causing the "tail end" of the barcode to be sprayed on the next letter.
- The OCR/ISS and OSS barcode quality should be checked regularly during mail processing.

SYSTEM LEAKAGE

Images In vs Decisions Out

Final Day Statistics Report
Inverse of Image Efficiency

Mechanical Rejects Flow



The System Leakage Goal is less than 5%.

Four major items which cause Leakage are LMLM Candidate Mail not being handled correctly, ISS Mechanical Rejects not being flowed correctly, IPSS system resets and mail culled at OSS feed operations.

Simple, right? Why is leakage important? Because it represents "wasted labor", since keyers worked to resolve an image and the "work" was never retrieved. It also means that some items were diverted from automation, causing processing in more expensive operations.

CONTROLLING SYSTEM LEAKAGE

Special Handling Codes Affecting Leakage

EQUIPMENT	SORT CODE	NAME OF SPECIAL HANDLING	IMAGE LIFT	TO ELIMINATE SYSTEM LEAKAGE
MLB / MLA* ISS	N/G	Read Reject	Yes	Process through OSS
MLB / MLA* ISS	R Stacker Kind	RBCS Stacker Kind 5 Digit Resolved	Yes	Process through OSS
MLB / MLA* ISS	I	ID Tracking Errors	Possibly	Process through OSS; approximately 30% of mail in stacker had image lifted
OSS	E	Time-Out	Yes	Rerun through OSS; if sorted to accept stacker, Leakage for this mail would be eliminated
OSS	F	Unreadable ID Tags	Yes	Impossible through processing; Operational Maintenance is needed to eliminate problem during processing
OSS	G	PostNET Verifier Error	Possibly	LMLM Mail and rerun through OSS; if sorted to accept stacker, Leakage for this mail would be eliminated
OSS	K	ZIP Not Yet Resolved	Yes	Rerun through OSS; if sorted to accept stacker, Leakage for this mail would be eliminated
OSS	L	ZIP Partially Resolved	Yes	Rerun through OSS; if sorted to accept stacker, Leakage for this mail would be eliminated
OSS	NOC	No PostNET Code and No ID Tag	Possibly	Operational Maintenance can assist in correcting the problem, otherwise check operational discipline
OSS	NOR	PostNET Code Error and No ID Tag	Possibly	Operational Maintenance can assist in correcting the problem, otherwise check operational discipline

Leakage is caused by many things, including ID Tag read errors on the OSS. (*If you can't read the ID, you can't retrieve the record!).* When Leakage is excessive, it is usually due to mail flow problems where mail captured on an ISS is sent to alternate distribution operations or dispatched instead of being run on an OSS. This may be unintentional, since it can be caused by inconsistent sortprograms or poor labeling of trays and containers. Keep an eye on your numbers and look for trends.

Other Potential System Leakage

Factors Creating Leakage	Cause of Leakage
LMLM Candidate Mail	Labeled mail is never re-processed through OSS. Unlabeled mail processed through LMLM and flows to MPLSM or Manual
ISS Mechanical Rejects	Lifted image may exist; could process through OSS instead of 1. Rerun on ISS and thereby create another image
Reboot (Cold Start)	ISS processed mail is being staged and Maintenance performs a Cold Boot prior to OSS processing. The results are deleted from the Decision Storage Unit. Potential for occurrence is usually at the end of a processing day.

A site should always average less than 2% ID Tag Rejects on the OSS, and strive for less than 10% PostNET Rejects in an originating operation, (except during the holidays as holiday mail causes both numbers to go up). If the numbers start to exceed these, look at the quality of the barcodes, both ID Tag and PostNET. The ID Tag must be perfectly vertical. This is the easiest ID problem to spot and fix.

RBCS SYSTEM LEAKAGE FORMULA

IMAGE LOSS=
(IPU_IMAG_PROC+RCR_11/9/5_DIG_RESOL)-(OSS_IMAG_PROC-OSS_SCC_FINAL)

IMAGE LEAKAGE=
(IMAGE LOSS/IPU_IMAG_PROC+RCR_11/9/5_DIG_RESOLV)*100

IMAGE EFFICIENCY=
100 - IMAGE LEAKAGE

ENTER VALUES BELOW :

LEAKAGE FORMULA FIELD NAME	REPORT FORMULA FIELD NAME IS LOCATED ON:	REPORT FIELD TITLE	ENTER VALUE'S
IPU_IMAG_PROC	END OF DAY	"IPU IMAGES PROCESSED"	351,309
RCR 11 DIGIT RESOLVED	END OF DAY	"RCR 11 DIGIT"	129,457
RCR 9 DIGIT RESOLVED	END OF DAY	"RCR 9 DIGIT"	12,676
RCR 5 DIGIT RESOLVED	END OF DAY	"RCR 5 DIGIT"	16,230
OSS_IMAG_PROC	END OF DAY	"OSS IMAGES PROCESSED"	514,399
	THESE 3 FIELDS REPRESENT THE OSS_SCC_FINAL FIELD		
ISS 11 DIGIT RESOLVED	OUTPUT PROFILE SUMMARY	"11 DIGIT (ISS)"	11,914
ISS 9 DIGIT RESOLVED	OUTPUT PROFILE SUMMARY	"9 DIGIT (ISS)"	726
ISS 5 DIGIT RESOLVED	OUTPUT PROFILE SUMMARY	"5 DIGIT (ISS)"	13,554

IMAGE LOSS:

IPU_IMAG_PROC	351,309
RCR 11/9/5_ RESOLVED	158,363
OSS_IMAG_PROC	514,399
OSS_SCC_FINAL	26,194
IMAGE LOSS (PCS):	21,467

IMAGE LEAKAGE:

IMAGE LOSS	21,467
IPU_IMAG_PROC	351,309
RCR_11/9/5_DIG_RESOLVED	158,363
LEAKAGE (%)	4.2

EFFICIENCY (%) 95.8

SYSTEM LEAKAGE CALCULATION

image_loss (Image Leakage) = *total_processed_ipu+rcr_11/9/5_dig_resol* (minus) (*total_processed_oss* (minus)*oss_scc_finalized*)

image leakage = (image loss/ipu_imag_proc+rcr_11/9/5_dig_resolv)*100

Image efficiency (Image Ratio) = 100 - (*image_loss / total_processed_ipu*) * 100

***total_processed_ipu*:**	Total number of images processed at the IPU. Data field can be found on the End Of Day Report.
***total_processed_oss*:**	Total number of images processed by the OSS's. Data field can be found on the End Of Day Report.
***oss_scc_finalized*:**	Total number of images processed that were finalized by subsystems (i.e., RCR, VIP, FPM) other than the IPU.
	This data field is not on any reports.

IMAGE LOSS LEAKAGE CALCULATION

The number of images keyed at the IPU (finalized by the VDT) that were not processed at the OSS, or not successfully processed at the OSS due to OSS time-out or POSTNET errors. Since images can be finalized by any one of the following subsystems, VIP_P, FPM_P/R, IPU, and RCR, the IPSS report software has to keep an internal variable to keep track of the OSS processed images which were not finalized by the IPU to serve this purpose. The user can also use the formula above to calculate the Image Loss value close to the one on this report.

WHERE:
ImagesProcessedIPU can be found in this or the EOD report in Summary mode.
ImagesProcessedOSS can be found in this or the EOD report in Summary mode.
##-DigitISSTotal and ##-DigitRCRTotal values can be found in the Output Profile report in Summary mode.

IMAGE EFFICIENCY CALCULATION

The percentage of images keyed at the IPU that were successfully processed at the OSS. The inverse of this number equates to system leakage.

ImageEff = 100.0 - (ImageLoss / ImagesProcessedIPU * 100.0)

STEPS TO LEARNING HOW TO READ A POSTNET CODE

1. Barcodes begin and end with Frame Bars (the first and last tall bars) to identify the field.
2. Five bars (excluding frame bars) = one digit of the ZIP.
3. Of the five bars, two must be tall and three must be short.
4. Each of the five bars has an assigned value: 7-4-2-1-0

5. Add the numbers of the two tall bars to find the digit of the ZIP: 7 + 2 = 9

   Remember: Two tall bars in the 7 and 4 position must always equal Zero.

6. The last 5 bars (before the ending frame bar) will be a correction character (cc) and is not a part of the ZIP itself; it allows us to correct errors in the barcode, if possible (see #8).
7. Once entire barcode has been decoded, all the digits within the barcode field (ZIP + CC), when added together, must equal a multiple of ten:

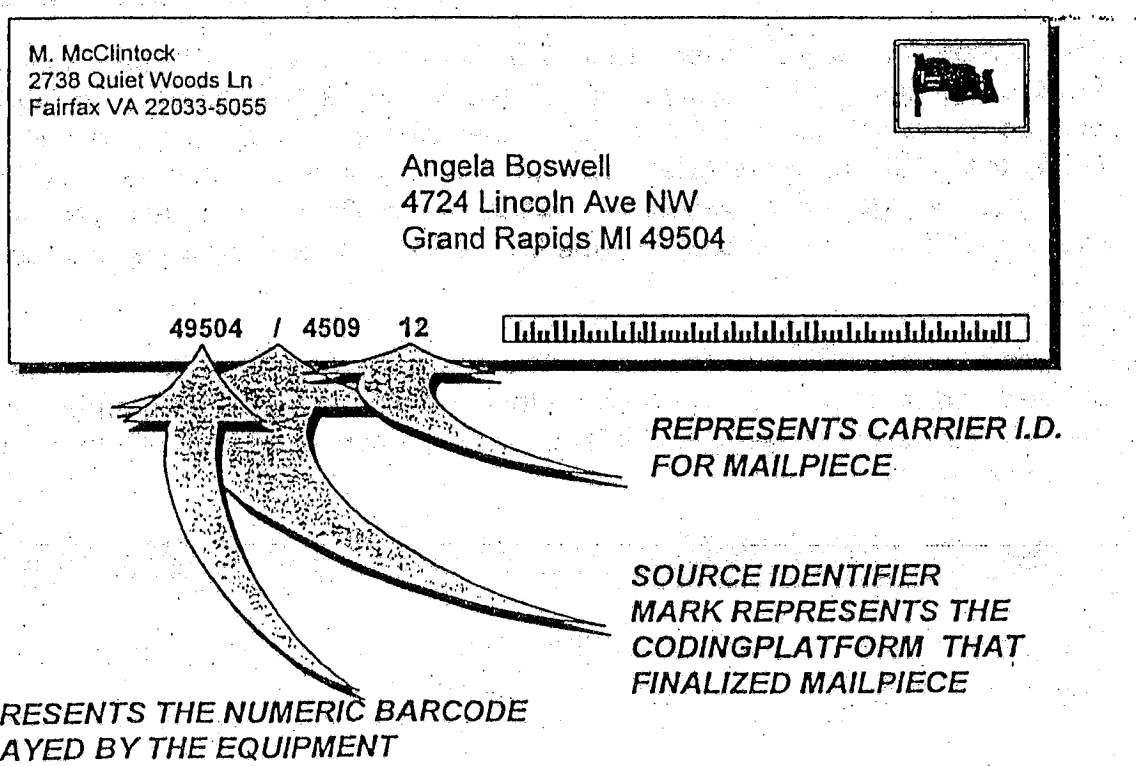
   4+9+5+0+4+8 = 30

8. If the barcode sorter cannot determine the digit based on the five bars, it will add all the digits it *can* read and deduct from the next multiple of ten to determine the missing digit information:

   4+9+?+0+4+8 = 25 (5 is the missing digit!)

   30
   - 25
   5

THE HUMAN READABLE FORMAT

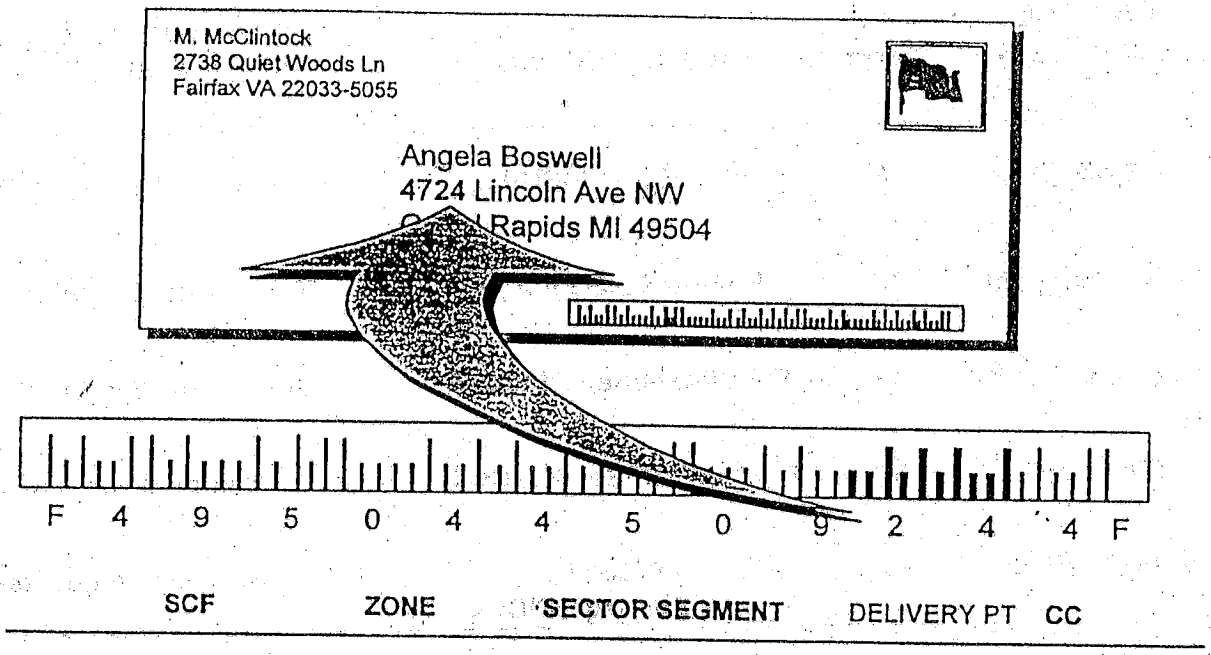


FIELDS OF INFORMATION ABOUT POSTNET BARCODES

FIELD NAME	BARCODE REPRESENTATION	# OF BARS	BARCODE CONTENT	HOW BARCODES CAN EXIST ON THE MAILPIECE
A	5 Digit ZIP	32	F\5 Digit ZIP\CC\F	Can be used alone or with B\B+ Field
B	Sector Segment	37	F\Zone\SecSeg\CC\F	Must be used with an A Field
B+	Sec\Seg & Del. Pt.	47	F\Zone\SecSeg\DP\CC\F	Must be used with an A Field
C	9 Digit ZIP	52	F\5 Digit ZIP\SecSeg\CC\F	Can be used by itself
C+	Delivery Point	62	F\5 Digit ZIP\SecSeg\DP\CC\F	Can be used by itself

Key: F = Frame Bar
SecSeg = Sector Segment (+4 or Add-on)
DP = Delivery Point
CC = Correction Character (Check Digit)

THE DELIVERY POINT BARCODE



TIPS FOR A QUALITY BARCODE OPERATION

Implement periodic checks of barcode print quality on the ISS and OSS throughout all processing runs. The print quality check should include the Verifier Reject stacker as well as spot checks of other sortation stackers. This discipline should apply to all barcode printing systems.

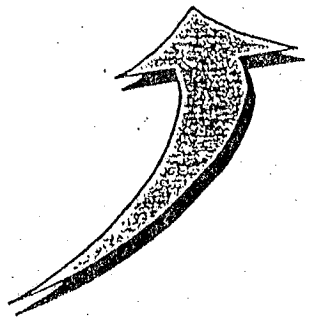
Establish periodic cleaning intervals of Ink Jet Printer print heads of the OSS throughout all processing runs. This also applies to MLOCRs and ISSs.

Train all Automation Supervisors and Mailprocessors to recognize poor quality barcodes and immediately report to Maintenance.

Reinforce Area Assurance responsibilities of Maintenance personnel regarding monitoring machine performance, barcode print quality and acceptance rates.

SOURCE IDENTIFIER MARKS

49504 / 4509 12



IPU	/
MLOCR / ISS	- (MINUS)
RCR / HWAI	+
MLOCR CO-DIRECTORY	>
MLOCR CO-PROCESSOR	X
LOWCOST OCR	=
MAILER	AUTO
COA	: (COLON)

HAVING QUALITY AND CONTROL OF BARCODES

An understanding of the Machine Accept Rate (MAR) indicator on the OSS can be a useful tool for supervisors and Maintenance personnel in determining existing problems and can help in improving the quality of barcodes.

OSS Machine Accept Rate (MAR)

$$\text{OSS MAR} = \frac{\text{(Total Pieces Fed - Non-Reads)}}{\text{Total Pieces Fed x 100}}$$

Ways to Increase the Machine Accept Rate

- Jog **ALL** mail
- Check WABCR Fiber Optic Bundles for Dust and Blocked Aperture Slot
- Check WABCR for Misalignment
- Check Tracking and Feeder
- Check Belt Conditions
- Check Supporting Foam Roller in Front of the Camera
- Check Read Window Photo Cell
- Check ISS ID Tag Printer
- Check ID Tag Reader

Non-Read Mailpieces Vs No Code Mailpieces

A Non-Read mailpiece occurs when the OSS can not see an ID Tag and a PostNET barcode can not be decoded.

A No Code mailpiece occurs when no potential PostNET barcode exists on mailpiece. This can effect the Gross Accept Rate (GAR).

Non-Read Mailpieces and What They Mean

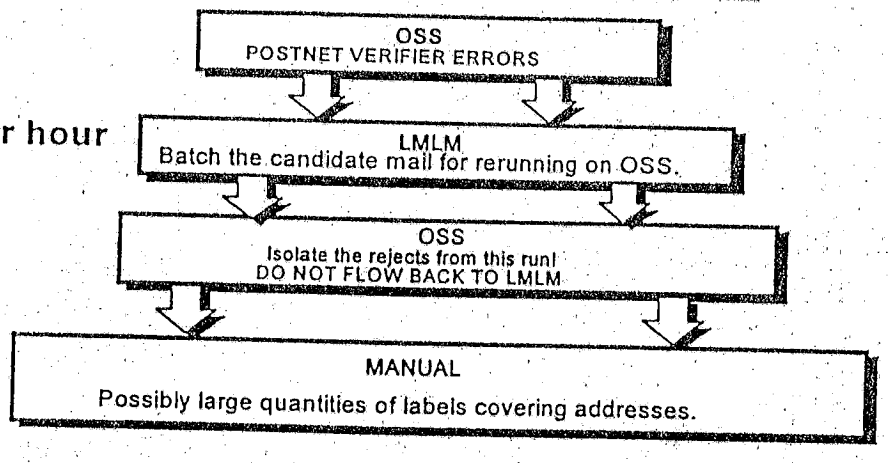
Frame Bar Missing	Mailpieces with an error in the Frame Bar of the barcode.
Unresolved	Mailpieces in which the barcode could not be resolved.
Two Digit Error	Mailpieces with two errors in the barcode which was found and not corrected.
Less than 32 Bars	Mailpieces in which the potential barcode contained less than 32 bars.
Checksum Error	Mailpieces sorted in which the barcode did not contain a PostNET barcode pattern in the checksum area.
Too Many Bars	Mailpieces in which the barcode exceeded the number of bars allowed for decoding as a PostNET Barcode.
Unknown	Mailpieces in which WABCR could not process the barcode information.

OSS Gross Accept Rate (GAR)

$$\text{OSS GAR} = \frac{\text{(Total Pieces Fed - Read Rejects)}}{\text{Total Pieces Fed x 100}}$$

LETTER MAIL LABELING MACHINE

Mail Processor
Applies labels at 20,000 per hour
Opn #776



TIPS FOR USING LMLM EFFECTIVELY

The Letter Mail Labeling Machine is cost effective and can return initially rejected mailpieces back into the Automated mail stream. Proper LMLM usage is not only cost effective, it is imperative that it be used *consistently*!

- If a significant volume of ID Tag Errors exist, sites could utilize LMLM to label the back of the mailpiece and reprocess on ISS. If a large volume of ID Tag Errors are occurring, notify Maintenance! This could signal a problem with an ISS ID Tag Printer.
- Identify mail with noise in the barcode clear area and label prior to processing on the ISS or MLOCR.
- Monitor the processing of LMLM labeled mail.
- Isolate the Rejects from LMLM mail runs and flow to Manual.
- Do not backlog volumes of mail in LMLM operations.

POSSIBLE LMLM MAIL FLOWS

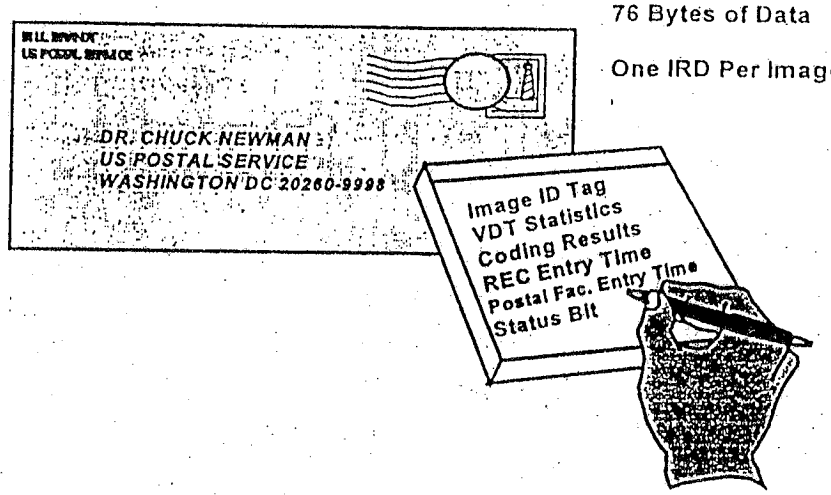
Mail Type	LMLM Handling	Next Handling
OSS Verifier Errors	Label Front	OSS
OSS Unreadable ID Tags	Label Back	ISS
Mail Identified in the Opening Unit with Noise in the Barcode Clear Zone: BBM, Colored or Glossy Envelopes	Label Front or Front and Back(Depending on the Envelope)	ISS

IMAGE RECORD DESCRIPTOR (IRD)

Complete History of the Image From Entry into the System to Final Resolution

76 Bytes of Data

One IRD Per Image



A mailpiece header called an Image Record Descriptor or IRD is created for each mailpiece that enters an ISS, just like every mailpiece that goes through an ISS receives an ID Tag. Note, that the mailpiece header or IRD is NOT the same thing as the ID Tag! The ID Tag is a component of the Image Record Descriptor along with other data that refers to that particular mailpiece.

There are two types of IRDs: One for an accepted mailpiece, and one for an ISS rejected mailpiece.

The IRD for an accepted mailpiece contains only the header, without an image, because once the ISS completes its lookup, a final result is found, and the mailpiece sorts to an accept stacker, there is no need to maintain the information regarding the mailpiece. On the AFCS/ISS the enriched mailpieces contain only header information unless you are lifting images from this mail along with the script mail. This is because the AFCS/ISS does not have the ability to perform lookups or determine ZIP results and does not mean that the mailpiece has been accepted.

The second header retains the image and any address data if the OCR/ISS either rejected the mailpiece or received only partial results. Results from RCR coding, REC Keying, and IPSS directory lookups attach to the IRD until the OSS calls for the information by searching for the ID TAG in the DSU.

The IRD contains the ID Tag assigned to the mailpiece and image information, along with any OCR data such as whether Partial, Final or No Result was found, address information, ABL, and image parameters.

Once a mailpiece is finalized on the OSS by utilizing the results from the DSU, the IRD and all related information is erased from the DSU.

Header Description or Image Record Description

A mailpiece header is created for each mailpiece. Image data is appended to the mailpiece header if the OCR/ISS rejected the mailpiece. There are two types of headers that are created: one for an accepted mailpiece (mailpiece header only) and one for a rejected mailpiece (mailpiece header including image). On the AFCS/ISS the enriched mailpieces will normally get a header only type header. This does not mean that these mailpieces have been accepted. The AFCS/ISS cannot determine ZIP information from the mail.

Mailpiece Header, Without Image: On the OCR/ISS this format is used for mailpieces not targeted for IPSS resolution. This will include OCR resolved ZIP+4 codes, Unique 5 Digit ZIP Codes, Non-Automated zones, and ID Tag Verifier Errors. On the AFCS/ISS this format is used for mailpieces that will flow to an OCR/ISS for further processing.

Field Name	Field Length
ID Tag	16 bytes
OCR Data	144 bytes
Address Block Location	64 bytes
Image Parameters	16 bytes
TOTAL	240 bytes

Mailpiece Header, Including Image: This format is used on the OCR/ISS for mailpieces targeted for IPSS resolution. This includes all mailpieces rejected at the OCR, most 5 Digit coded pieces and (as an option) select 9 Digit results coded to 5-digits. The AFCS/ISS normally uses this format for script mail where we always lift images. The enriched mail may also get this format if we are lifting images from enriched mail on the AFCS/ISS.

Field Name	Field Length
ID Tag	16 bytes
OCR Data	144 bytes
Address Block Location	64 bytes
Image Parameters	16 bytes
OCR Address Information (optional)	Variable Length
Image Data	Variable Length
TOTAL	240 bytes (+)

Header Information remains in the System until a mailpiece is finalized on the Output Subsystem. There are several different fields within each header type. The header format and fields are illustrated below.

OCR Data Format - Fields include:

- OCR Status - Whether Final, Partial or No Result was found, and/or depth of code received, Pre-Barcoded, and Bit assignment.
- ZIP Code - In case of not or partially read/fill with blanks
- PostNET Verify - Passed or error.
- Special Codes - Allows partial recognition data from the MLOCR process to be transmitted to the Remote Computer Reading process. (Only at RCR sites).
- OCR Address Information - In no case will this variable length field cause a data set to exceed 32 Kbytes. When necessary, the upper edge of the image will be cropped to maintain the maximum image size specifications. (optional).

Address Block Location - Fields include:

- Number of potential Address Blocks found
- X,Y Coordinates for each address block found.

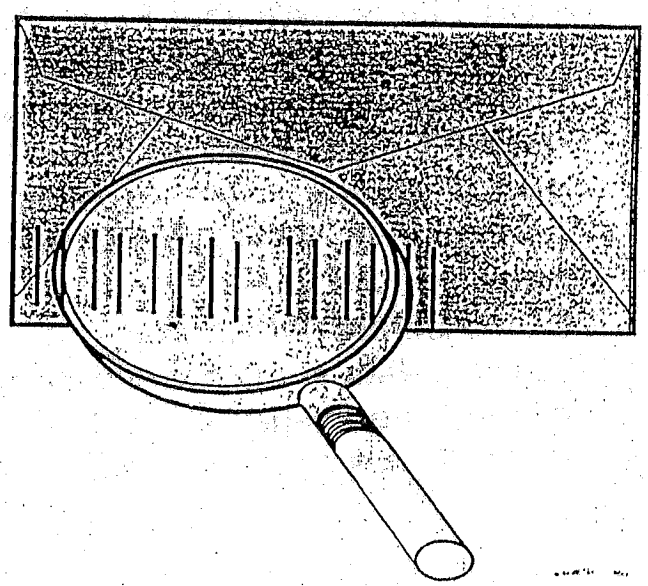
Image Parameters - Fields include:

- Image Class - Test Image, Maintenance Image, Image with or without Header.
- Image Height and Width.
- Compression Method and Parameter.
- Image Data Length.

MAILPIECE ID TAG

ID TAG

- Unique ISS #
- Date
- Time
- Sequence



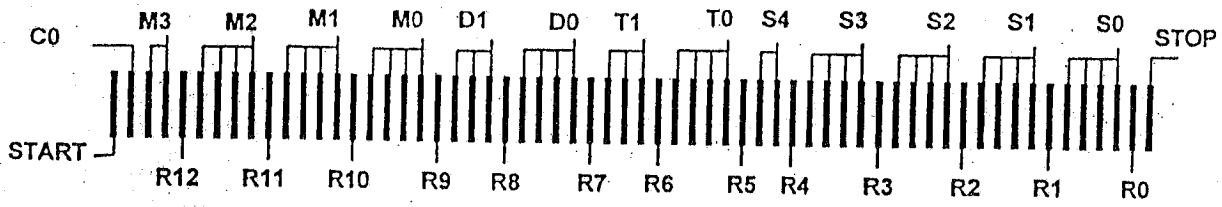
Understanding the Identification Tags

The ID-Tag stays with the mailpiece; therefore, it is important to know the information contained in an ID Tag. This helps to diagnose problem mailpieces and identify possible machine problems.

The information the ID Tag tells us is:

- Mail Class (not used yet)
- ISS machine number
- Site
- Date
- and approximate time that the ID Tag was applied.

- ID Tag - consists of five numeric fields that are denoted by Alpha Code Abbreviations:
- C for mail Class
- M for Machine identification
- D for Day of month
- T for Time of day broken down into "1/2 hour steps"
- S for Sequence Numbers
- R for Redundancy Bits - Redundancy bits are inserted between each numerical field to "protect the code" and to guarantee that no more than 4 gaps succeed one another. The Alpha Code is: A BIT being defined as the number of spaces or bars (I III I) reserved to designate each element of the ID Tag. There are a total of 62 BITS in an ID Tag



The OSS has the capability of interpreting ID Tags and corresponding decisions. By selecting **display zip/pkts** you can display online or last hundred mailpieces. while the mailpiece(s) are being run, supervisors will be able to interpret the "scrolling" ID Tag(s).

- ID Tags for non-postal operations begin with 34 or 35.
- Internal ID Tags begin with 01-30
- Sites should **not** assign their own numbers when relocating equipment. All ID designators should be assigned by HQ's.

Understanding the ID Tag

The identification Tag sprayed from an ISS can offer front-line supervisors information about the mailpiece as well as identifying problems that may have occurred in the system.

What's in the ID Tag?

Mail Class (not in use)
- 0 = Third Class
- 1 = First Class

ISS Machine Identification Number
- Ranges from 1 - 3999 for USPS generated ID tags
- Higher numbers for private and Canadian ID tags

Mach. ID # for your first ISS would be _____

Your Site # for RBCS is _____
(may be more than one number)

Day of Month
- Ranges from 1 - 31
- *Today is* _____

Time of Day
- Ranges from 0 - 47,
- Measured in 1/2 Hour Increments
- *The time increment is* _____

Sequence Number of Mailpiece
- Ranges from 1 - 25000;
- Starts Back at 1 each 1/2 Hour
- *Mailpiece Sequence # is* _____

Time	:01	:31
12:00a	0	1
1:00a	2	3
2:00a	4	5
3:00a	6	7
4:00a	8	9
5:00a	10	11
6:00a	12	13
7:00a	14	15
8:00a	16	17
9:00a	18	19
10:00a	20	21
11:00a	22	23
12:00p	24	25
1:00p	26	27
2:00p	28	29
3:00p	30	31
4:00p	32	33
5:00p	34	35
6:00p	36	37
7:00p	38	39
8:00p	40	41
9:00p	42	43
10:00p	44	45
11:00p	46	47

Note: ID Tags are generally not oversprayed. If a readable ID Tag exists on the back of the mailpiece, the ISS will detect the ID Tag and "reuse it". This includes Canadian ID tags.

When an ID Tag is decoded you have a series of numbers. The first number denotes the Mail Class, which currently is not in use and therefore, at this time, will always be ONE (1) for First Class. (0-zero means Standard)

The second two numbers denote the Image Lift Unit Number (ISS or AFCS).

The next two numbers denote the RBCS Site Number.

The day of month ranges from 1 to 31 and starts over every month. Today's date is _____? Let's use today's date for our example.

If you decoded an ID Tag and the first 5 numbers were 1 02 08 15, what would you know about this mailpiece?

The next two numbers of the ID Tag represents the Time Of Day in a HALF (1/2) hour increment that the mailpiece was run through the ISS.

The time chart demonstrates each hour broken down into 47 half (1/2) hour increments:

- The first column tells us the hour and a.m. or p.m.
- The column titled - :01 denotes the first 30 minutes after the hour.
- The column titled - :31 denotes the second 30 minutes past the hour.

For example: 1:45 AM, look at the Time Column under 1:00 AM.

The first 1/2 hour after the hour would be 2, the second 1/2 hour after the hour would be 3. Therefore: 1:45 A.M. would be?

Let's try another one. What would 8:20 P.M.(20:20) be?

As another example, you decode an ID Tag and it says 30. What 1/2 hour during the day was this mailpiece run?

Between 3:00 p.m. and 3:30 p.m.

Now, a mailpiece run at 10:29 p.m. (22:29) would receive a time number of?

Any questions before we go on to the last five numbers that make up the ID Tag?

The last five digits in our ID Tag information are referred to as the "Sequence number of the mailpiece". Each half hour, when the time increment number

changes, the sequence number starts over at one (1). This number can range from 00001 to 25000. (Leading zeros are added to sequence numbers under 5 digits.)

Decoding an ID Tag

ID Tags are very difficult to decode without the assistance of a decode program, mainly because of the redundancy bits inserted to assure no gap larger that 4 spaces will occur in an ID Tag.

There are a couple ID Tag Decoding programs out now that can be used to decode ID Tags easily, as it is very difficult to decode an ID tag by sight! Currently there is a PC Based program called DECODE.EXE. If you have access to an OSS machine you can run the mailpieces one at a time and watch the ID tag decode on screen.

As we have learned, the ID Tag is a set of fluorescent bars sprayed on the back of a each mailpiece that has gone through and image lift unit, (such as an OCR/ISS or AFCS/ISS).

ID Tags are generally not oversprayed. If a readable ID Tag exists on the back of the mailpiece, the ISS will detect it and "reuse" it. An image is lifted and attached to the IRD with this ID Tag, unless it is considered "old", then it will fall in the designated "Old ID Tag"
bin as possible loop mail.

HARDWARE

REMOTE ISS / OSS
BRIDGE BOX
T-1 LINES
REMOTE TERMINALS AND PRINTER

OPERATIONS

HOST CONTROLS CONNECTIVITY
HOST MANAGES IMAGE BUFFER

RIOSS SYSTEM OVERVIEW

Remote Input/Output Sub System (RIOSS) can be utilized to connect lower volume Processing facilities to current RBCS sites and permit them to benefit from the advantages of RBCS processing.

The RIOSS configuration is made up of two facilities. The remote facility has the ISS/OSS equipment and the Host Plant has the IPSS. Up to two ISS and two OSS machines can be located at a remote location. Soon even more ISSs and OSSs will be possible after the planned hardware upgrade to Time Division Multiplexers (TDMs).The connection and priority settings of the ISS/OSS equipment to the ICU is controlled by the Host P&DC. All maintenance of the RIOSS system and equipment, including the associated T-1 lines, is generally performed by the remote facility.

System Hardware

In addition to the ISS/OSS equipment located at the remote facility, it has the following:

- Communications equipment (2 CSU's, 1 Bridge box, 1 terminal server)
- Maintenance terminal which (controls the operation of the RIOSS hardware)
- A Report Terminal (Operations uses to monitor the status of the system)
- Printer (to produce hard copy reports)
- Modem (for remote access to the system

The Host P&DC requires an additional NIP and possibly a POP card to the IPSS

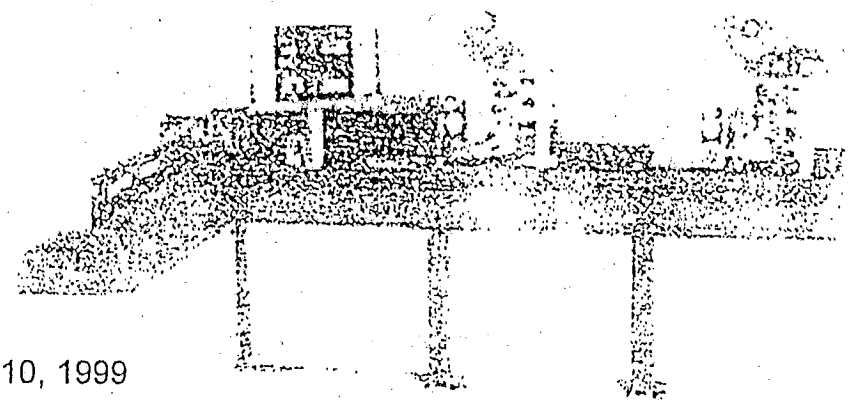
Postal Tabbing

To minimize manual processing, many postal plants attempt to process mail with marginal machineability characteristics on automated equipment. However, many of these pieces are incapable of quick acceleration into a feed system; loose pages open during high-speed belt transport and increase jams. The end result is high volumes of torn and damaged mail pieces, along with possibly higher labor costs associated with the remaining manual mail distribution.
Mailers who have met the requirements for automation discounts and properly tabbed their mailings have raised another concern about redundant tabbing. In response, a policy to eliminate redundant tabbing has been issued so the Postal Service will not apply additional tab(s) to mail pieces already tabbed by the mailer

Customer Issues: Some mailers object to postal tabbing because the design of the mail piece is altered and response rates may be suppressed. Effective April 1, 2000, revisions to "Processing Instructions" in the Domestic Mail Manual (M130 and M610) provide a means for mailers to keep mail pieces from tabbing and all other automated processing. Mailings identified as "Manual Only" must be processed in manual operations.

Other features of the leading edge tabbing machine:

- Translucent tabs are used, rather than white tabs, so that graphics or customer-applied messages are not obscured by the tab(s).
- Tabs measure 1 W and improve the ability to tab thick materials.
- Machine can feed and tab all letter-size pieces, ranging from a maximum of 9" x 12 x 3/16" to a minimum 3" x 5" x .007". Ability to tab thick/thin, short/tall pieces at the same time; no separation of mail types required for processing.
- Second tab will be added to mail pieces with a height greater than 4".
- Machine will tab 95% of mail and segregate the output for MLOCR processing, LMLM processing; DBCS processing; and manual processing. Generally, the return rate to manual operations is less than 5%.
- Throughput: 10,000+ pieces per hour
- Size: 21' L x 6'5" W x 6'9" H (maximum footprint)



November 10, 1999

Profold Leading Edge Tabbing Machine

Profold, Inc. is the only supplier to the USPS of the Leading Edge In-Line Tabbing System.

Profold's automated system has two years proven performance in six USPS areas. @Many of these systems enjoyed through put in excess of 20 million pieces annually, which equates to saving of over 50,000 man-hours per year per unit

One USPS area has successfully installed over 30 systems with an average return on investment of between 3 to 6 months.

To contact Profold call:

STEVE CURTIS
Ph: 603-672-7639
Fax: 603-672-3166 E-
Mal scurtis@xtdl.com

PROFOLD INC

PROFOLD LEADING EDGE TABBING SYSTEM

Rental Program

Cost Per Month For 18 Months	1 Unit	10 Units	25 Units
Profold Leading Edge Tabbing System	$10,500	$9,950	$9,450
Setup, Installation & Three Days of Training, per unit	$6,000		
Setup, Installation & Full Week of Training, per unit	$9,000		
Two million Tabs per machine at a cost of $1.25 per 1000 Tabs, per unit	$2,500		
Off-Site Maintenance Training: a 3-1/2 day session for 2-6 maintenance technicians.	$4,500		

Service Support Program:

- ✓ Maintenance Training Tune Up and Quarterly Preventative Maintenance provided by Profold for each quarter of rental term, at each site.
- ✓ Service Help Desk: 8 Hours Daily for term of rental.
- ✓ Support operations to achieve maximum volume of tabable mail.
- ✓ Work with the acceptance unit and mail processing personnel to ensure maximum candidate mail is identified and routed for tabbing.
- ✓ Manuals: 3 sets provided, per unit - Operators, Maintenance and Illustrated Parts.

Terms:

- All costs above include cost of delivery to the site when shipped with the system.
- Term of the rental program is for an 18-month period which may be renewed 90 days prior to the end of the term for an additional 18 months.
- Upon renewal Profold will install a new system at no cost. Monthly rental cost will be at current prices at the time of renewal.
- Commit to a 36-month rental program and lock in the current monthly cost above for the full 36-month period. A new system will be installed after 18 months at no cost.
- Payments: first and second months rent, a refundable security deposit of one months rent, the cost for installation, tabs and spare parts are due prior to shipment. Each months rent is due on the first day of that month.
- Parts: All non-wear parts to be warranted by Profold. Wear parts at the site's expense (see spare parts kit lists attached for cost)

11/22/99

PROFOLD INC

SERVICE SUPPORT PROGRAM

Profold has installed over 45 Leading Edge Tabbing Systems throughout the Postal Service. Valuable lessons were learned over the course of installing and maintaining these systems, which lead to the development of this service and maintenance program. When adopted, our Service Support Program maximizes your investment by ensuring higher throughput, less downtime and significantly reduced manual mail volume.

Experience has shown that the frequency of visits by Profold technicians and working with maintenance and processing personnel on site stimulates a greater degree of acceptance and ownership by USPS staff, which has resulted in greater savings.

Profold technicians will make quarterly visits to provide:

- Maintenance Tune Up Training: Our technician will give each tour a three hour maintenance training session for all maintenance staff that work on the system.
- Conduct Quarterly Preventative Maintenance: Our technician will do the work and we invite the maintenance staff to participate. He/she will also work with the on site maintenance technicians to resolve problems, issues and/or questions in regard to the system. Profold will replace any non-wear parts that require replacement at the time of the quarterly maintenance, at no charge.
- The technician will audit the system prior to conducting the quarterly PM and will provide this information to the maintenance manager and site contact.
- He/she will observe the operators on each tour and make recommendations for any improvements and answer questions the operators may have. For an additional charge he/she will be available for operator training during his visit.
- The technician will review the procedures for the candidate mail being routed to the tabber to ensure that the maximum savings are achieved.
- The technician will provide a written report in regard to the training, PM, condition of the system and flow of mail to be tabbed with recommendations. This report will be submitted to the plant manager, site contact and area office contact.
- Help Desk Support: our technicians will be available during day time hours, five days a week, to answer questions and provide trouble shooting.

Cost:
Rental Program - No Charge
Purchase Program $24,000 per unit, per year

Contact:
Steve Curtis
Account Manager
603-672-7639
email:scurtis@xtdl.com

11/22/99

Processing Operations

UNITED STATES POSTAL SERVICE

January 12, 2000

MANAGERS, IN-PLANT SUPPORT (AREA)

SUBJECT: "Torn Mail" Envelopes for Damaged Letters

Presently, when a letter is damaged, it is placed into a clear plastic bag that then receives manual processing. In 1996, the Lancaster Performance Cluster began to test and use a new envelope for damaged letters that allows the letter to be re-entered into the automation mail stream. The "Torn Mail" Envelope has subsequently been put into use in the Las Vegas and Baltimore Performance Clusters.

The cost impact for re-introducing damaged letters into the automation mail stream is $5 per 1,000 total piece handlings versus nearly $50 per 1,000 manual total piece handlings. In addition, the envelope cost is half that of the plastic bags and it is a biodegradable material.

Attached is a copy of the "Torn Mail" Envelope and offeror/contractor information of the company that has produced the envelope, as well as a timeline for implementation. The new envelopes should be used by all no later than April 8, 2000.

Should you have additional questions or concerns, please contact Ronald Porter of Processing and Distribution Center Operations at (202) 268-6491.

Walter O'Tormey

Walter O'Tormey
Manager

Attachments

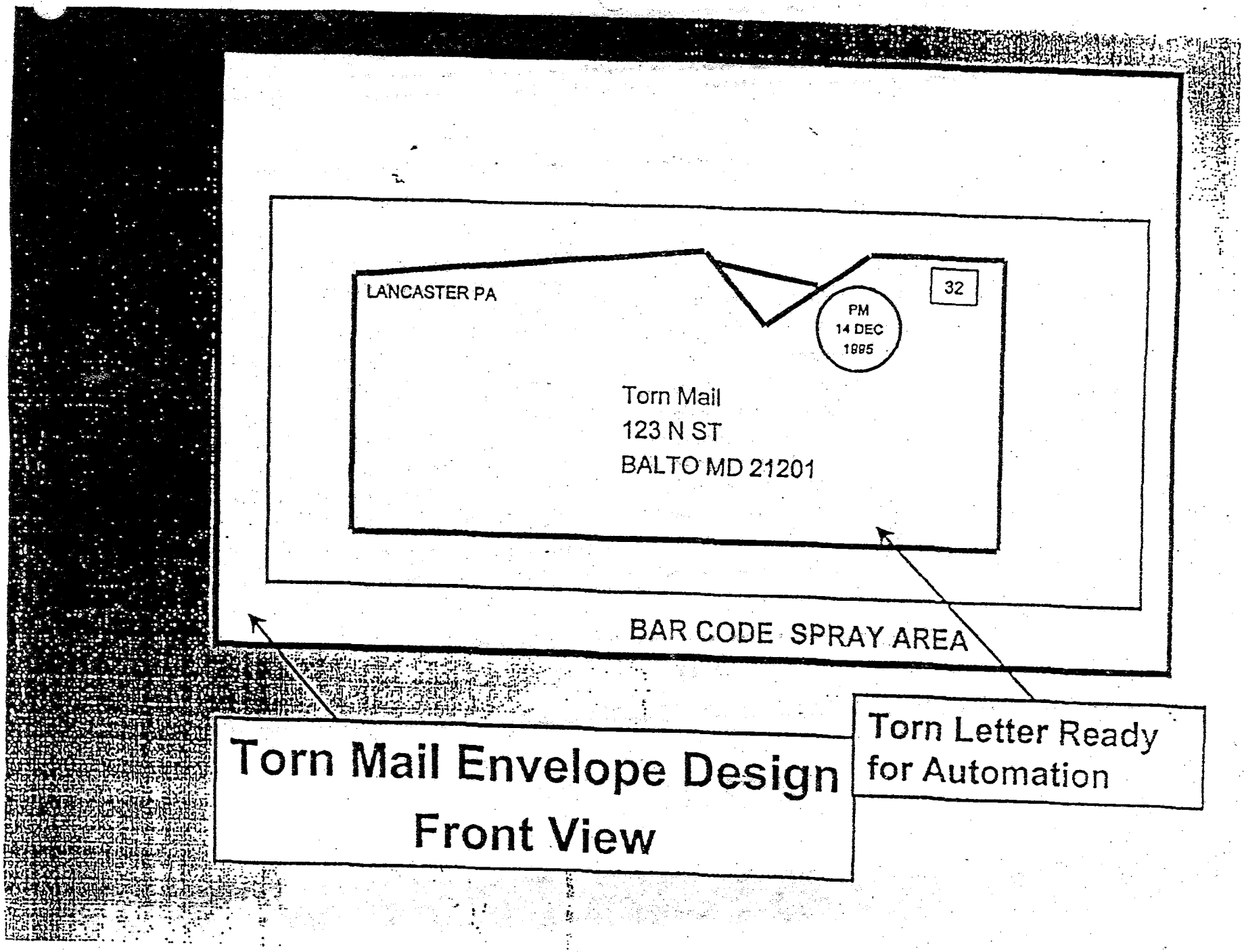
cc: Mr. Spates
Mr. Goldstein
Ms. Peak

MANAGER, IN-PLANT SUPPORT
SOUTHWEST AREA
(DATE) JAN 18 2000

DUE:	ACTION	INFO
REO		
OPS	[illegible]	
MAT		
FIN		
AF		✓

Pls - disseminate via e-mail as needed

475 L'Enfant Plaza SW
Washington DC 20260-2804
202-268-4305
Fax: 202-268-5388



Torn Mail Envelope Design
Front View

SELF STICK

Fold Line

Dear Valued Postal Customer:

I want to extend my sincere apology as your Postmaster for the enclosed document that was inadvertently damaged in handling by your Postal Service.

We are aware how important your mail is to you. *With that in mind, we are forwarding it to you in* an expeditious fashion.

The U.S. Postal Service handles over 177 billion pieces of mail each year. While each employee makes a concerted effort to process, without damage, each piece of mail, an occasional mishap does happen.

We are constantly working to improve our processing methods so that these incidents will be eliminated. You can help us greatly in our efforts if you will continue to properly prepare and address each letter or parcel that you enter into the mail stream.

We appreciate your cooperation and understanding and sincerely regret any inconvenience that you have experienced

Your Postmaster

Rear View of Torn Mail Envelope Design

U.S. POSTAL SERVICE: PURCHASE ORDER

1. ORDER NUMBER: 102595-98-P-0618
2. REQUEST NUMBER: 98-02430
3. SOC/EC: A 4. COMMODITY: 7510G

5. a. ISSUED BY:
PRINTING PURCHASING
US POSTAL SERVICE
475 L'ENFANT PLAZA SW RM 4131
WASHINGTON DC 20260-6255

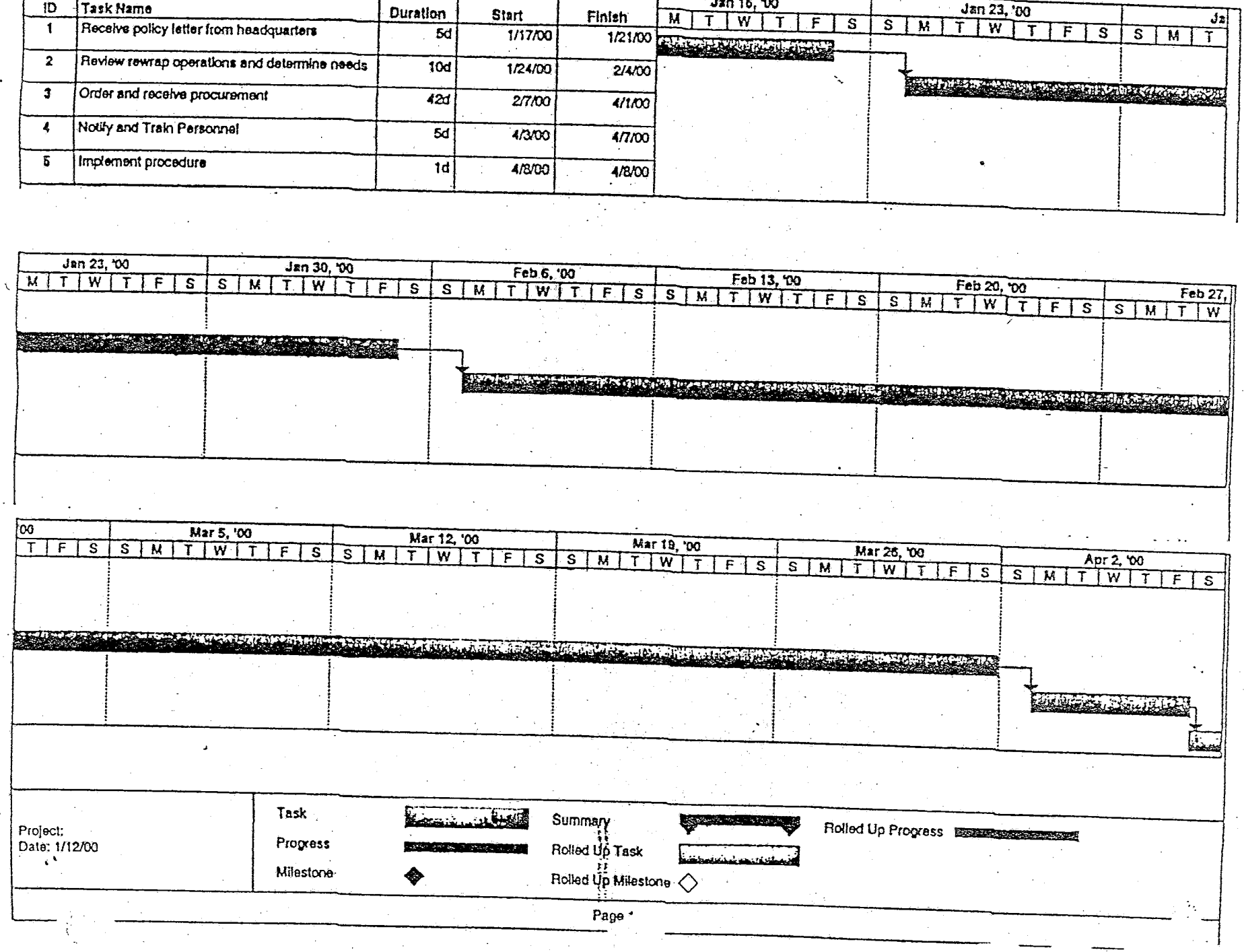
b. FOR INFORMATION CALL:
Name: Rose M. Green
Title: Purchasing Specialist
Tel: (202) 268-8950
(No Collect Calls)

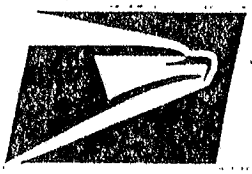
6. a. OFFEROR/CONTRACTOR
OLES ENVELOPE CORP
JIM CONSIDINE
532 EAST 25TH STRRET
BALTIMORE MD 21218-5403

b. Contact name:
c. Telephone No: (410) 243-1520
d. TIN: 52-1113661
e. Parent TIN:
TIN-Taxpayer Identification Number

f. Remittance Name and/or Address: (If different from above)

ID	Task Name	Duration	Start	Finish
1	Receive policy letter from headquarters	5d	1/17/00	1/21/00
2	Review rewrap operations and determine needs	10d	1/24/00	2/4/00
3	Order and receive procurement	42d	2/7/00	4/1/00
4	Notify and Train Personnel	5d	4/3/00	4/7/00
5	Implement procedure	1d	4/8/00	4/8/00





RBCS Image Quality Improvement Through The Use of Mode II Audits and No-Improvement ZIP Filters

October 1999

RBCS Image Quality Improvement Through The Use of Mode II Audits and No-Improvement ZIP Filters

I. Introduction

The purpose of this quality improvement methodology is to establish a minimum level of actions required of Processing & Distribution Centers (P&DCs) and Remote Encoding Centers (RECs). These procedures establish requirements for national reporting of quality data. They in no way preclude P&DCs and RECs from beginning or continuing quality programs which exceed the requirements of this methodology.

Quality can be defined as a comprehensive approach to continuous improvement. Achieving a quality result is important; the Remote Bar Coding System (RBCS) goal is to generate quality bar codes to the finest depth of code in an efficient and timely manner. This document outlines an image quality improvement procedure for identifying quality-related issues associated with RBCS. The procedure has two components: Mode II Audits and No Improvement Filters. The Mode II Audit module sends a predetermined number of the same image to two different keyers at the REC. Any image that is keyed differently by the two operators is classified as a "problem image", from which "gross error" and "adjusted error" rates are calculated. The adjusted error rate is defined as those errors caused by DCO keying. By following the audit procedures outlined in this document, both the gross and adjusted error rates will be driven downward. The second component is the No Improvement Filter. The No Improvement ZIP Filter process captures samples of images that were not finalized to the finest depth of code. By following the No Improvement procedures outlined in this document, the number of No Improvement images will be driven down. The final result of both procedures will be the finest depth of code possible being applied on all images processed through the RBCS sites.

II. MODE II AUDIT PROCEDURES

Designated plant personnel are to run Mode II Audits according to the sample size, frequency and audit instructions contained in Appendix A on a weekly basis at a minimum. If current Area instructions are to perform Mode II audits on a more frequent basis, those instructions should be adhered to. "Problem images" are to be printed out using the instructions in Appendix A. The Statistics report, Summary report, and Operator report are also to be printed for each audit session. Designated Plant personnel will conduct an initial analysis of images using the procedures and error categories outlined in Appendix A.

The designated plant personnel will annotate each "problem image" with the error category. A "problem image" can result in two errors charged per image sample if analysis shows that both DCOs made keying errors. If two errors are charged for one image sample, the total errors calculated would exceed the number of "differing result pairs" shown on the Audit Summary Report. Designated plant personnel will also annotate each image that requires additional action for error-resolution. Once the initial analysis is completed, the "problem images" and audit reports will be sent to the REC for further analysis and review. Upon receipt of the package from each plant, designated REC personnel review results of the initial analysis performed by the Plant and identify any "problem images" that may need to be reclassified using the tracking sheet contained in Appendix A, and any additional images that require action for error-resolution. Upon completion of the review, the REC will contact the Plant to schedule a discussion of the package. Discussions should center on potential solutions to image resolution problems as well as problem images that may need to be reclassified. Images requiring further action for error resolution will be annotated as to the type of action needed and responsible party. In subsequent discussions, the status of previously identified images requiring follow-up action will be reviewed.

Upon completion of discussion, the following corrective actions will be taken:

- Designated plant personnel will coordinate the efforts of all Plant and District support functions to correct the cause(s) of "problem images" that are not the result of keying errors. This may involve the efforts of the DAS, Maintenance personnel, mail processing personnel, AMS, MDA, DPS coordinators, and Customer service personnel, depending on the specific cause of the "problem image".

- Designated REC personnel are to counsel individual REC keyers identified during Mode II audits as having keying deficiencies.

Also after discussions are completed, the agreed upon categories of "problem images" will be input into a standardized Excel tracking sheet (contained in Appendix A). This tracking sheet will be used to generate gross and adjusted error rates for each plant to create trend charts for each category of error. RECs processing images for more than one plant will have multiple MODE II audit tracking sheets (Appendix A). The individual plant results are to be consolidated to represent the total quality measurement for the entire REC and reported to Headquarters on an AP basis.

Worksheets that can be used by plant personnel to plan and track the MODE II audits are contained in Appendix C.

III. No Improvement ZIP Filter Procedures

Image Sampling Analysis Tool

The Image Sampling Analysis Tool is a program that runs on the IPSS Audit module. It allows the user to perform detailed analysis of previously captured image sample sessions, with the intention of identifying directory or other problems. The Analysis Tool allows several sample sessions to be consolidated and viewed by keystroke occurrence. This density-based approach can, in just a few minutes time, categorize thousands of images, assisting in identifying problems more efficiently.

The Analysis Tool follows the logical course of action that might be taken by a person attempting to identify problems, such as directory discrepancies, customer addressing anomalies and keying problems, but does so much more efficiently. This, in turn, allows much larger sample sets to be analyzed, improving the likelihood of identifying meaningful problems. The Analysis Tool will also report SCFs and 5 digit ZIPs that occur most often in the No Improvement sample.

Designated Plant personnel are to use the No Improvement Analysis Tool to identify the top four zones contributing to No Improvement volumes in their facility on a *Quarterly* basis. Instructions for use of the tool are contained in Appendix B. Once the sample has been collected, designated plant personnel will use the tracking sheet contained in Appendix B to track and categorize the No Improvement samples. Error categories to be used are also contained in Appendix B. Those samples identified as receiving no improvement due to keying error will be sent to the appropriate REC for analysis and review. If, after review, REC personnel feel that the no-improvement was not due to keying error, they will contact plant personnel to discuss the error category assigned. If a keying error caused the no-improvement, REC personnel will counsel individual keyers identified as having keying deficiencies.

Upon completion of the attached worksheet, NIWKST_5.XLS, the following action will be taken.

Designated plant personnel will coordinate the efforts of all Plant and District support functions to correct the cause(s) of no-improvement images that are not the result of keying errors. This may involve the efforts of the DAS, Maintenance personnel, mail processing personnel, AMS, MDA, DPS coordinators, and Customer service personnel, depending on the specific cause for the no-improvement image.

Designated REC personnel are to counsel individual REC keyers identified during the sampling as having keying deficiencies.

Designated plant personnel will forward this data to the Area Office RBCS Coordinator on a Quarterly basis. It is expected that the 'Top 20' occurrences identified will be significantly eliminated from Quarter to Quarter. The Area Office designee will consolidate individual P&DC/F worksheets into an Area 'Top 20' workbook (sample NE_Q4_99 attached) on a quarterly cycle.

IV. Responsibilities in This Process

Plant Manager

The plant manager is responsible for ensuring that the Mode II Audit procedures, No Improvement Zip Filter procedures, and problem resolution procedures are followed at the facility on an ongoing basis. Additionally, the manager is responsible for designating appropriate plant personnel to generate weekly and AP reports for distribution to the REC and Area Office.

REC Manager

The REC manager is responsible for ensuring the Mode II Audit procedures, No Improvement ZIP filter procedures, and problem resolution procedures are followed at the REC on an ongoing basis.

Manager, In-Plant Support

The Manager, In-Plant Support (MIPS) is responsible for ensuring that appropriate personnel are designated to run and analyze the Mode II Audits and No Improvement ZIP Filters. The MIPS must also ensure that appropriate personnel are designated to discuss image errors and solutions with the REC on a weekly basis, and coordinate the efforts of all Plant and District support functions in the correction of problem images.

Manager, Distribution Operations

The Manager, Distribution Operations is responsible for ensuring that problems identified as being caused by mail-processing practices (such as improper jogging) are corrected immediately.

Manager, Maintenance

The Manager, Maintenance is responsible for ensuring that problems identified as being caused by image lift units are corrected immediately.

Area RBCS Coordinator

The Area RBCS Coordinator is responsible for ensuring the Mode II Audit procedures, No Improvement ZIP filter procedures, and problem resolution procedures are followed in their Area on an ongoing basis.

Sampling Methodology and Control Charting

The following is a more thorough discussion of sampling methodology and control charting. Although control charting is not a required part of this process, its use can track keying quality over time and can indicate poor keying quality on a sample-set by sample set basis.

DCO keying quality (like the quality of any production process) is subject to variation. This variation can be classified as being either random or assignable. Random variation occurs on an infrequent basis and is due to undiscoverable causes such as simple human fallibility. This type of variation usually cannot be economically eliminated. On the other hand, assignable variation happens due to reasons that can be identified and corrected. Because of the existence of random variation, it is possible that the overall keying quality could actually be at an acceptable level even though the percentage error value for a particular data set would indicate otherwise. Thus, it is necessary to be able to distinguish between random and assignable variation.

This can be done through two different methods. One of these methods is acceptance sampling. Acceptance sampling is a pass/fail process that can statistically determine on a sample-set by sample-set basis if the keying quality is acceptable.

Another method is called control charting. Control charting is a graphical method that tracks keying quality over time and can indicate poor keying quality on a sample-set by sample-set basis, as well as detect any trends that could lead to future poor keying quality. REC keying samples can be obtained using the IPSS Audit module in the Mode II setting. Images must be sampled systematically to obtain statistically valid estimates of the keying error rate at the Remote Encoding Center. A Sampling Period (SP) is defined as a REC operating day, starting from the end of the preventive maintenance window to the beginning of the next day's preventive maintenance window. Remote Encoding Center DCO keying quality is determined by identifying those sampled problem images bearing non-identical results that cannot be attributed to causes other than DCO keying errors. Directory problems, address hygiene, and image lift quality are the primary reasons for discounting a sampled image result from the error calculation. Control charting is not a requirement of this methodology. It is an additional tool that is recommended to use in quality improvement efforts.

As previously mentioned, control charting is a graphical method that tracks keying quality over time and can indicate poor keying quality on a sample-set by sample-set basis. It can also detect any trends that could lead to future poor keying quality and present a large amount of numerical data in a concise and easy-to-interpret format. Control charts have two distinct features. One of these is the *central line*, which is the average value of the process variable being charted. The other distinct feature is *control limits*, which delineate the random variability area (the area within the control limits), from the assignable-cause variability areas (the other areas of the control chart). There is an Upper Control Limit (UCL) and a Lower Control Limit (LCL), and these two limits are typically placed three standard deviation units away from the central line. At this distance, very few false quality problem alarms will be generated.

Control charts can be prepared using Microsoft Excel using the 25 most recent adjusted sampling data points. Once the control chart is produced, some of the items to look for are: points falling outside of the area between the UCL and the LCL, excessive number of points (≥ 7) on either side of the central line but still within the area between the UCL and the LCL, and trends that are linear or cyclic in nature. Data points that show these tendencies should be removed from further calculations after their underlying causes have been corrected.

Since the focus here is on the percentage of defective images, the proper type of control chart to use is the p (proportion defective) chart. This information will be available from the previously discussed acceptance sampling procedure, so no new data will need to be collected.

To find the control limit and central lines for the p chart, use the formulas:

Average Sample Size: $\bar{n} = \textit{total images inspected / number of samples taken}$

Average Proportion Defective: $\bar{p} = \textit{total \# of errors / total images inspected}$

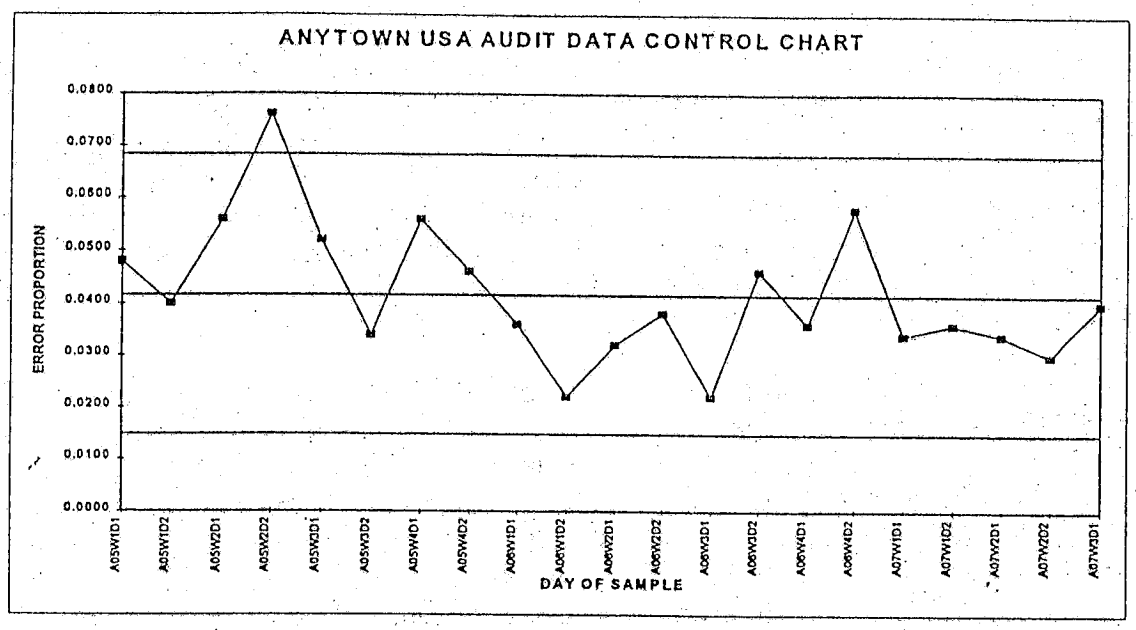
Central Line Formula: $CL = \bar{p}$

Upper Control Limit Formula: $UCL = \bar{p} + 3\sqrt{\bar{p}(1-\bar{p})/\bar{n}}$

Lower Control Limit Formula: $LCL = \bar{p} - 3\sqrt{\bar{p}(1-\bar{p})/\bar{n}}$

Note: If the LCL is negative, then the LCL = 0.

Example from Anytown USA Audit data (Sample Size = 250; Total Samples = 500)



When	Errs	Prop. Def.
AP5W1D1	24	0.0480
AP5W1D2	20	0.0400
AP5W2D1	28	0.0560
AP5W2D2	38	0.0760
AP5W3D1	26	0.0520
AP5W3D2	17	0.0340
AP5W4D1	28	0.0560
AP5W4D2	23	0.0460
AP6W1D1	18	0.0360
AP6W1D2	11	0.0220
AP6W2D1	16	0.0320
AP6W2D2	19	0.0380
AP6W3D1	11	0.0220
AP6W3D2	23	0.0460
AP6W4D1	18	0.0360
AP6W4D2	29	0.0580
AP7W1D1	17	0.0340
AP7W1D2	18	0.0360
AP7W2D1	17	0.0340
AP7W2D2	15	0.0300
AP7W3D1	20	0.0400

$\bar{n}$ = 500 ((21*500) / 21))

$\bar{p}$ = 0.0415 ((24+20+...+15+20) / (21*500))

CL = $\bar{p}$ = 0.0415, UCL = 0.0683, LCL = 0.0148

Note from the control chart diagram that one of the samples falls above the UCL (AP5, WK2, Day 2). This indicates that assignable-cause variation has occurred and needs to be corrected. Once the problem has been solved, that data point should be removed from future calculations so as not to inaccurately skew the data. Also note that the last five points on the control chart are below the central line. If additional points to the chart continue this pattern, this would also indicate the need for an investigation into the cause of this pattern.

Sample audit chart table and audit control charts are contained in Appendix C for local use.

Appendix A: MODE II AUDIT WORKBOOK

Appendix A refers to the AUDIT.XLS EXCEL workbook. Appendix A contains:

Instructions for starting a MODE II audit session.

Instructions for computing the sample size and frequency to be used for MODE II audits.

Categories that should be used when analyzing MODE II audits.

The MODE II Tracking spreadsheet that is used to track the MODE II audit results. This spreadsheet is the first worksheet "MODE II Tracking" in the AUDIT.XLS EXCEL spreadsheet.

Starting an Audit Session

1. Go to the Audit Module and logon using the USERNAME: AUDIT. When prompted for the password, hit the return key
2. The screen will contain three windows. Click on the upper right hand window titled "AUDIT Main Menu" to make it active
3. Select choice "A" (Start new AUDIT session) from the menu selection.
4. Enter the Image frequency and the total number of images to collect from the Sample Size and Frequency worksheet (next tab)
5. Once you have started the AUDIT module, you may view the status or how many images have been collected by selecting the letter "D" (View current Audit status) in the main menu
6. To Stop the AUDIT session, select the letter "B" (Stop current AUDIT session) in the main menu window. This will stop all AUDIT sessions
7. To analyze the AUDIT sessions, select the letter "C" (Analyze AUDIT results) in the Main Menu window. A list with various sessions will appear. Use the Select key to select only one AUDIT session. A window will appear with three choices.
8. Select the letter "B" (Analyze Problem Results) and use Automatic Print to print all problem images in the session you are viewing along with the Statistics, Summary, and Operator Reports.
9. When you have printed or finished a session, you should delete it, as sessions use considerable amount of disk space. To delete a session, go the main menu and select letter "E" (Move AUDIT session data). You will then have an additional window with which to move the AUDIT session to the NDSS computer, which is not recommended, or to delete the session. Once deleted, you cannot recover the deleted session. To exit, use the F11 or ESC key.

Logging Off the System

1. If at any time you do not wish to complete the operation or you make a mistake, you can escape by pressing the F11 key. This key is in the top row and sometimes labeled as the ESC key.
2. Pressing this key repeatedly in the AUDIT Main Menu window will get to the question "Do you really want to exit and logoff? NO/YES". Using the arrow key will toggle the answer between YES and NO. If you choose YES, you will be logged off the system. **THIS IS THE ONLY WAY YOU SHOULD EXIT THE SYSTEM. DO NOT USE THE SESSION EXIT ON THE TOP STATUS WINDOW.** This will cause problems and should not be used.

Sample Size & Frequency Instructions

Projected Images For The Day	Sample Size For The Day
10,001 - 35,000	158
35,001 - 150,000	250
150,001 - 500,000	400
500,001 +	625

Frequency:

Projected Images for the day/sample size = frequency.

If your plant is projecting 350,000 images, the sample size would be 400 and the frequency would be 875 (350,000/400) = 875.

*The sample size is based on a predetermined sampling plan called ANSI/ASQC Z1.4 to meet statistical validity. More about this sampling plan can be found in the book Juran's Quality Control Handbook, Fourth Edition (1988), published by McGraw-Hill, Inc.

Analysis of Mode II Discrepancies

Ten categories are used to identify those problem images. The categories are explained below:

0) **Non-Error:** Problem images that were finalized to the correct destination by both keyers, but were keyed differently. Problem images where one keyer makes a "logical connection" to a selection window choice and the other keyer responds "none", if no better coding is possible. This category also includes any other keying item jointly agreed to by the Plant and REC not specifically addressed in this document.
1) **Customer Errors:** Problem images where poor address hygiene, misspelling of address information, non-existent addresses, unreadable fonts, insert shift, or bad ZIP codes result in differing responses from the keyers.
2) **Illegible Addressing:** Addresses or characters which are clearly unreadable as a result of poor quality printing or handwriting.
3) **Misapplied Keying Rules:** Operator failed to use the proper keying rule resulting in a destination error or error in finest depth of code (i.e. A Blockface ZIP applied when a delivery point code was possible). These categories include improper use of the misfaced and reject keys as well as the incorrect responses to selection windows.
4) **Outward Keying Error:** Operator miskeyed City/State information. This category includes the use of the none key by the operator when a valid choice is available with respect to city, state or ZIP code elements (outward prompt).
5) **Inward Keying Error:** Operator miskeyed Secondary Address Line information. This category includes the use of the none key by the operator when a valid choice is available with respect to the inward prompt.
6) **Transposition Error:** Operator transposed numbers such as "707" for "770" resulting in an incorrectly coded image.
7) **Extraneous Keystrokes:** Operator response includes extra keystrokes, which result in miscodes.
8) **Database Errors:** Errors caused as result of an AMS database or RBCS Directory Generation problem. This category also includes Problem images where one keyer makes a "logical connection" and chooses one of the selection window choices and the other keyer responds "none" if better coding of the selection choices is possible.
9) **Software Error:** Errors caused by logic errors in the lookup software resulting in an incorrect code being applied.
10) **Unreadable Image Lift:** Errors caused by poor quality images resulting from misalignment of lift units or obstruction of the lens.

Insert "Mode II Tracking" worksheet of AUDIT.XLS EXCEL spreadsheet marked Page 13 here. Discard this page.

Appendix B: No Improvement ZIP Filter Workbook

Appendix B refers to the AUDIT.XLS EXCEL spreadsheet. Appendix B contains:

- Instructions for identifying the zones on which ZIP filters will be run.
- Instructions for running ZIP filters.
- Categories that should be used when analyzing ZIP filters.
- Instructions for completing the No Improvement tracking worksheet.

The "Tracking Sheet" worksheet is used to track the No Improvement results. This is the second worksheet in the AUDIT.XLS EXCEL spreadsheet.

The "Tracking Sheet" worksheet used to consolidate above mentioned worksheets.

Week 1:

Collect 1,000 No Improvement Inward for 5 days (Total 5,000)

Week 2:

- Set ZIP filters for top three zones as requested in instruction # 9, page 17 of this document (Mon – Thurs).
- Set ZIP Filter for fourth zone as requested in instruction # 9, page 17 of this document (Fri).

Week 3:

Continue to set ZIP filter for fourth zone (Mon – Wed). Complete worksheet (Thurs – Fri).

To ensure the success of this endeavor, request all previous image-sampling sessions be deleted or backed up to tape. Also request no other image samplings be done during this time. Systems running IPSS 5.2 will be able to accommodate the requested samplings.

EXAMPLE

Sample type	***Frequency***	***Timeframe***
NO IMPROVEMENT INWARD	5 days @ 1000 per day	WEEK 1
ZIP FILTER ZONE 1 XXXXX-9999	4 days @ 500 per day	WEEK 2

FILTER ZONE 2 XXXXX-9999 4 days @ 500 per day WEEK 2

ZIP FILTER ZONE 3 XXXXX-9999	4 days @ 500 per day	WEEK 2
ZIP FILTER ZONE 4 XXXXX-9999	4 days @ 500 per day	WEEK 2/3
WORKSHEET COMPLETION		WEEK3

Identify Zones for ZIP Filter

1. Collect 5,000 No Improvement Inward Samples
2. Use Analysis Tool and Select Sessions
3. Select ZIP Density Option, **3 Digit**

Select Sample Sessions
Analyze Inward Keying
Analyze Outward Keying
Search Keying Dialogue
Export Data to NDSS

Zip Density Report

Option F will display 3 or 5 digit densities of SCF and Zone volumes that contribute to a site's No Improvement volume.

4. Note top SCFs in your Plant

ZIP	Count	Percent
212	**2632**	**32.9**
210	**960**	**12.0**
211	**664**	**8.3**
219	280	3.5
207	184	2.3

4. Select ZIP Density option, 5 digit
5. Enter top SCFs, Print 5 digit report for top SCFs
6. Determine top four 5 digit zones that contribute to No Improvement

SCF 212	ZIP	Count	Percent
	21204	264	3.3
	21200	248	3.1
	21228	88	1.1

SCF 210	ZIP	Count	Percent
	21061	96	1.2
	21093	88	1.1
	21044	64	0.8

SCF 211	ZIP	Count	Percent
	21117	136	1.7
	21122	88	1.1
	21157	56	0.7

8. Identify Top 4 Zones

1. *Set sample for 500 piece collection for ZIP Filters on each ZIP, #####999955. Set collection time for 12 hours during the Outgoing Processing Window. (Small to medium sites may not be able to collect 500 images a day.) Set Sample as described for four days.*

START NEW IMAGE SAMPLE

Enter total number of images to collect : *500*

Enter time limit for sample. Hours : *12* Minutes :

0

Enter System time for sample Date *07/15/1999* Time *16:00*

Roll-up the images collected over a four day period. Use NIWKST_5.XLS to track and categorize No Improvement.

NO IMPROVEMENT CATEGORIES

	ERROR	CAUSE	SOLUTION	RESPONSIBLE PARTY
1	Keying Error	Operator keying error such as transpositions, missed selections, incorrectly applied rules.	Use Audit and Image Sampling to determine types of errors and DCOs responsible for errors.	DAS, Quality Specialist, REC Manager, MREOs, SREOs
2	Hardware	Problem with image lift unit that results in poor resolution of image. Often a label or debris over the appeture.	Review Reject images for problems. The REC should notify maintenance at the Plant.	SREOs, Maintenance
3	VDT Filtering	Duplicate records in the database.	Use UZIPs and BZIPs when filtering is associated with Unique ZIPs. Change or abbreviate firm names.	AMS, DAS
4	Address is missing from the database	New deliveries not reported. Overlapping ranges Building/Firm names & rural route defaults not in database.	Contact Delivery to include new entries Review "Bad/Warn" files. Add Building and Firm Names when volume warrants. Add rural route defaults.	Delivery, DAS, AMS
5	Unnecessary address information in the database.	AMS Alternates, NDSS aliases create unnecessary selection screens.	Investigate the necessity of this entry for all platforms. Remove unnecessary alternate and alias records. Use NDSS flags to specify platform.	DAS, AMS
6	DIRGEN /DAP Problems	Addresses are correctly in database but can not be accessed through DAP due to Directory Generation Problems.	Report Problems to Engineering.	Engineering
7 a	Customer	Misspelled Street Name Alternate Street Name.	Enter NDSS Alias for misspellings, AMS Aliases for Alternate names.	DAS, AMS
7 b	Customer	Incorrect House number, Unreadable address information.	Large mailers with database errors should be contacted by the MDA or Account Rep.	DAS, MDA, Account Rep.
7 c	Customer	Missing, incorrect suffix, Pre or post directional that causes a selection screen.	Check the address to determine the existence of both/all selections in the Delivery Point file. If the address exists at only one	DAS, AMS

			delivery point use an AMS Delivery Point Alternate.	
7d	Customer	Personal Collection mail that is incorrectly addressed.	Propose the use of a Delivery Point file, possible new desk for this type of mail.	Engineering

Input information in the shaded areas of the spreadsheet.

1)	SITE NAME	Enter Site Name
2)	**SAMPLE SIZE**	Enter total sample size of No Improvement / Inward
3)	AP VOLUME	Enter AP No Improvement Volume from Corporate Database, CIS, RBCS (Option 5)
4)	ZONES	From 5 Digit ZIP Density report No/Improvement Inward, Enter Top 4 zones in order of contribution
5)	% of NI INWARD	From 5 Digit ZIP Density report No/Improvement Inward, % of Contribution
6)	EXTRACTION	Analyze Four Days of No Improvement images collection of ZIP filter by zone. Enter the extraction used for top 5 contributors to no improvement in each zone identified, and the firm, building or street information on the mailpiece image.
7)	% of NI	Enter the % of No Improvement the extraction caused
8)	CATEGORY	Use the attached Category Sheet
9)	CAUSE	Enter Cause of Address resulting in No Improvement (EX – Number range missing, Firm in Database more than once.)
10)	ACTION	Enter Action taken to resolve No Improvement
11)	DATE RESOLVED	Enter Date change was made to database or problem was resolved and extraction is no longer contributing to No Improvement

Insert "Tracking Sheet" worksheet from AUDIT.XLS EXCEL spreadsheet marked Page 19 here. Discard this page.

Appendix C: Sample Audit Documentation Workbook

The Method.xls EXCEL workbook consists of the following worksheets:

1) The first tab (Audit Plan) contains an audit plan that can be customized for use by any plant.

2) The second tab (Audit Log) contains a spreadsheet that can be used to track the results of the audits and the discussion process.

3) The third tab (Audit Results) contains a spreadsheet that can be used to consolidate numerous audit results into one spreadsheet.

4) The fourth tab (Audit Chart Table) contains a spreadsheet that can be used to build an Audit Control Chart.

5) The fifth tab (Audit Control Chart) contains an audit control chart.

Insert "Audit Plan" worksheet from the AUDIT.XLS EXCEL spreadsheet marked Page 21 here. Discard this page.

Insert "Audit Log" worksheet (2 pages) from the AUDIT.XLS EXCEL spreadsheet marked Pages 22 & 23 here. Insert Page 22 here. Discard this page.

Insert "Audit Log" worksheet (2 pages) from the AUDIT.XLS EXCEL spreadsheet marked Pages 22 & 23. Insert Page 23 here. Discard this page.

Insert "Audit Results" worksheet (2 pages) from the AUDIT.XLS EXCEL spreadsheet marked Page 24 & 25. Insert Page 24 here. Discard this page.

Insert "Audit Results" worksheet (2 pages) from the AUDIT.XLS EXCEL spreadsheet marked Page 24 & 25. Insert Page 25 here. Discard this page.

Insert "Audit Chart Table" worksheet from the AUDIT.XLS EXCEL spreadsheet marked Page 26 here. Discard this page.

Insert "Audit Control Chart" worksheet from the AUDIT.XLS EXCEL spreadsheet marked Page 27 here. Discard this page.

Test Date>	AP xx, Wk xx	# Samples>	297	# Keyed >	594
Err Type #	Type of Error	Total Errors	% of Total	% of Errors	
0	Non-Error	1	0.2%	4.3%	
1	Customer Errors	4	0.7%	17.4%	
2	Illegible Addressing	6	1.0%	26.1%	
3	Misapplied Keying Rules	4	0.7%	17.4%	
4	Outward Keying Error	2	0.3%	8.7%	
5	Inward Keying Error	2	0.3%	8.7%	
6	Transposition Error	1	0.2%	4.3%	
7	Extraneous Keystrokes	0	0.0%	0.0%	
8	Database Errors	1	0.2%	4.3%	
9	Software Error	1	0.2%	4.3%	
10	Unreadable Image Lift	1	0.2%	4.3%	
Total Problem Images		**23**	**3.9%**	**100%**	
Mismatched Pairs Reported		23			
Gross Rate		3.9%			
Gross Rate minus non-errors		3.7%			
NON-ERRORS		1	0.2%	4.3%	
SUMMARY OF CUSTOMER ERRORS		10	1.7%	43.5%	
ADJUSTED RATE (KEYING ERRORS)		9	1.5%	39.1%	
SUMMARY OF DB/SOFTWARE ERRORS		2	0.3%	8.7%	
SUMMARY OF MACHINE ERRORS		1	0.2%	4.3%	
				100%	

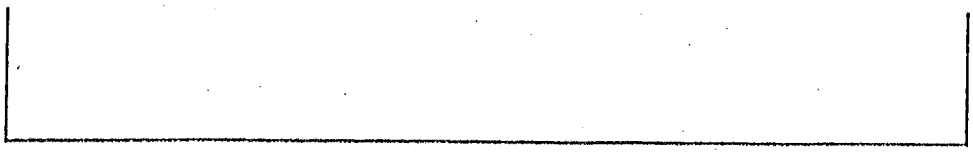
COMMENTS

Images to be reconciled:

Image #	Plant cat	REC cat	Final category

Images requiring error resolution:

Image #	Action required by:



Audit Plan for: Anytown USA P&DC

AP & FY: AP4 FY2000

Week	Day	Projected REC Images	Required Sample Size	Suggested Sample Frequency
1	1	406,793	400	915
	2	552,214	625	795
	3	537,501	625	774
	4	544,038	625	783
	5	486,549	400	1,095
	6	580,834	625	836
	7	454,676	400	1,023
2	8	456,870	400	1,028
	9	582,410	625	839
	10	602,040	625	867
	11	604,759	625	874
	12	423,387	400	953
	13	606,040	625	873
	14	409,252	400	921
3	15	[illegible]	625	[illegible]
	16	[illegible]	625	[illegible]
	17	[illegible]	400	942
	18	[illegible]	625	[illegible]
	19	[illegible]	625	[illegible]
	20	[illegible]	625	[illegible]
	21	[illegible]	400	[illegible]
4	22	489,323	400	1,101
	23	523,819	625	754
	24	578,811	625	833
	25	529,738	625	763
	26	534,240	625	769
	27	443,144	400	997
	28	592,601	625	853

Audit Log for:	0													
Fiscal Year:	0													

Audit AP & Week	Audit Started		Audit Ended		Problem Images Printed		Problem Images Copied		Problem Images Mailed		Problem Images Reconciled		Error Percentage Finalized	
	Date	Initials	Date	Initials	Date	Initials	Date	Initials	Date	Initials	Date	Initials	Date	Initials
AP00 WK01														
AP00 WK02														
AP00 WK03														
AP01 WK04														
AP00 WK05														
AP00 WK06														
AP00 WK07														
AP00 WK08														
AP00 WK09														
AP00 WK10														
AP02 WK11														
AP00 WK12														
AP00 WK13														
AP00 WK14														
AP00 WK15														
AP00 WK16														
AP00 WK17														

AP03 WK18													
AP00 WK19													
AP00 WK20													
AP00 WK21													
AP00 WK22													
AP00 WK23													
AP00 WK24													
AP04 WK25													
AP00 WK26													
AP00 WK27													
AP00 WK28													
AP00 WK00													
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AP00 WK00													

Audit Results for:	0						
Fiscal Year:	0						
Audit AP & Week	Sample Pairs	Sample Size	Number of Problem Images	Raw Error Percentage	Problem Images Reconciled	Final Number Problem Images	Adjusted Error Percentage
AP00 WK01	400	800	14	1.8%	2	12	1.5%
AP00 WK02	625	1,250	14	1.1%	2	12	1.0%
AP00 WK03	625	1,250	38	3.0%	4	34	2.7%
AP01 WK04	625	1,250	30	2.4%	2	28	2.2%
AP00 WK05	400	800	56	7.0%	4	52	6.5%
AP00 WK06	625	1,250	26	2.1%	2	24	1.9%
AP00 WK07	400	800	26	3.3%	2	24	3.0%
AP00 WK08	400	800	38	4.8%	6	32	4.0%
AP00 WK09	625	1,250	14	1.1%	2	12	1.0%
AP00 WK10	625	1,250	44	3.5%	4	40	3.2%
AP02 WK11	625	1,250	18	1.4%	2	16	1.3%
AP00 WK12	400	800	42	5.3%	4	38	4.8%
AP00 WK13	625	1,250	42	3.4%	4	38	3.0%
AP00 WK14	400	800	36	4.5%	4	32	4.0%
AP00 WK15	625	1,250	20	1.6%	2	18	1.4%
AP00 WK16	625	1,250	18	1.4%	2	16	1.3%
AP00 WK17	400	800	44	5.5%	4	40	5.0%
AP03 WK18	625	1,250	12	1.0%	2	10	0.8%
AP00 WK19	625	1,250	44	3.5%	4	40	3.2%
AP00 WK20	625	1,250	36	2.9%	2	34	2.7%
AP00 WK21	400	800	60	7.5%	4	56	7.0%
AP00 WK22	400	800	32	4.0%	4	28	3.5%
AP00 WK23	625	1,250	36	2.9%	2	34	2.7%
AP00 WK24	625	1,250	44	3.5%	4	40	3.2%
AP00 WK00	0	0	36	#DIV/0!	4		
AP00 WK00	0	0	18	#DIV/0!	2		
AP00 WK00	0	0	20	#DIV/0!	2		
AP00 WK00	0	0	60	#DIV/0!	4		
AP00 WK00	0	0	32	#DIV/0!	2		
AP00 WK00	0	0	54	#DIV/0!	4		
AP00 WK00	0	0	42	#DIV/0!	6		
AP00 WK00	0	0	30	#DIV/0!	2		
AP00 WK00	0	0	38	#DIV/0!	4		
AP00 WK00	0	0	26	#DIV/0!	4		
AP00 WK00	0	0	48	#DIV/0!	6		
AP00 WK00	0	0	38	#DIV/0!	4		
AP00 WK00	0	0	18	#DIV/0!	2		
AP00 WK00	0	0	30	#DIV/0!	4		

Chart Data for:	0					
Fiscal Year:	0					
Audit AP & Week	Sample Size	Final Number Problem Images	Error Percentage	UCL	CL	LCL
AP00 WK01	800	12	1.5%	4.2%	2.7%	1.2%
AP00 WK02	1,250	12	1.0%	4.2%	2.7%	1.2%
AP00 WK03	1,250	34	2.7%	4.2%	2.7%	1.2%
AP01 WK04	1,250	28	2.2%	4.2%	2.7%	1.2%
AP00 WK05	800	52	6.5%	4.2%	2.7%	1.2%
AP00 WK06	1,250	24	1.9%	4.2%	2.7%	1.2%
AP00 WK07	800	24	3.0%	4.2%	2.7%	1.2%
AP00 WK08	800	32	4.0%	4.2%	2.7%	1.2%
AP00 WK09	1,250	12	1.0%	4.2%	2.7%	1.2%
AP00 WK10	1,250	40	3.2%	4.2%	2.7%	1.2%
AP02 WK11	1,250	16	1.3%	4.2%	2.7%	1.2%
AP00 WK12	800	38	4.8%	4.2%	2.7%	1.2%
AP00 WK13	1,250	38	3.0%	4.2%	2.7%	1.2%
AP00 WK14	800	32	4.0%	4.2%	2.7%	1.2%
AP00 WK15	1,250	18	1.4%	4.2%	2.7%	1.2%
AP00 WK16	1,250	16	1.3%	4.2%	2.7%	1.2%
AP00 WK17	800	40	5.0%	4.2%	2.7%	1.2%
AP03 WK18	1,250	10	0.8%	4.2%	2.7%	1.2%
AP00 WK19	1,250	40	3.2%	4.2%	2.7%	1.2%
AP00 WK20	1,250	34	2.7%	4.2%	2.7%	1.2%
AP00 WK21	800	56	7.0%	4.2%	2.7%	1.2%
AP00 WK22	800	28	3.5%	4.2%	2.7%	1.2%
AP00 WK23	1,250	34	2.7%	4.2%	2.7%	1.2%
AP00 WK24	1,250	40	3.2%	4.2%	2.7%	1.2%
AP04 WK25	1,250	24	1.9%	4.2%	2.7%	1.2%
	27,200	734	2.7%	4.2%	2.7%	1.2%

9.0 References

Reference	Publication/Handbook
Management Operating Data Systems	M-32
Time and Attendance Procedures	F-22
Manual Distribution Operating Guidelines	PO-410
Scheme: Construction: Assignment: Training and Proficiency	M-5
Postal Employees Guide to Safety	EL-814
Small Plant Best Practice Guidelines	PO-420
Strategic Improvement Guide for Flats Processing	PUB 128
Mail Piece Design for Automation – Letter Size	
Mail Piece Design for Automation – Flat Size	

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