

APPENDIX 2. VOUCHER EXAMINATION STATISTICAL SAMPLING PROCEDURES

1. DEFINITIONS. For the purpose of this appendix, the following definitions apply:

a. Voucher. An invoice or similar document requesting disbursement, together with all other documents (generally a purchase order and a receiving report), necessary to support the determination made in the examining process.

b. Error Amount. Total gross dollar amount of errors within a sample (overclaims plus underclaims).

c. Dollar Error Rate. The percentage arrived at by dividing the total error amount by the total value of the vouchers examined.

d. Statistical Sampling in Voucher Examination. The technique of examining a sample of a universe of like vouchers for making rational decisions with respect to the quality of the universe of vouchers and the need for correcting deficiencies in the vouchering system.

e. Savings Using Statistical Sampling. The cost of a 100% audit less (1) the cost of preexamination procedures, plus cost of auditing the sample; and (2) the cost of errors in vouchers not audited.

2. BACKGROUND. Public Law 88-521 and title I of Public Law 93-604 stipulate the following:

a. When the agency head determines that economies will result, he may prescribe the use of adequate and effective statistical sampling procedures in the examination of disbursement vouchers.

b. No certifying or disbursing officer acting in good faith and in conformity with such procedures shall be held liable with respect to any certification or payment made by him on a voucher which was not subject to specific examination because of the prescribed statistical sampling procedures, PROVIDED that such officer and his department or agency have diligently pursued collection action to recover the illegal, improper, or incorrect payment in accordance with procedures prescribed by the Comptroller General.

c. Nothing contained in these laws shall affect the liability or authorize the relief of any payee, beneficiary, or recipient of any illegal, improper, or incorrect payment, or relieve any certifying or disbursing officer, the head of the agency, or the Comptroller General of responsibility to pursue collection action against any such payee, beneficiary, or recipient.

d. The General Accounting Office was delegated the authority to establish maximum amounts under which statistical sampling procedures may be used. Under this authority, title 7, section 19.4 of GAO Manual for Guidance of Federal Agencies, revised January 18, 1985, established the amount at \$1,000.

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3. REQUESTS FOR INFORMATION. Operating accounting offices having any questions concerning the use of statistical sampling procedures in examining vouchers for payment shall contact the Office of Accounting, Fiscal Standards Branch, AAA-430.
- * 4. APPLICABILITY OF \$1,000 LIMITATION. Statistical sampling procedures are limited to vouchers for amounts of \$1,000 or less. The dollar limitation *
is determined as follows:
- a. For vouchers supporting payments to vendors, use the net amount after deducting discounts, allowances, etc.
 - b. For employees' travel vouchers, use the gross amount before deducting advances.
 - * c. For individual vouchers, which may exceed \$1,000 but which represent numerous separate transactions each of \$1,000 or less of a similar kind (e.g., billings for gasoline credit card purchases, imprest fund cashiers' reimbursement vouchers, charge account billings of numerous purchases), each invoice, receipt, or delivery ticket covering an individual purchase is considered as a separate voucher in counting the volume of vouchers, in selecting the sample to be examined, and in applying the \$1,000 limitation. *
5. AUTHORIZATION FOR USE OF STATISTICAL SAMPLING. Statistical sampling procedures are authorized for examination of vouchers when all of the following conditions are met:
- a. A feasibility study, conducted in accordance with paragraph 6 below, demonstrates: (1) that a net saving will result from the use of sampling methods, and (2) the indicated probable error rates are within tolerable maximums.
 - b. Advance approval is obtained from the Office of Accounting, Fiscal Standards Branch, AAA-430. This approval will be based on the results of the feasibility study. Requests for approval shall be supported by fully documented results of the study.
 - c. Approval by AAA-430 to use statistical sampling methods carries with it the requirement to adhere without deviation to the procedures in paragraph 7 of this appendix.
6. FEASIBILITY STUDY PROCEDURES. A feasibility study will be conducted and a survey report prepared by each operating accounting office in accordance with instructions outlined below. The study must cover all vouchers of less than *
\$1,000 processed during a 1-month period to be selected by the accounting *
office.
- * a. Separate all vouchers of less than \$1,000 into two categories, travel *
vouchers and all others.
 - b. Each category must be processed in accordance with the following preexamination procedures:

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- (1) Match the invoice with the purchase order of contract; match the claim for reimbursement with the travel order.
- (2) Match the invoice with the receiving reports.
- (3) Verify invoice or travel claim administrative approval when required.
- (4) Enter or verify accounting classification data.

These are the minimum steps which must be applied to ALL vouchers in accordance with GAO standards for statistical sampling procedures. This review SHALL NOT include any of the examination steps set forth in paragraph 6c below.

c. Employees other than those who do the preexamination processing shall examine each voucher as follows:

- (1) Verify quantities, prices, and arithmetic computations.
- (2) Review for compliance with contract, purchase order, or other authorization requirements.
- (3) Review for legality and compliance with administrative regulations.

It is important to completely separate the functions and the time of the two individuals or groups, and to avoid duplication of one group's functions by the other. This is essential to identify the potential saving from adoption of sampling procedures.

d. As each group of vouchers is completed, the employee(s) involved will record the following information for the group.

- (1) Number of vouchers processed.
- (2) Workhours expended, kept separately for preexamination, and voucher examination procedures.
- (3) Cost of each phase. Base cost on the average hourly rate of the voucher examination unit.
- (4) The amount of dollar errors broken down by underclaims and overclaims.

e. Prepare a summary analysis of the results of the feasibility study in accordance with the format on figure 1.

f. Submit a copy of the feasibility study and a recommendation on the use of statistical sampling techniques to the Office of Accounting, Fiscal Standards Branch, AAA-430.

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g. If the feasibility study discloses error rates in excess of tolerances, or if no savings result from the use of sampling procedures, aggressive efforts should be made to eliminate the unfavorable features or to reduce errors, whichever is indicated. After a reasonable time lapse (4 to 6 months), another feasibility study should be made to determine if statistical sampling is then warranted.

7. STATISTICAL SAMPLING PROCEDURES. When statistical sampling procedures are authorized by the Office of Accounting, Fiscal Standards Branch, AAA-430, vouchers will be examined in accordance with the procedures outlined below.

a. Preexamination. Follow the procedures outlined in paragraphs 6a and 6b above.

b. Prompt Processing. Use of sampling techniques shall not be allowed to compromise the FAA's policy of prompt payment of vouchers. Generally, all vouchers received each day should be grouped and processed that day, or no later than the second day following receipt.

c. Determining the "Sample." Determine whether the normal or increased sampling rate is to be used in accordance with subparagraphs 7d and 7e below. Determine the specific vouchers for full examination (the steps outlined in paragraph 6c above) by the systematic random sampling method. This method relies on the random selection of a starting number. Determine the starting number for each group to be examined by drawing a number from a container holding numbers 1 through 10, or 1 through 20, depending on the predetermined sampling rate. The selection of the starting number must be conducted in a manner to assure true random selection. After the drawing, either each 10th or each 20th voucher will be examined completely. Examples: if the normal sampling rate is to be used and the random start number is "6", examine vouchers numbered 6, 26, 46, 66, etc., (each 20th voucher). It is not necessary to mark vouchers to be sampled with the sequential numbers. They should be either extracted from the group or clearly identified before the examination is begun. The minimum sample size under this procedure must be 10 vouchers. If 10 or more vouchers cannot be drawn, then the entire group must be examined.

d. Sampling Standards. The following standards are prescribed for statistical sampling:

(1) Travel vouchers - the dollar error rate must be consistently below 10%, and savings must result from the use of statistical sampling.

(2) All other vouchers - the dollar error rate must be consistently below 3%, and savings must result from the use of statistical sampling.

(3) Sampling Rates. The sampling rates for all types of vouchers are as follows:

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(a) Normal rate - 1 out of 20.

(b) Increased rate - 1 out of 10.

(3) Initial Use of Normal Rate. Use the normal rate initially for all vouchers.

(4) Change of Rate During the Month. If, during the month, there is an indication that the dollar error rate is excessive to prior experience or savings are not achieved, and the normal sampling rate is being used, the increased sampling rate should be instituted for the remainder of the month.

e. Monthend Procedures. At the end of each calendar month, it will be necessary to determine if statistical sampling may be continued in the ensuing month, and if so, the sampling rate to be used. This will be accomplished as follows:

(1) Summarize Examined Vouchers on FAA Form 2750-1, Voucher Sampling Record, (figure 2) for each category.

(2) Determine the percentage of dollar errors to the total dollars subject to statistical sampling procedures.

(a) Travel vouchers. If the dollar error rate is less than 5.0% and savings are resulting, the normal sampling rate will be used in the ensuing month. If the dollar error rate is between 5.0% and 10.0% and savings are resulting, the increased sampling rate will be used. If the dollar error rate is more than 10% or no savings result from sampling, a 100% examination will be resumed.

(b) Other vouchers. If the dollar error rate is less than 1.5% and savings result, the normal sampling rate will be used in the ensuing month. If the dollar error rate is between 1.5% and 3.0% and savings result, the increased sampling rate will be used. If the dollar error rate is more than 3.0% and no savings result, a 100% examination will be resumed.

f. Restoration of Statistical Sampling. When 100% examination procedures have been instituted pursuant to an excessive error rate or lack of savings, statistical sampling procedures may not be resumed for travel vouchers until the dollar error rate for two successive months is less than 10% and savings result, or less than 3% for other vouchers if savings result. When the dollar error rate permits a resumption of sampling procedures, the increased sampling rate must be used during the first month. If the result for that month is a dollar error rate of less than 5% for travel vouchers, or less than 1.5% for other vouchers, and savings result, the sampling rate may be reduced to the normal rate for the ensuing month.

g. Documentation. Each group of vouchers and each voucher examined will be identified:

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(1) Assign a consecutive number to each group of vouchers; begin with "T-1," for travel vouchers and with "O-1" for other vouchers. Begin with new series of numbers each fiscal year. This is in addition to any existing numbering system.

(2) Stamp each voucher that is examined with a stamp or facsimile as follows:

E X A M I N E D		
Batch Number	Date	Exam. Init.

(3) Prepare FAA Form 2750-1, Voucher Sampling Record, as illustrated in figure 2 for each group of vouchers.

h. Review of Prior Vouchers. Certain types of errors discovered in the sampling process may indicate a need to review some prior unexamined vouchers. Examples of this situation are:

(1) Travel Vouchers. Review previous unexamined vouchers of the individual involved for the current fiscal year when sample examination discloses errors which appear to be excessive in value, deliberate, or repetitive.

(2) Other Vouchers. Review previous unexamined vouchers submitted under the same purchase order or contract, or by the same vendor, when sample examination discloses errors that appear to be excessive in value, deliberate, or repetitive.

8. SCHEDULING VOUCHERS FOR PAYMENT. Statistical sampling voucher batches should be processed and scheduled for payment separately from other vouchers for later identification and audit purposes. These batches should be clearly marked to indicate that the vouchers were examined by statistical sampling. The batch number should be placed on each voucher, unexamined, as well as examined.

9. ANALYSIS OF SAMPLING. Prepare a monthly analysis of vouchers examined on the statistical sampling basis in the format used for the feasibility study illustrated in figure 1. The analysis is intended to provide information to permit continuous evaluation of the system and the determination of approximate savings. After local review, the analysis should be filed and retained for site audit and reference purposes.

*10. AIRFARE COST USING CHARGE CARD. The amounts of airfare charged to an employee's Citicorp Diners Club charge card and claimed on the travel voucher will be deducted from the gross amount claimed and the remainder used to determine if the travel voucher is within the authorized amount established for statistical sampling procedures as stated in paragraph 2d of this appendix. *

FIGURE 1. FORMAT FOR FEASIBILITY STUDY

1. Total vouchers		290
2. Total claimed value of item #1		\$41,014.31
3. Vouchers selected for 100% audit (sample)		25
4. Total value of vouchers audited		\$3,225.91
5. Overclaims		\$64.36
6. Underclaims		\$21.31
7. Audit cost of sample per voucher:		
a. Sorting Time	- 2.0 hours	
Sampling Vouchers	- 5.0 hours	
100% Audit of 10% Sample	- 12.5 hours	
Logs and Report Preparation	- 2.0 hours	
	<u>21.5 hours</u>	
	21.5 hours x pay rate \$8.55 = \$183.82	
b. \$183.82 ÷ 25 =		\$7.35
8. Cost of 100% audit 145 hours x \$8.55		\$1,239.75
9. Average error amount for vouchers audited		
\$64.36 - \$21.31 = \$43.05 ÷ 25 =		\$1.72
10. Savings using sampling:		
a. Cost of 100% audit	\$1,239.75	
b. Cost of 100% audit of sample	-\$183.82	
c. Cost of errors in vouchers not audited		
290 - 25 = 265 x \$1.72	<u>-\$455.80</u>	\$600.13
11. Saving as a percent of 100% audit cost		
\$600.13 ÷ \$1,239.75 =		48%
12. Gross dollar error rate \$21.31 + \$64.36 ÷ \$3,225.91 =		2.65%

FIGURE 2. FAA FORM 2750-1, VOUCHER SAMPLING RECORD

VOUCHER SAMPLING RECORD		1. DATE EXAMINED <i>SEPT. 17, 1982</i>	2. VOUCHER GROUP NO. <i>0-28</i>		
		3. TOTAL VOUCHERS IN GROUP <i>127</i>	4. SAMPLE EXAMINING TIME HRS. <i>-</i> MIN. <i>30</i>		
5. SAMPLING STANDARDS					
A. RANDOM SAMPLE STARTING NUMBER <i>4</i>		B. TYPE OF VOUCHER			
		EXAMINING RATE USED			
		NORMAL			
		INCREASED			
		(1). TRAVEL	EVERY 20TH	EVERY 10TH	
		(2). OTHER	<input checked="" type="checkbox"/> EVERY 20TH	EVERY 10TH	
6. VOUCHERS SAMPLED					
SEQUENTIAL NUMBER (A)	NAME OF PAYEE (B)	REFERENCE NUMBER (C)	AMOUNT APPROVED FOR PAYMENT (D)	O U	NET AMOUNT OF OVER/UNDER CLAIM (E)
<i>4</i>	<i>R + S MEATS CO</i>	<i>1468</i>	<i>\$ 87.29</i>	<i>0</i>	<i>\$ 1.20</i>
<i>24</i>	<i>Shell Oil</i>	<i>148762</i>	<i>5.28</i>		
<i>44</i>	<i>Shell Oil</i>	<i>278697</i>	<i>6.47</i>		
<i>64</i>	<i>Shell Oil</i>	<i>152347</i>	<i>4.29</i>		
<i>84</i>	<i>Jefferson Prod. Co.</i>	<i>6-587</i>	<i>12.65</i>		
<i>104</i>	<i>Price Utilities</i>	<i>C-7986</i>	<i>27.52</i>		
<i>124</i>	<i>Green & Smith</i>	<i>5278</i>	<i>14.68</i>		
TOTAL AMOUNT OF OVERCLAIMS				O	<i>\$ 1.20</i>
TOTAL AMOUNT OF UNDERCLAIMS				U	<i>\$ -</i>
<i>7</i>	COUNT	VOUCHERS	VALUE	<i>\$ 158.18</i>	
REMARKS/ACTION TAKEN					
<i>R + S invoice, 10% over pricing on unit cost of item 3. Paid at correct amount.</i>					
<i>J. J. Smith</i> EXAMINER'S SIGNATURE					

FAA Form 2750-1 (Rev. 7-77)

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