

## Chapter V: STAGE I ENUMERATION IN TWO-STAGE AREAS

In Stage I, all enumerators were to receive a first and a final field review. Whether or not they received a second or third review before the final review depended upon the number of errors found. The criteria for accepting an enumerator's work were made tighter for each subsequent review to keep pace with his gain in experience. At each point, the enumerator's work was to be terminated if it did not meet minimum criteria. At final review the assignment was either accepted as completed or considered unacceptable and returned to the same or another enumerator for correction.

After final review and any necessary correction resulting from it, the crew leader was to review every housing unit in the EA that was completed by "closeout" procedure (i.e., the information was obtained from neighbors) to see whether or not the minimum information had been obtained for each person and housing unit. If there were more than 25 people and housing units for which the minimum data had not been obtained, the assignment was turned over to another enumerator for one more visit to each housing unit which had been enumerated by the closeout procedure. If there were still too many missing entries after this visit, the crew leader was instructed to make certain imputations.

After the review of closeouts was completed, the crew leader was to verify the transcription to the Stage II Fosdic enumeration book of the 100-percent information for the last sample housing unit (or group quarters) on every page of the Listing Book. If the number of errors resulted in an unacceptable transcription, the assignment was given to the same or another enumerator for a complete review and correction of all the transcription. When the assignment was returned to the crew leader after correction, he was then to inspect the transcription for the first sample household on each page of the Listing Book.

For each enumeration assignment in two-stage areas, there was to be one form F-243, Record of Field Review: PH-1 and PH-2, upon which the results of the field reviews, the closeout review, and transcription verification were to be reported. If more than one enumerator worked on one assignment, more than one form was to be filled out; if the same enumerator worked on more than one assignment, a form was to be filled out for each assignment.

When all the corrections had been made in the Stage I enumeration books for an EA, these books and the corresponding Listing and Stage II books were sent to the District Offices where the Stage I books were edited on a sample basis for consistency and completeness, the

counts necessary for payroll were verified, and the transcription of the 100-percent information for sample units to the Stage II enumeration books was verified.

### Field Review

Field review was to be conducted by the crew leader or field reviewer in the presence of the enumerator. The reviews were composed of the following checks;

1. A check for missed housing units (from the list prepared in advance on form F-236 by the crew leader).
2. A review of the Listing Book for major defects such as errors in sample key designation.
3. A review of the Listing Book for minor defects such as incorrectly recorded callbacks.
4. A review of the population items on a sample of Stage I enumeration book pages for omissions, bad marking, or inconsistencies.
5. A similar review of the housing items.
6. A check to see that the canvassing information recorded in the Listing Book agreed with the information in the Stage I enumeration books.

There was also a check (for which there were no acceptance standards) on whether or not the Fosdic pages were free of creases, tears, etc.; lines were being cancelled properly; people were being listed in the proper sequence; and, in block areas, whether or not the block and page numbers were being entered.

After performing these operations the reviewer compared the number of errors found in each section with the maximum number of errors acceptable for that section. Depending on the type and number of sections in which the enumerator's errors exceeded the maximum, the reviewer was to take one of three actions:

1. Instruct the enumerator that no further review would be necessary until his assignment was completed, when a final review would be made.
2. Schedule another review appointment for as soon as the enumerator had had time to do more enumerating. Sometimes additional training would be necessary before this next review.
3. Terminate the enumerator's appointment.

It is estimated that field review forms were received for about 84 percent of the EA's. It is likely that more were filled out but were lost before reaching Jeffersonville at the end of the census. For example, six District Offices sent in none. As mentioned earlier, there were no controls for assuring that the quality control records were sent in. It seems likely that the District Office staffs, who were necessarily concentrating on sending in completed enumeration books and Listing Books in good order and who at the same time were closing the temporary District Offices and disposing of equipment and supplies, may have failed to send in completed quality control records in some cases.

**Section I - Check for Missed Units.** The most important part of Stage I field review was the coverage check in section I of form F-243. On first review, the enumerator was allowed to have missed one rural or two urban prelisted housing units. After that the enumerator was to be released if he missed any one of the prelisted units.

The results of the coverage check are given in table 14. The check was made for an estimated 88 percent of the two-stage assignments, ranging from 85 percent in rural areas to 91 percent in urban nonblock areas. About 6 percent of the assignments had one or more of the

**Table 14 -- Results of Coverage Check: Stage I of Two-Stage Areas**  
(Proportion of EA's)

Status of coverage check	All two-stage areas	Urban areas		Rural areas
		Block	Nonblock	
Total EA's.....	1.000	1.000	1.000	1.000
Coverage check not made.	.123	.127	.088	.150
No prelisting done....	.031	.027	.032	.038
F-236 not available...	.007	.006	.005	.009
Section blank.....	.085	.094	.051	.103
Coverage check made.....	.877	.873	.912	.850
No units missed.....	.812	.798	.847	.799
One or more units missed <sup>1</sup> .....	.065	.075	.065	.051
1.....	.042	.048	.040	.035
2.....	.010	.010	.018	.005
3.....	.003	.004	.003	-
4.....	.003	.002	.002	.005
5.....	.001	.003	-	-
6.....	(Z)	.001	-	-
7.....	(Z)	.001	-	-
8.....	(Z)	-	.002	-
9.....	-	-	-	-
10 or more.....	.005	.006	-	.006

Z Less than .0005.

<sup>1</sup>Different units were checked in first and final review. The proportions shown here are for the sum of all units missed per EA.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

prelisted units reported as missed by the enumerator. About 2 percent had two or more units reported as missed.

The estimates of missed units are underestimates because the crew leader had not always listed the full number of units when doing his preparatory work. The Technical Officers' evaluation of the coverage check, as shown in table 23, indicates that the coverage check was incomplete or incorrectly made in only 5 percent of

**Table 15.-- Number of Sections Failed in EA's Failing at Least One Section: Two-Stage Areas**  
(Proportion of EA's failing at least one section)

Number of sections failed	Stage I		Stage II	
	First review	Final review	First review	Final review
Number of EA's in sample failing at least one section.....	115	27	21	33
Proportion of sample EA's failing one or more sections.....	1.000	1.000	1.000	1.000
1 section only.....	.817	.741	.724	.971
2 sections.....	.157	.185	.173	-
3 or more sections.....	.026	.074	.103	.029

Source: Forms F-243, Record of Field Review, PH-1 and PH-2, and forms F-244, Record of Field Review, PH-3 and PH-4.

**Table 16.--Field Review Sections Failed: Stage I of Two-Stage Areas**  
(Proportion of EA's)

Number of review sections failed	Urban EA's		Rural EA's	
	First review	Final review	First review	Final review
Total.....	1.00	1.00	1.00	1.00
Failed no sections.....	.93	.98	.96	.99
Failed section I and—				
No other sections.....	-	(Z)	(Z)	-
One other section.....	-	(Z)	-	-
Two other sections.....	-	-	(Z)	-
Three other sections.....	(Z)	-	-	-
Four other sections.....	-	-	-	-
Five other sections.....	-	-	-	-
Passed section I and failed—				
One other section.....	.05	.01	.03	.01
Two other sections.....	.01	(Z)	.01	-
Three other sections.....	(Z)	(Z)	-	(Z)
Four other sections.....	-	-	-	-
Five other sections.....	-	-	-	-

Z Less than .005.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

**Table 17.--Errors in Each Field Review Section on First Review: Stage I of Two-Stage Areas**

(Proportion of enumerators)

Number of errors	Field review section					
	I	II	III	IV	V	VI
Total..	1.00	1.00	1.00	1.00	1.00	1.00
0.....	.93	.75	.79	.51	.54	.87
1.....	<sup>1</sup> .06	<sup>3</sup> .22	.15	.16	.16	<sup>3</sup> .11
2.....	<sup>2</sup> .01	.03	.05	.09	.10	.01
3.....	(Z)	.01	<sup>3</sup> .01	.07	.06	(Z)
4.....	(Z)	(Z)	(Z)	.04	.03	(Z)
5.....	(Z)	(Z)	(Z)	.04	.03	(Z)
6.....	(Z)	-	(Z)	.02	.01	(Z)
7.....	-	-	-	.02	.01	-
8.....	(Z)	-	-	.01	.02	-
9.....	-	-	-	.01	.01	(Z)
10.....	-	-	-	.01	.01	(Z)
11.....	-	-	-	(Z)	(Z)	-
12.....	(Z)	-	-	.01	<sup>3</sup> .01	-
13.....	(Z)	-	-	(Z)	(Z)	-
14.....	-	-	-	(Z)	(Z)	-
15.....	-	-	-	(Z)	(Z)	-
16.....	-	-	-	<sup>3</sup> (Z)	(Z)	-
17 or more...	(Z)	-	-	.01	.01	(Z)

Z Less than .005.

<sup>1</sup>Maximum allowable errors for rural EA's.

<sup>2</sup>Maximum allowable errors for urban EA's.

<sup>3</sup>Maximum allowable errors for all EA's.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

**Table 18.--Errors in Each Field Review Section on Final Review: Stage I of Two-Stage Areas**

(Proportion of enumerators)

Number of errors	Field review section					
	I	II	III	IV	V	VI
Total..	1.00	1.00	1.00	1.00	1.00	1.00
0.....	<sup>1</sup> .99	.92	.94	.79	.80	.93
1.....	.01	<sup>1</sup> .07	.04	.08	.08	<sup>1</sup> .06
2.....	(Z)	.01	.01	.04	.04	(Z)
3.....	(Z)	(Z)	<sup>1</sup> .01	.03	.02	(Z)
4.....	(Z)	(Z)	-	.02	.02	(Z)
5.....	(Z)	-	-	.02	.02	-
6.....	-	-	-	.01	.01	-
7.....	-	-	-	.01	(Z)	-
8.....	-	-	-	(Z)	(Z)	-
9.....	-	-	-	(Z)	(Z)	-
10.....	-	-	-	(Z)	(Z)	-
11.....	-	-	-	-	.01	-
12.....	-	-	-	(Z)	<sup>1</sup> (Z)	-
13.....	(Z)	-	-	(Z)	-	-
14.....	-	-	-	(Z)	-	-
15.....	-	-	-	-	(Z)	-
16.....	-	-	-	<sup>1</sup> (Z)	-	-
17 or more...	-	-	-	(Z)	(Z)	-

Z Less than .005.

<sup>1</sup>Maximum allowable errors.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

the assignments observed (and was not made at all in 7 percent of the assignments).

Error Rates in Sections II through VI. Tables 2 and 19 show the error rates for the remaining sections of Stage I field review. For sections II and III of form F-243, "error rates" (in table 19) are in terms of EA's with one or more errors. This is because the questions called for "Yes" or "No" answers and a "No" answer could represent more than one error. The table shows that error rates for the individual parts of these sections ran from about 1 to 7 percent.

The error rates reported by crew leaders and field reviewers on first review were .007 for population items

**Table 19.--Error Rates for Listing Book Review: Stage I of Two-Stage Areas**

Line number on F-243	Description of error	Error rate	
		First review	Final review
	Section II - Listing Book, part 1 <sup>1</sup> (major checks)		
2	(For PH-2) Block numbers in column 2 in incorrect order.....	.03	.03
3	Housing units listed in incorrect sequence according to address.....	.05	.04
4	Sample key (column 5) in incorrect order.....	.04	.05
5	Number of persons for each completed unit not shown in column 12.....	.06	.03
6	No "A" or "GQ" for each sample unit in column 13.....	.12	.03
	Section III - Listing Book, part 2 <sup>1</sup> (other checks)		
8	Columns 1, 3 or 4 not adequately filled for each housing unit.....	.05	.07
9	Column 6 not filled correctly.....	.03	.06
10	Column 7 not filled for each housing unit.....	.05	.06
11	Callbacks not recorded in columns 8 or 9.....	.07	(X)
12a	Method of completion not shown in columns 10 or 11.....	.06	(X)
12b	Number of closeout cases unreasonable	.01	(X)
	Section VI - Enumeration book - Listing Book agreement <sup>2</sup>		
37	PH not in agreement with column 5 of Listing Book.....	(Z)	(Z)
38	Number of persons in enumeration book not equal to number in column 12 of Listing Book.....	.01	(Z)

X Not checked in final review.

Z Less than .005.

<sup>1</sup>"Error rate" for items in this section is in terms of the proportion of EA's with one or more errors.

<sup>2</sup>"Error rate" for this section is in terms of households inspected.

Source: Forms F-243. Record of Field Review, PH-1 and PH-2.

and .009 for housing items. On final review, the respective rates were reduced to .002 and .004. The error rates for individual population items were fairly homogeneous, but some of the rates for individual housing items (usually those that occurred infrequently) ran up to 8 or 14 percent.

When population and housing items are combined, the error rate observed by final review is .003. However, a careful analysis of a sample of the enumeration books at the end of the census shows that the actual omission (error) rate for these items was .009. Hence, the reviewers were finding and reporting only one-third of the errors.

Certain items inspected during field review played no part in the prescribed action to be taken in regard to the enumerator. The proportion of EA's having one or more of these failings is shown in table 20. It is not known how much correcting of enumeration books was done as a result of this part of the review.

Table 20.--Error Rates for Miscellaneous Items: Stage I of Two-Stage Areas

Line number on F-243	Type of error	Error rate <sup>1</sup>	
		First review	Final review
31	Pages with creases, tears, or marks in margins.....	.08	.12
32	Persons in P2 not listed in proper order.....	.03	.02
33	Not enough lines left by enumerator for callbacks.....	.03	(X)
34	(For PH-2) Block and page numbers not entered.....	.13	.03
35	Blank lines with marks that might be picked up by FOSDIC as entries.....	.03	.03
36	Lines not cancelled properly by enumerator.....	.01	.02

X Not checked in final review.

<sup>1</sup>The proportion of EA's with one or more errors.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

**Section VII - Action Taken.** After tallying errors in the earlier sections, the reviewer was to enter the sum of these tallies in section VII, to circle that sum if it was above the accepted number of errors, and to take the action indicated on the form.

Table 21 indicates the actions required on Stage I assignments, judging by the tallies of the reviewers on form F-243. For 81 percent of the assignments, only a first and final review were required. Four percent required an intermediate review, and 1 percent should have resulted in the enumerator's release. In 14 percent of the cases, it was not possible to determine what the correct action was, but it has been assumed in table 22

Table 21.--Correct Pattern of Action on Field Review According to Reviewers' Tallies: Stage I of Two-Stage Areas

Correct action	Proportion of EA's
Total.....	1.000
Enumerator to be released.....	.011
After first review.....	.009
After second review.....	.001
After third review.....	(Z)
No further review to be made until final.....	.813
Intermediate review to be made.....	.036
Second review.....	.032
Second and third review.....	.003
Uncertain.....	.140

Z Less than .0005.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

Table 22.--Action Taken in Field Review Compared With Correct Action: Stage I of Two-Stage Areas

Action	Proportion of EA's
Total.....	1.000
Correct action performed.....	.798
Enumerator released.....	.003
Intermediate review performed.....	.030
Only first and final reviews performed.....	.662
Final review only performed <sup>1</sup> .....	.103
Incorrect action performed.....	.180
Enumerator not released.....	.008
Enumerator released unnecessarily.....	.003
More reviews than necessary performed..	.072
Not enough reviews made.....	.081
Odd patterns of review.....	.016
Correct action uncertain.....	.022
Enumerator released.....	.002
Only first review performed.....	.001
Only first and final reviews performed.....	.001
No reviews performed.....	.007
Other patterns of review.....	.011

<sup>1</sup>It is assumed here that these were additional assignments undertaken by enumerators who had successfully completed their first assignments.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

Table 23.-- Technical Officers' Evaluation of Field Review: Stage I of Two-Stage Areas

Description of check	Total	Field review made according to instructions	Field review made but not completely or correctly	Field review not made
Form F-243:				
I. Check for missed housing units.....	1.00	.88	.05	.07
II. Listing Book review.....	1.00	.91	.03	.06
III. Listing Book review.....	1.00	.91	.03	.07
IV. Population items review.....	1.00	.92	.02	.06
V. Housing item review.....	1.00	.92	.03	.06
Lines 31 to 36.....	1.00	.90	.01	.08
VI. Enumeration book-listing Book agreement.....	1.00	.89	.02	.09
Average.....	1.00	.91	.02	.07
Other:				
1. F-214 from earlier review checked.....	1.00	.44	.15	.41
2. Correct pages reviewed.....	1.00	.91	.03	.06
3. All errors recorded on F-243.....	1.00	.88	.05	.07
4. Enumerator required to fill form F-214.....	1.00	.84	.08	.08
5. Manual references given.....	1.00	.79	.03	.12
6. Appropriate entries made in item 4 of F-236.....	1.00	.79	.10	.11
7. Column (d) of item 5 on F-236 completed.....	1.00	.67	.12	.21
8. Dwelling counts reconciled in F-236.....	1.00	.69	.03	.23
9. Action taken correctly in section VII of F-243.....	1.00	.84	.03	.13
10. Enumerator given F-242 when necessary.....	1.00	.57	.05	.38
Average.....	1.00	.75	.08	.17

Source: Forms F-289, Evaluation of Field Review for PH-1 or PH-2.

that most of these were cases of second assignments for which only final review was required.

Table 22 compares the action actually taken by the reviewer—who made first and final reviews only, or made additional reviews, or released the enumerator—with the correct action according to his instructions. It shows the correct action was taken 80 percent of the time and an incorrect action was taken 18 percent of the time. For the remaining 2 percent, the correct action could not be determined. The incorrect actions consisted of more than the necessary number of reviews having been performed almost as often as less than the required number of reviews. The reviewers sometimes explained on the form that a second review was conducted because the enumerator had not done enough work by the time of first review to be judged.

Tables 21 and 22 show that in 1.1 percent of the cases the correct action was to release the enumerator before final review and in 0.8 percent of the cases the enumerators were released. The similarity in these proportions, however, is only fortuitous: In 0.3 percent of the cases enumerators were released when the tally of errors indicated that only first and final reviews were required, and in 0.2 percent of the cases enumerators were released when it was uncertain as to what was required but there was no indication that the enumerator should have been released. In 0.8 percent of the cases the enumerator should have been released but was not.

Table 24.-- Comparison of Field Review Action on Regional Office Telegrams and Field Review Forms: Stage I of Two-Stage Areas

Type of field review and action	Regional Office telegrams	Form F-243
First review.....	1.000	<sup>1</sup> 1.000
No further review required.....	.807	.871
Further review required.....	.177	.123
Enumerator released.....	.016	.006
Intermediate reviews.....	1.000	1.000
No further review required.....	.817	.830
Further review required.....	.128	.142
Enumerator released.....	.055	.028
Final review.....	1.000	<sup>2</sup> 1.000
EA acceptable.....	.976	.978
EA not acceptable.....	.024	.022

<sup>1</sup>Excludes some sample cases (about 14 percent) where there appear to have been irregular patterns of review and where it was impossible from the forms to tell what action should have been taken. Most of these cases (84 percent of them) had final reviews only.

<sup>2</sup>Includes only those cases where final review was conducted.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2, and Regional Office telegrams.

During the field operation the Regional Offices were summarizing the field review reports received from their two-stage District Offices and telegraphing the results to Washington twice a week. Insofar as the results of final review are concerned, the reports from these telegrams agree with the sample of forms F-243 (see table 24). With regard to the proportions of enumerators released, however, there is wide variance: The telegrams report that 1.6 percent of the "first reviews" ended with the release of the enumerator; the sample of forms F-243 shows only 0.6 percent. The results of the telegraphic reports of intermediate reviews, both second and third, similarly show twice as high a proportion ending in the release of the enumerator as does the sample of forms F-243.

Because there was no provision in either the District Office reports or the telegrams for reporting the number of enumerators who had quit, the enumerators who quit may have been added in with those who were released for

cause. Some reviewers noted on the form F-243 that an enumerator had quit; but, since they were not required to do this, the number reported on the forms would be expected to be an underestimate. Nevertheless, as can be seen in table 25, adding the number who quit to those released makes the F-243 results comparable with those of the telegrams for some regions.

Closeout Review

When three attempts to obtain the census information directly from a member of a household by personal visit or telephone failed and the enumerator obtained the information from neighbors ("closeout" procedure), there was a high likelihood that he was unable to obtain all the required information. To control the number of such cases, each enumerator's work was reviewed in two ways:

Table 25-- Proportions of Enumerators Released According to Regional Office Telegrams, Compared With Those Released and Quit According to Field Review Forms: Stage I of Two-Stage Areas

Regional Office	From telegrams:			From field review forms:						
	Total	Released after 1st review	Released after 2nd or 3rd review	Total released and quit	Total released	Total quit	Released after 1st review	Quit after 1st review	Released after 2nd or 3rd review	Quit after 2nd or 3rd review
TOTAL.....	.027	.016	.011	.020	.009	.011	.005	.008	.004	.003
NORTH EAST.....	.031	-	-	.025	.011	.014	-	-	-	-
Boston, Mass.....	.036	.021	.015	.022	-	.022	-	.015	-	.007
New York, N.Y.....	.030	.017	.013	.030	.013	.017	.010	.014	.003	.003
Philadelphia, Pa.....	.043	.027	.016	.030	.013	.017	.009	.013	.004	.004
Pittsburgh, Pa.....	.019	.014	.005	.028	.014	.014	.014	-	-	.014
Cincinnati, Ohio.....	.023	.012	.011	.005	.005	-	-	-	.005	-
NORTH CENTRAL.....	.021	-	-	.017	.008	.008	-	-	-	-
Detroit, Mich.....	.026	.019	.007	.008	.008	-	.008	-	-	-
Chicago, Ill.....	.019	.010	.009	.030	.020	.010	.010	.010	.010	-
St. Paul, Minn.....	.019	.011	.008	.010	-	.010	-	-	-	.010
Kansas City, Mo.....	.016	.007	.008	.009	-	.009	-	.009	-	-
St. Louis, Mo.....	.024	.015	.008	.013	-	.013	-	.013	-	-
SOUTH.....	.024	-	-	.004	-	.004	-	-	-	-
Charlotte, N.C.....	.018	.012	.006	.006	-	.006	-	.006	-	-
Atlanta, Ga.....	.025	.015	.010	-	-	-	-	-	-	-
New Orleans, La.....	.026	.021	.005	-	-	-	-	-	-	-
Dallas, Tex.....	.032	.016	.016	.009	-	.009	-	.009	-	-
Denver, Colo.....	.019	.015	.004	-	-	-	-	-	-	-
WEST.....	.031	-	-	.032	.018	.014	-	-	-	-
Los Angeles, Calif.....	.032	.018	.013	.034	.021	.012	.008	.008	.013	.004
Seattle, Wash.....	.024	.010	.014	.024	-	.024	-	.024	-	-

Source: Forms F-243, Record of Field Review, PH-1 and PH-2, and Regional Office telegrams.

1. After an assignment was accepted at final review, the reviewer (crew leader or field reviewer) examined entries for each household completed by closeout. If there were more than 25 lines (people and housing units) in the assignment with

missing information for any one of the questions on sex, race, sample key, type of housing unit, access to unit, or occupancy of unit, or if a housing unit neither had a head of household designated nor was designated as vacant, the assignment was to be given to another enumerator who was to visit at least once every unit which had been completed by closeout procedure.

Table 26--Results of Closeout Review: Stage I of Two-Stage Areas

Tallies on forms F-243	Proportion of EA's
Total.....	1.00
No evidence of closeout review.....	.19
Some evidence of closeout review...	.81
Tallies incomplete.....	.12
Tallies complete.....	.69
Failed.....	1.02
Passed.....	.68

<sup>1</sup>The proportion actually rejected was .06, according to the action shown by the crew leader on line 47.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

2. In the District Office, the quality control clerk checked to see if more than 20 percent of the housing units in an EA had been completed by the closeout procedure, regardless of the amount of missing information. If so, the assignment was sent back to the field. There is no record of the proportion of EA's sent back for this reason.

A national sample of Listing Books shows that 3.5 percent of the Stage I housing units were marked as enumerated by closeout procedure.

The results of examination of records of the closeout review by crew leaders are confusing. First of all, table 26 reveals that there was no evidence of the closeout review having been made in 19 percent of the EA's. In another 12 percent of the cases, the tallies that were to appear on lines 45 and 46 of the review form were incomplete. Where the information existed, there was disagreement between the tallies on lines 45 and 46 and

Table 27.--Closeout Entries on Forms With Evidence of Closeout Review: Two-Stage and Single-Stage Areas

Closeout entry	(Proportion of EA's)		
	Two-stage areas		Single-stage areas
	Stage I	Stage II	
Total EA's with tallies for closeout review.....	1.000	1.000	1.000
Marked for failure <sup>1</sup> .....	.079	.070	.039
Correctly.....	.019	.058	.012
Incorrectly.....	.060	.012	.027
Marked for acceptance <sup>2</sup> ....	.800	.892	.906
Correctly.....	.796	.791	.906
Incorrectly.....	.004	.101	.000
Result not marked:.....	.121	.038	.055
Should have failed.....	.001	.021	.000
Should have accepted....	.120	.017	.055

<sup>1</sup>  Yes - Give to closeout enumerator."  
<sup>2</sup>  No - Accept EA."

Source: Forms F-243, Record of Field Review, PH-1 and PH-2; forms F-244, Record of Field Review, PH-3 and PH-4; and forms F-243A, Record of Field Review, Single Stage.

Table 28.--Errors Per Population or Housing Line as Found in Office Quality Control: Stage I of Two-Stage Areas and 100 Percent Items for Single-Stage

Errors per line inspected <sup>1</sup>	Proportion of--	
	ED's	Crew leaders
Total.....	1.00	1.00
.00.....	.55	.52
.01 to .10.....	.30	.31
.11 to .20.....	.08	.09
.21 to .30.....	.03	.05
.31 to .40.....	.02	.02
.41 to .50.....	.01	.01
.51 to .60 <sup>2</sup> .....	(Z)	(Z)
.61 to .70.....	(Z)	(Z)
.71 to .80.....	(Z)	-
.81 to .90.....	-	-
.91 to 1.00.....	(Z)	(Z)
1.01 or more.....	-	(Z)
Mean errors per line.....	.05	.05

Z Less than .005.

<sup>1</sup>A line is defined as either a housing line (with an expected 10 items) or a population line (with an expected 7 items). On the average, there are about 8.2 items per line. Errors include omissions.

<sup>2</sup>ED enumeration book or books rejected when errors per line greater than .50, which is equivalent to a 6 percent error rate on an item basis.

Source: Forms F-267, Office QC Record for PH-1.

the final action shown on line 47; the former showed 2 percent of the EA's failing the closeout review, and the latter, 6 percent. The truth may be somewhere in between, because the reports telegraphed to Washington from the Regional Offices showed that 3.5 percent of the assignments had been rejected for closeout in Stage I.

District Office Quality Control

After the enumeration books received in the District Offices had passed the checks for damaged books and closeout, the work of each enumerator was inspected. Three percent of the pages in the 100-percent enumeration books for an ED were reviewed for the completeness of the population and housing lines (excluding households and housing units which had been enumerated by closeout procedure). The ED was rejected if more than 6 percent of the items were blank.

When an ED was rejected, the ED map, the Listing Book and both the Stage I and Stage II enumeration books were returned to the crew leader for correction. The second time an ED was rejected after a given field

reviewer had done the final review, he was to be relieved of his field-review functions regardless of whether or not he had had a chance to be retrained after the first ED failed. (Such field reviewers were then allowed to do enumeration if more was available.) The crew leader was relieved of field-review functions after the second rejected ED only if his scheduled retraining had been performed before he reviewed the ED.

According to the telegrams received from the Regional Offices, 3.2 percent of the ED's were rejected in District Office quality control in two-stage enumeration areas for incomplete population and housing items. The sample of forms F-267 and F-268 upon which the District Offices recorded their results, however, shows only 1.9 percent of the ED's as rejected.

District Office quality control was duplicated in Washington for a national sample of housing units. The error rate of .007 reported by the District Offices closely matched the error rate of .009 found in the national sample. Table 2 shows this comparison as well as giving the office error rates by item.

Table 29.--Nonresponse Rates for Population and Housing Items Found in Field and Office Reviews and in National Sample: Proportion of Work Rejected and Work Which Should Have Been Rejected

(Nonresponse rates are lack of response or inconsistencies in responses)

Inspection and results	Two-stage areas		Single-stage areas	
	Stage I (100% items)	Stage II (Sample items)	100% items	Sample items
First field review:				
Estimated nonresponse rate <sup>1</sup> .....	.007	.012	(NA)	(NA)
Proportion of EA's rejected on these checks.....	<sup>2</sup> .016	<sup>2</sup> .014	(NA)	(NA)
Final field review:				
Estimated nonresponse rate <sup>1</sup> .....	.003	.007	.005	.009
Proportion of EA's rejected on these checks.....	<sup>2</sup> .005	<sup>2</sup> .005	(NA)	(NA)
Office review: <sup>3</sup>				
Estimated nonresponse rate <sup>1</sup> .....	.007	.007	.007	.007
Proportion of ED's rejected.....	<sup>4</sup> .019	<sup>5</sup> .008	<sup>6</sup> .020	<sup>6</sup> .029
National Sample:				
Nonresponse rate for items checked on final review <sup>1</sup> ....	(NA)	.032	(NA)	.034
Proportion of ED's which should have been rejected on final review.....	(NA)	.228	(NA)	.134
Nonresponse rate for items inspected in office.....	.009	.019	(NA)	(NA)
Proportion of ED's which should have been rejected in office.....	.025	.071	(NA)	(NA)

NA Not available.

<sup>1</sup>An average of three people per household was used in computing the estimated nonresponse rates. These estimates may be overstatements of the errors found: When the reviewer was asked to tally nonresponses for more than one item on one line (as for P10-P12, P27, P31-P33, etc.) the estimated number of items checked was not multiplied by the number of items on the line.

<sup>2</sup>This is a maximum rate—assuming that no EA failed both the population and housing checks.

<sup>3</sup>This review excluded all vacant households.

<sup>4</sup>From forms F-267 and F-268. The telegrams reported .032.

<sup>5</sup>From forms F-280. The telegrams reported .016.

<sup>6</sup>From the telegraphic reports.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2; forms F-244, Record of Field Review, PH-3 and PH-4; forms F-243A, Record of Field Review, Single Stage; forms F-267, Office QC Record for PH-1; forms F-268, Office QC Record for PH-2; forms F-280, Office QC Record for PH-3 or PH-4; and national sample of completed Fosdic books.



Payroll Verification

Since the enumerators were paid on a piece-rate basis it was important to make sure that they had indeed recorded the census information for the same number of people as they claimed on their payroll voucher. After the District Office quality control clerks made their quality control checks they also verified the population counts in the enumeration books, the Listing Books, and the payroll voucher.

They first compared the number of people on every 20th page in the enumeration books with the count recorded for the corresponding housing units in the Listing Book. If one error was found, the population counts for every unit in the enumeration book were to be matched with those in the Listing Book, correcting the Listing Book as necessary.

Next, they verified the addition of the population counts on every third page of the Listing Book; if one error was found they were to verify the addition of all pages.

After all necessary corrections had been made to the page totals, they were then to verify the addition (and the transcription, it must be assumed) of all the page totals for population and housing counts for each ED in the EA as shown on a summary page of the Listing Book.

Form F-287, Office Payroll Verification Record for Two-Stage Areas, was used for making these checks. The inspection for one EA was to be recorded on one line of this form. Often, however, ED's were listed on separate lines. The proportions of lines in error for the three checks described above were, respectively, 8, 22, and 32 percent, where a line could be either an EA or an ED.

The errors found in these three checks were cumulative. An error in the first check would automatically mean an error in the second and third checks.

The total 100-percent population count and housing count in the EA were then verified or changed as necessary on the payroll voucher, and the ED counts were posted on the cover of the enumeration book.

Transcription Verification

For the sample households and people that were to be enumerated in Stage II, the Stage I enumerator transcribed the 100-percent information from the Stage I enumeration book to the Stage II enumeration book. This work was verified on a sample basis both in the field and in the District Offices.

In the field the reviewers checked the transcription of one sample housing unit on every page of the Listing Book. When there were five sample housing units on a page of the Listing Book, this resulted in a 20-percent sample verification. If there were one or more errors

per housing unit inspected, the assignment was to be completely verified and corrected.

Table 30.--Transcription Verification Error Rates in Field Review: Stage I of Two-Stage Areas

Transcription errors per housing unit	Proportion of EA's	Transcription errors per housing unit	Proportion of EA's
Total.....	1.00	1.00 to 1.00 <sup>1</sup> ..	.01
		1.10 to 1.19...	(2)
0.....	.47	1.20 to 1.29...	(2)
.01 to .09.....	.07	1.30 to 1.39...	(2)
.10 to .19.....	.13		
.20 to .29.....	.09	1.40 to 1.49...	(2)
.30 to .39.....	.06	1.50 or more...	.01
.40 to .49.....	.04	Mean error rate	.16
.50 to .59.....	.04	Proportion of EA's failing transcription verification..	.02
.60 to .69.....	.02		
.70 to .79.....	.02		
.80 to .89.....	.01		
.90 to .99.....	.01		

<sup>2</sup> Less than .005.

<sup>1</sup>Rejection rate was 1.00.

Source: Forms F-243, Record of Field Review, PH-1 and PH-2.

Table 31.-- Errors Found in Office Transcription Verification: Stage I of Two-Stage Areas

Number of errors <sup>1</sup>	Proportion of EA's	Number of errors <sup>1</sup>	Proportion of EA's
Total..	1.00	13.....	.01
		14.....	.01
0.....	.26	16.....	.01
1.....	.08	17.....	.01
2.....	.09	18.....	.01
3.....	.07	19.....	(2)
4.....	.05	20.....	.01
5.....	.06	21.....	(2)
6.....	.04	22.....	(2)
7.....	.03	23.....	(2)
8.....	.03	24.....	.01
9.....	.02	25 <sup>2</sup> .....	.09
10.....	.03		
11.....	.02	Rejected with fewer errors than 25 <sup>3</sup> ....	.04
12.....	.01		
13.....	.01		

<sup>2</sup> Less than .005.

<sup>1</sup>The sampling was designed so that every EA would have about 15 housing units inspected, with little variability. Errors include omissions.

<sup>2</sup>The verifier was to stop verifying and reject the EA as soon as 25 errors were found.

<sup>3</sup>The verifier was to reject if one wrong housing unit was transcribed or one person was omitted.

Source: Forms F-278, Office Verification of Transcription to PH-3 or PH-4.

The result of the transcription verification performed by the crew leaders was not recorded on the Regional Office Quality Control Report and was thus not part of the Regional Offices' telegraphic reports. Going by the sample of forms F-243, transcription verification took place in the field for 83 percent of the assignments.

Among the EA's for which field verification of the transcription was recorded, only 2 percent were found by the field reviewers or crew leaders to have unacceptable transcription. This, as will be seen below, is a very low error rate compared with the error rate of 9 percent found later by the people in the District Offices. It may be that this check was carried out so poorly in the field because it was the last step taken before delivering the enumeration books and other materials for the EA to the District Office, and the crew leaders and field reviewers may have been overly eager to conclude their work on each EA.

The sampling plan for quality control in the District Offices was designed so that Stage II entries for about

15 housing units would be verified for each EA. When there were 77 Stage II (25-percent sample) housing units in the EA, the District Office verification of about 15 of them resulted in about the same sampling rate for verification as was used in the field verification. The District Office inspection, however, was of a truncated sample: The moment the verifier found 25 errors, or one wrong housing unit or group quarters person erroneously transcribed to the Stage II enumeration book, he was to stop inspecting and set aside the book for correction.

In two-stage areas the telegrams from the Regional Offices indicated that the District Offices had rejected 9 percent of the EA's for unacceptable transcription; the sample of Transcription Verification Forms (F-278) shows 13 percent.

In assignments that were not rejected (the only ones for which full tallies of errors were made), there was an estimated 3.7 percent error rate per item.