

# **USPS LR-K-68**

## **Acceptance Rate Study (Abdirahman)**

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## **I. INTRODUCTION**

Library reference USPS LR-K-68 is a category 2 library reference sponsored by witness Abdirahman (USPS-T-21). This library reference contains acceptance rate figures obtained from the data collected during the 1999 Letters/Cards Mail Flow Densities Study described in Docket No. R2000-1, USPS-T-24, page 6 at 18-24. This is the first time this has been provided in a library reference format.

## **II. PURPOSE**

The purpose of this study is to calculate the “acceptance rates” that are used to “flow” mail through the mail processing cost models.

## **III. BACKGROUND**

Mail processing uses sort plans to control mail flows. A “sort plan” is a software program that determines the bin number to which each mail piece should be sorted based on ZIP Code information. The term “acceptance rate” refers to the percentage of mail that is finalized (i.e., is not rejected) in a given operation.

## **IV. STUDY PLAN**

A field study was conducted the week of July 19 – July 23, 1999.

### **A. SAMPLE UNIVERSE**

The sample universe was limited to the 269 Processing and Distribution Centers (P&DC) and Processing and Distribution Facilities (P&DF). The study was conducted at 40 plants.

### **B. SAMPLE DESIGN**

Total mail volume data were obtained for FY 98. The plants were then ranked in descending order (using the “Total Pieces Handled” mail volumes from the MODS system) and divided into three strata: small, medium, and large. The total mail volume percentages for the strata as a whole were then calculated and multiplied by the sample size of 40 in order to determine how many plants to sample from each strata. The results showed that 21 large plants, 13 medium plants, and 6 small plants should participate in the study. Each plant within each strata was assigned a random number using the random number function in

EXCEL. The random numbers were then sorted in ascending order. The first 21, 13, and 6 plants on the lists for the large, medium, and small strata, respectively, were selected to participate in the study.

## **V. DATA COLLECTION**

A pilot study was conducted at one of the 40 sites selected. Instructions were then developed using the data from this pilot study. These instructions were sent to each participating plant a week before the data collection period.<sup>1</sup>

Each plant was asked to submit AP 11 FY 99 "Sort Plan Area Summary" End-Of-Run reports for a specific list of automation operation numbers.<sup>2</sup> Once the data had been collected, the study coordinators were asked to mail the data to Postal Service headquarters.

## **VI. DATA PROCESSING**

Data were received from all 40 plants. Two plants submitted data for the incorrect time period. In addition, one of these two plants also used a sort plan coding system that was difficult to interpret. This was not discovered until one month after the data had been collected. Due to time constraints and the fact that sort plans are changed over time, the decision was made to exclude these plants from the study.

The data for the remaining 38 plants were aggregated by strata. Acceptance rate percentages were calculated for each operation using piece counts from the EOR reports. The nationwide accepted AP11 FY99 MODS volumes were then distributed by operation for each strata as follows:

$$(\text{Operation Mail Volume}) * [ (\text{S1 Volume Percent}) * (\text{S1 Accept Percent}) + (\text{S2 Volume Percent}) * (\text{S2 Accept Percent}) + (\text{S3 Volume Percent}) * (\text{S3 Accept Percent}) ]$$

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<sup>1</sup> See Docket No. R2000-1, USPS-T-24, Appendix IV.

<sup>2</sup> The End-Of-Run (EOR) software is stored on the Local Area Networks (LAN) at plants and contains bin volumes for each sort plant processed on the various letter sorting equipment.

The volumes for all three strata were totaled for each operation. The final acceptance rate percentages were calculated using these total volumes.

## **VII. RESULTS**

The acceptance rate percentages did not change significantly compared to those that were calculated in past dockets using the MODS methodology. For most operations, however, they did increase slightly.