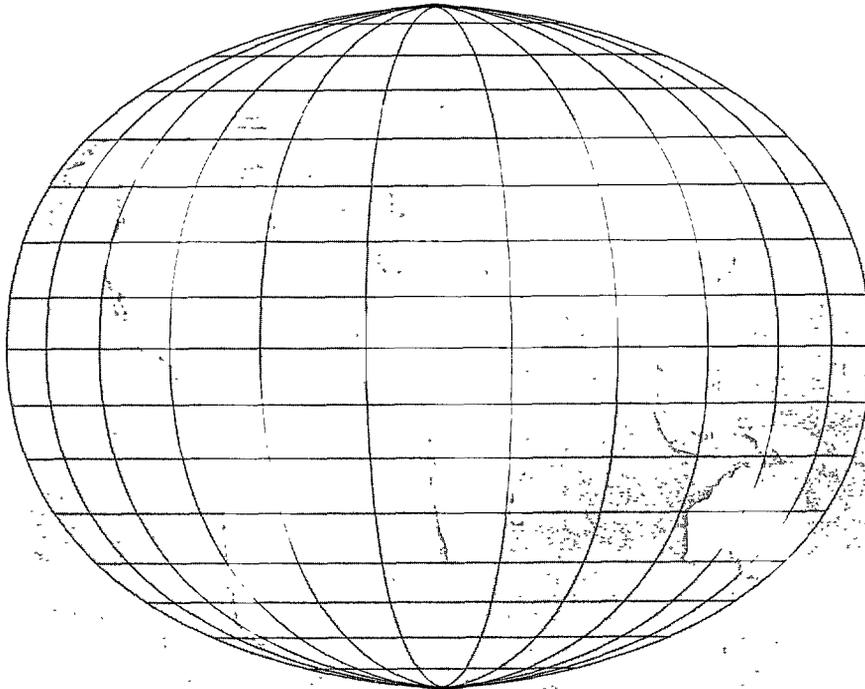


Report of Audit

Performance Audits

AUDIT OF THE CONTROLS OVER THE QUALITY OF FINANCIAL MANAGEMENT DATA

Report No. 9-000-96-005
July 11, 1996



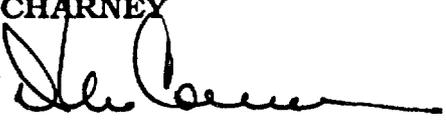
**OFFICE OF INSPECTOR GENERAL
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT**



U.S. AGENCY FOR
INTERNATIONAL
DEVELOPMENT

July 11, 1996

MEMORANDUM FOR M/FM, DONALD K. CHARNEY

FROM: IG/A/PA, David M. Conner 

SUBJECT: Audit of the Controls Over the Quality of Financial Management Data (Audit Report No. 9-000-96-005)

This report summarizes OIG audits of data integrity within the Mission Accounting and Control System (MACS) at 33 USAID missions. Unless corrected on a systemic, agencywide basis, the serious data accuracy problems we identified could adversely affect reliability of the New Management Systems (NMS) that are replacing MACS and other management systems.

We have included your written comments to the draft report in Appendix II. The report contains one recommendation which is resolved.

I appreciate the cooperation and courtesy extended to OIG staff during the audit.

Background

Realizing that USAID must operate with increasingly scarce funds, the Agency undertook a new and aggressive effort to change the way data and information were managed. USAID's objective is to consolidate all financial data into a corporate data base where data from the field and USAID/Washington can be used to produce timely, accurate, and meaningful reports.

For this data base to succeed, the MACS data from all missions must be of high quality. Therefore, in support of the Office of Information Resources Management (M/IRM) and the Office of Financial Management's (M/FM) work, the Office of Performance Audits and the Regional Inspectors General in Cairo, Dakar, Nairobi, and Singapore conducted a series of 33 audits designed to evaluate the accuracy of data in the MACS files which is central to the Agency's work. This report summarizes the results of those audits.

As stated in M/FM's comments (Appendix II), MACS is being replaced by the Agencywide Accounting and Control System (AWACS) currently under development. AWACS is part of the NMS. Both the OIG and the Congress are concerned with development and implementation problems with AWACS. In May 1996, Congress requested that the OIG keep it apprised on the progress of AWACS development and implementation.

Audit Objective

The audit was designed to answer the following question:

- Does the Mission Accounting and Control System (MACS) contain systemic weaknesses which may reduce the accuracy of financial management data?

Audit Findings

We found that MACS data was accurate¹ in 788 (67 percent) of the 1,174 data elements we sampled (see Appendices III and IV). The remaining 386 (33 percent) elements contained errors due to (1) local mission problems of data entry errors (190 errors) and missing support (140 errors), and (2) a systemic problem of manually calculating and entering data (56 errors) that could have been automatically calculated.

The issue of data accuracy (i.e., data integrity) has major repercussions throughout USAID because USAID has had and continues to have inaccurate data within its management systems. In 1993, USAID noted in its Information Systems Plan (ISP) that it had major deficiencies in managing information resources. One problem noted in the ISP was a high error rate in data with a tendency toward forced reconciliations, and an inefficient use of scarce human resources. The General Accounting Office (GAO) had found a 26 percent error rate in rekeying of disbursement data. Based on the results of our 33 audits summarized here, the data integrity problems that have plagued MACS may be continued in the New Management Systems (NMS) unless strong management action is taken to ensure that data integrity is maintained. The NMS includes the Agencywide Accounting and Control System (AWACS), the system replacing MACS. USAID began implementing the NMS in January 1996.

¹ We considered data elements with error rates of up to 5 per cent accurate for our reporting purposes.

Local mission problems

The mission problems consisted of data entry errors and missing support. The problems were particularly noticeable at four missions² in which the number of data elements with significant error rates exceeded 75 percent of the elements sampled as shown in the table on page 3 of this report. The main problem at each of the four missions was missing support. We discuss the missing support problem on page 4 of this report.

<i>Percent of Data Elements Reviewed With Significant Error Rates</i>	<i>Number of Missions</i>	<i>Number of Data Elements Reviewed</i>	<i>Number of Data Elements With Significant Error Rates</i>	<i>Percent of Data Elements With Significant Error Rates</i>
More than 75%	4	152	140	92%
From 51% to 75%	1	38	25	66%
From 26% to 50%	11	372	121	33%
Up to 25%	17	612	100	16%
TOTAL	33	1,174	386	33%

Data entry errors

Data entry errors occurred at all 33 missions we audited and accounted for 190 (49 percent) of the 386 data elements with significant error rates.

Office of Management and Budget (OMB) Circular No. A-130, dated July 15, 1994, states that Agencies shall collect or create only that information necessary for the proper performance of agency functions and which has practical utility. Practical utility includes such qualities of information as accuracy, adequacy, and reliability.

In addition, the MACS User's Guide details the need to (1) verify data elements (such as Project Agreement Date and Project Authorized Amount) when entering information into the system and (2) periodically review data elements and adjust them as required.

² The four missions (and percentage of data elements with significant error rates) are at Jordan (100 percent), South Africa (97 percent), REDSO/ESA (92 percent), and Zimbabwe (79 percent).

Reasons that significant error rates occurred in 190 data elements included:

- **missions did not ensure that data was updated when new information was received.** This cause was cited at 26 of the 33 missions we reviewed. For example, at USAID/El Salvador, the Commitment End Date data element was not updated when commitment end dates were changed.
- **accounting personnel either made data entry errors or did not understand the correct use of parameters.** This cause was cited at 25 of the 33 missions we audited. At USAID/Sri Lanka, for instance, 11 Commitment End Dates were inaccurate because the accounting personnel had incorrectly entered information into MACS. At USAID/Niger, errors were found in 7 data elements because of incorrect data entry and also because accounting personnel did not fully understand which values were to be entered into MACS.
- **missions did not periodically review elements for accuracy.** This cause was cited at 23 of the 33 missions reviewed. At USAID/Jamaica, for example, seven sampled project agreement dates were incorrect. While other information on these projects had been subsequently entered into MACS, these dates had never been corrected.

Missing support

At 24 of the 33 missions we audited, missing support³ resulted in significant error rates in 140 data elements or 36 percent of the 386 data elements with significant error rates.

The GAO provides guidance on availability of documentation. GAO *Internal Control Specific Standard One* requires all transactions to be clearly documented and that documentation to be readily available for examination.

The significant error rates occurred in the 140 data elements because mission procedures did not ensure that files were created and maintained for source

³ At the start of the data integrity audits, financial management officials presented the rationale that missing support for an element would be counted as an error because support should be available for all data entered into MACS. We agreed with that rationale and used that rationale as criteria in our 33 data integrity audits.

documents at the 24 missions. Missing support contributed to significant error rates at the following four missions:

USAID MISSION	NUMBER OF RECORDS SAMPLED	NUMBER OF MISSING RECORDS	PERCENT OF MISSING RECORDS
Jordan	2,709	1,135	42
South Africa	1,964	477	24
REDSO/ESA	2,715	608	22
Zimbabwe	2,266	442	20

Management at seven missions mentioned problems with obtaining information for other than bilateral projects. In addition, extenuating factors also contributed to the missing support problem. For example,

- USAID/Jordan is the accounting station for USAID/Yemen. Documentation for several USAID/Yemen transactions were misplaced due to civil strife in Yemen.
- USAID/Panama was closed in 1987 and reopened in 1990. Accounting documentation was sent to USAID/Costa Rica in 1987 and was returned to USAID/Panama in 1990. During these transfers, some of this documentation was either misplaced or lost.

While we agree that extenuating circumstances may explain some errors due to missing support, data integrity must be maintained and USAID management must develop and implement a system to provide information to its customers.

Since documentation was not available, we could not verify that all information entered into MACS was accurate.

In the audit reports to the 33 missions reviewed:

- The OIG made fifty-nine recommendations addressing data entry errors. One recommendation is open and resolved, and the remaining 58 are closed.

- The OIG made twenty-two⁴ recommendations addressing the missing support problem. All 22 recommendations are closed.

While recommendations to correct data entry and missing support problems were made in the individual audit reports, a systemic solution is needed within USAID.

Recommendation No. 1: We recommend that the Office of Financial Management establish a system to ensure data integrity at all accounting stations. This system should include:

- edit checks for data integrity during data entry.
- criteria for retaining supporting documentation.
- criteria for replacing documentation lost due to extenuating circumstances.
- information flow between accounting stations and the Office of Financial Management to (i) report systemic problems and (ii) disseminate that information to all accounting stations.

Incorrect calculations

As shown below, 56 significant error rates (15 percent of the 386 data elements with significant error rates) in two Project Information Master File elements resulted from incorrect manual calculations and could have been avoided if the elements were calculated automatically.

<i>ELEMENT</i>	<i>MISSIONS REVIEWED</i>	<i>SIGNIFICANT ERROR RATES</i>
Terminal Disbursement Date	33	25
Life of Project	32	31

The terminal disbursement date indicates the date after which disbursement may not be made. This disbursement date must be the same as or later than the

⁴ No recommendation was made to USAID/South Africa because the Mission had taken action to correct the problem.

Project Agreement Completion Date (PACD), and is normally nine months after the PACD.

The life of project indicates the length of the project in years; that is, the number of years between the agreement date and the PACD.

Errors in these fields were caused by incorrect mathematical calculations, input errors and the absence of consistent application of a policy. Rather than requiring a manual calculation and entry, MACS should have been designed to calculate and record the information automatically using other data already in the system. USAID management stated that the AWACS will calculate data fields and insert data automatically. In our draft report, we recommended that the Office of Financial Management document the automatic calculation in AWACS of the two data elements above and any other elements that could be calculated automatically. The Chief Financial Officer (CFO) stated that neither data element would be included in AWACS. He, therefore, suggested that we not include the recommendation in this report. While the recommendation also addressed other elements that could be calculated automatically, we agree with the CFO and have not included that recommendation in the final report.

Management Comments and Our Evaluation

The Office of Financial Management agreed with the reported findings and their comments are included as Appendix II to this report.

The CFO concurred with Recommendation No. 1, stating that:

During the final stages of software development and testing of AWACS, M/FM will be conducting tests to ensure data integrity of AWACS.

Based on the CFO's comments, we consider recommendation No. 1 resolved.

As stated above, the CFO suggested that we exclude a recommendation from the draft report that dealt with calculating data elements automatically. We have excluded that recommendation from the final report.

SCOPE AND METHODOLOGY

Scope

The Office of Audit performed an audit of the quality of Mission Accounting and Control System (MACS) data at 33 USAID missions. This audit was performed in accordance with generally accepted government auditing standards from October 1994 to March 1996.

Methodology

Using information (i.e. findings and management comments) from MACS data integrity audits at 33 missions, we summarized and analyzed systemic problems concerning MACS data.

Each of the 33 audits used the same methodology. Financial management officials in Washington, D.C. identified MACS files and key data elements for review within the 28 MACS Transaction/Master files. Information for selected data elements from the following six files were reviewed:

- Advance Transaction
- Budget Allowance Transaction
- Commitment Transaction
- Disbursement Transaction
- Reservation/Obligation Transaction
- Project Information Master

In each audit, the first five data files were reviewed using statistical sampling techniques and most of the Project Information Master File records were reviewed. We designed the audit so that the data files at each accounting station comprised a unique universe. Therefore, while we were able to project results at each accounting station, we cannot project findings from the individual audits to USAID in its entirety.

For each data element reviewed, we determined if MACS data was accurate and supported by information from source documents. Based on the results of these determinations, the error rate for each data element was calculated and an assessment was made to determine if the error rate was significant. Data elements with an error rate up to 5 percent were considered accurate for reporting purposes. Error rates exceeding 5 percent were considered significant.

We used information from the 33 MACS data integrity audit reports as noted in Appendix V.



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APR 29 1996

TO: Henry L. Barrett, IG/A/PA (Acting)
FROM: *T. K. Charney*
Donald K. Charney, CFO
SUBJECT: *For* Draft Audit of the Controls Over the Quality of
Financial Management Data

We reviewed the draft subject audit report which summarizes the 33 OIG audits of data integrity within the Mission Accounting and Control System (MACS).

The timing of the 33 data integrity audits was excellent with regard to the M/FM's development of the Agency Wide Accounting and Control System (AWACS). The issues of integrity and migration of MACS data with regard to the new AWACS database were being addressed at the time of these audits. One major impact of the audits was to improve the quality of MACS data that will be migrated to AWACS. For example, in November 1994 and in response to the ongoing audits, M/FM issued a Policy Directive to its overseas controllers providing guidance on the use of certain MACS data fields to improve the accuracy and uniformity of MACS data. A second major benefit of these audits is the added emphasis given to the importance of data integrity throughout the NMS/AWACS systems.

We fully concur with Recommendation No. 1. During the final stages of software development and testing of AWACS, M/FM will be conducting tests to ensure data integrity, including edit checks during data entry, standards for retention of supporting documentation, and information flow between overseas and Washington accounting stations. In connection with this recommendation, we would like to work together to develop the format of the documentation for the transition process to ensure we meet auditing standards.

We suggest Recommendation No. 2 not be included in the final audit report. The two data elements (the Terminal Disbursement Date and the Life of Project) cited in this recommendation are not data elements in the NMS/AWACS systems. The concept of "projects" is replaced by Strategic Objectives, Activities, and Sub-Activities and are a part of the Operations module. While SOs and Activities do have "planned start dates" and "planned completion dates", there are no corresponding data elements in the AWACS or the Operations module for Life of Project and

Terminal Disbursement Date. In addition, because the NMS is built around the concept that accounting transactions are captured and recorded where and when they occur and that the information is only entered once, the chance of data input error is greatly reduced.

We sincerely appreciate the efforts and cooperation of your staff in finalizing this audit. Your findings and conclusions with regard to data integrity have had a very positive impact in the development of our new NMS and AWACS systems.

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**SUMMARY OF MACS FILES AND DATA ELEMENTS
REVIEWED AT THIRTY-THREE MISSIONS**

<u>MACS FILES/ELEMENT</u>	<u>MISSIONS REVIEWED</u>	<u>MISSIONS WITH ERRORS¹</u>	<u>PER- CENT</u>	<u>DATA ENTRY/ OTHER ERRORS</u>	<u>ERRORS DUE TO MISSING SUPPORT</u>
BUDGET ALLOWANCE TRANSACTION FILE					
Budget Plan Code	33	6	18.2	1	5
Transaction Amount	33	6	18.2	0	6
Project Number	32	5	15.6	0	5
RESERVATION/OBLIGATION TRANSACTION FILE					
Obligation Number	33	6	18.2	1	5
Reservation Control Number	33	6	18.2	0	6
Budget Plan Code	33	6	18.2	0	6
Transaction Amount	33	9	27.3	5	4
Project Number	7	0	0.0	0	0
COMMITMENT TRANSACTION FILE					
Commitment Document Number	33	7	21.2	1	6
Earmark Control Number	33	8	24.2	2	6
Call Forward Date	33	10	30.3	4	6
Training Months	17	1	5.9	1	0
Budget Plan Code	30	10	33.3	4	6
Transaction Amount (AID/W)	33	9	27.3	3	6
Transaction Amount (Mission)	33	10	30.3	6	4
Commitment End Date	33	25	75.8	20	5
DISBURSEMENT TRANSACTION FILE					
Obligation Document Number	32	4	12.5	1	3
Reservation Control Number	32	5	15.6	1	4
Commitment Document Number	32	3	9.4	0	3
Earmark Control Number	32	3	9.4	1	2
Budget Plan Code	32	5	15.6	4	1
Disbursing Office Code	32	7	21.9	4	3
Local Disbursement Amount	24	12	50.0	11	1
Budget Allowance Disbursement	32	4	12.5	2	2
Amortization Begin Date	10	0	0.0	0	0
Amortization End Date	10	0	0.0	0	0
Transaction Type	31	4	12.9	0	4

¹ This is the number of missions with a significant error rate. A significant error rate is a rate of more than 5 per cent.

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**SUMMARY OF MACS FILES AND DATA ELEMENTS
REVIEWED AT THIRTY-THREE MISSIONS**

<u>MACS FILES/ELEMENT</u>	<u>MISSIONS REVIEWED</u>	<u>MISSIONS WITH ERRORS¹</u>	<u>PER- CENT</u>	<u>DATA ENTRY/ OTHER ERRORS</u>	<u>ERRORS DUE TO MISSING SUPPORT</u>
ADVANCE TRANSACTION FILE					
Advance Number	21	4	19.0	2	2
Obligation Document Number	21	4	19.0	2	2
Commitment Document Number	20	3	15.0	2	1
Project Number	21	5	23.8	2	3
Advance Type	21	7	33.3	5	2
Accountability Date	20	10	50.0	9	1
Advance Transaction Amount	21	5	23.8	2	3
Local Currency Amount	20	5	25.0	4	1
PROJECT INFORMATION MASTER FILE					
Project Agreement Completion Date	33	25	75.8	22	3
Authorized Amount	33	26	78.8	19	7
Agreement Date	33	30	90.9	27	3
Terminal Disbursement Date	33	25	75.8	24	1
Host Country Contribution	33	25	75.8	19	6
Project Number	31	10	32.3	3	7
Life of Project (In Years)	32	31	96.9	30	1

¹ This is the number of missions with a significant error rate. A significant error rate is a rate of more than 5 per cent.

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SUMMARY OF DATA ELEMENTS REVIEWED, ERROR RATES AND PERCENTAGE OF ERROR RATES

MISSION	NUMBER OF DATA ELEMENTS REVIEWED	NUMBER OF DATA ELEMENTS WITH SIGNIFICANT ERROR RATES (PERCENT)	
1. Jordan	38	38	(100)
2. South Africa	38	37	(97)
3. REDSO/ESA	38	35	(92)
4. Zimbabwe	38	30	(79)
5. REDSO/WCA	38	25	(66)
6. Niger	37	17	(46)
7. Jamaica	34	13	(38)
8. Egypt	36	13	(36)
9. Mali	37	13	(35)
10. Panama	23	8	(35)
11. Mozambique	35	11	(31)
12. Ecuador	33	10	(30)
13. Costa Rica	33	9	(27)
14. Kenya	38	10	(26)
15. RDO/Caribbean	31	8	(26)
16. Dominican Republic	35	9	(26)
17. India	38	9	(24)
18. Bolivia	34	8	(24)
19. Thailand RSM/EA	39	9	(23)
20. Guatemala	32	7	(22)
21. Nepal	38	8	(21)
22. Peru	34	7	(21)
23. Honduras	31	6	(19)
24. Nicaragua	31	6	(19)
25. Indonesia	38	7	(18)
26. Senegal	31	5	(16)
27. Malawi	38	6	(16)
28. Philippines	39	6	(15)
29. El Salvador	32	4	(13)
30. Sri Lanka	38	4	(11)
31. Swaziland	38	4	(11)
32. Ghana	37	2	(5)
33. Bangladesh	38	2	(5)
TOTALS	1,174	386	(33)

MACS DATA INTEGRITY AUDITS

MISSION	AUDIT REPORT		AUDIT PERIOD
	NUMBER	DATE	
1. Jordan	3-278-95-011	05/05/95	Fiscal Years 1992-1994
2. South Africa	3-674-95-016	08/18/95	Fiscal Years 1992-1994
3. REDSO/ESA	3-623-96-002	11/30/95	Fiscal Years 1992-1994
4. Zimbabwe	3-613-95-017	08/31/95	Fiscal Years 1992-1994
5. REDSO/WCA	7-624-95-008	08/03/95	10/01/91 to 01/26/95
6. Niger	7-683-95-010	09/14/95	10/01/91 to 01/31/95
7. Jamaica	9-532-94-008	06/20/94	Fiscal Years 1992-1993
8. Egypt	6-263-95-004	02/09/95	Fiscal Years 1992-1994
9. Mali	7-688-95-005	02/17/95	10/01/91 to 07/31/94
10. Panama	9-525-94-013	09/21/94	Fiscal Years 1992-1993
11. Mozambique	3-656-95-015	08/18/95	Fiscal Years 1992-1994
12. Ecuador	9-518-95-002	10/31/94	Fiscal Years 1992-1994
13. Costa Rica	9-515-94-014	09/23/94	Fiscal Years 1992-1993
14. Kenya	3-615-95-008	03/17/95	Fiscal Years 1992-1994
15. RDO/Caribbean	9-531-94-006	05/26/94	Fiscal Years 1992-1993
16. Dominican Republic	9-517-94-010	07/29/94	Fiscal Years 1992-1993
17. India	5-386-95-019	09/15/95	Fiscal Years 1992-1994
18. Bolivia	9-511-95-004	11/30/94	Fiscal Years 1992-1993
19. Thailand RSM/EA	5-493-95-002	12/21/94	Fiscal Years 1992-1994
20. Guatemala	9-520-94-005	05/23/94	Fiscal Years 1992-1993
21. Nepal	5-367-95-004	03/14/95	Fiscal Years 1992-1994
22. Peru	9-527-95-001	10/31/94	Fiscal Years 1992-1993
23. Honduras	9-522-94-009	06/24/94	Fiscal Years 1992-1993
24. Nicaragua	9-532-95-003	11/23/94	Fiscal Years 1992-1993
25. Indonesia	5-497-95-017	08/24/95	Fiscal Years 1992-1994
26. Senegal	7-685-95-003	12/01/94	10/01/91 to 07/31/94
27. Malawi	9-612-95-007	02/21/95	Fiscal Years 1992-1994
28. Philippines	5-492-95-009	03/31/95	Fiscal Years 1992-1994
29. El Salvador	9-519-94-004	05/19/94	Fiscal Years 1992-1993
30. Sri Lanka	5-383-95-016	08/23/95	Fiscal Years 1992-1994
31. Swaziland	9-645-95-013	06/16/95	Fiscal Years 1992-1994
32. Ghana	7-641-96-001	11/21/95	PIM File: 10/01/92 to 04/30/95 Other 5 Files: 10/01/94 to 04/30/95
33. Bangladesh	5-388-95-013	07/28/95	Fiscal Years 1992-1994