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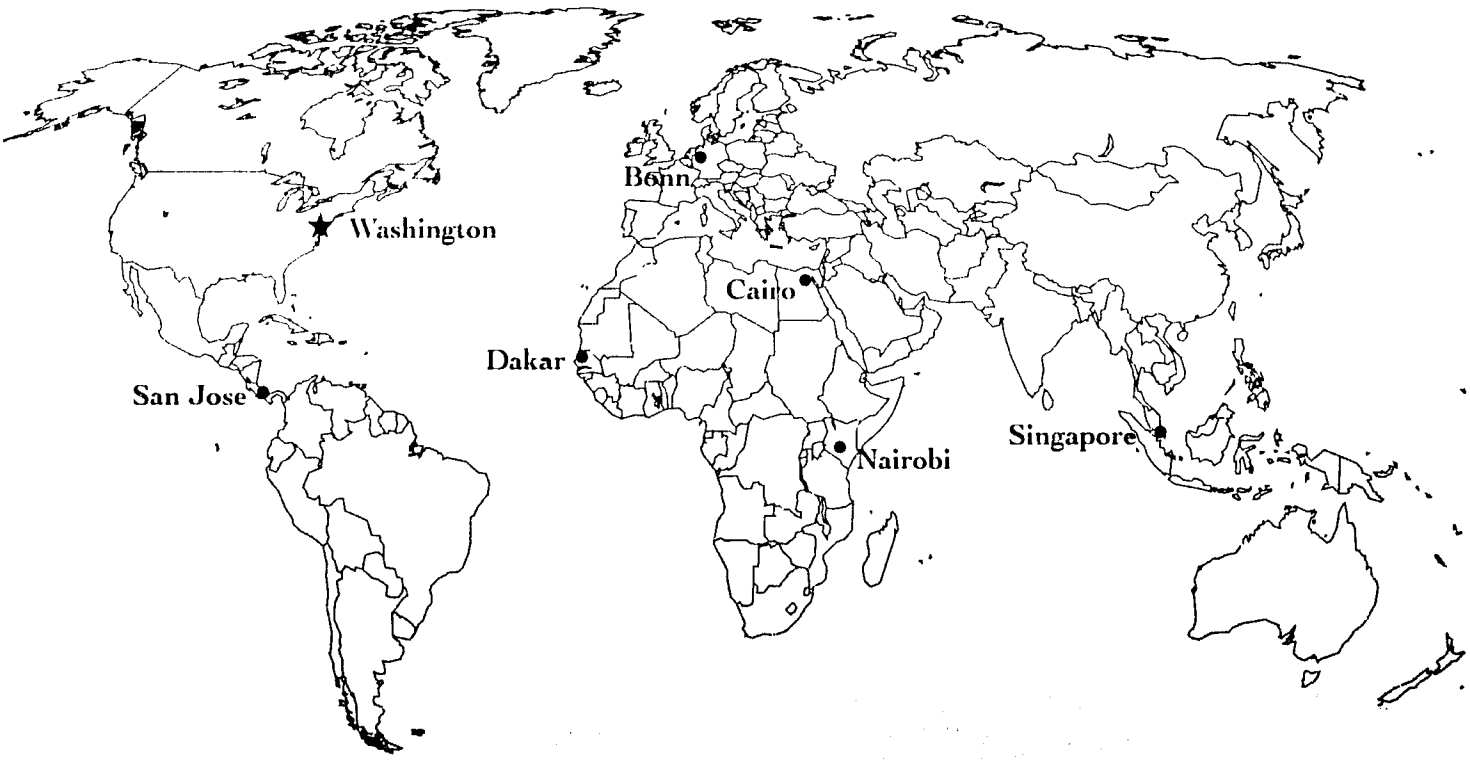
Regional Inspector General for Audit
Dakar

# Audit of the Quality of MACS Data at REDSO/WCA

Audit Report No. 7-624-95-008
August 3, 1995




INSPECTOR GENERAL

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Regional Inspector General for Audit
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UNITED STATES OF AMERICA
**AGENCY FOR INTERNATIONAL DEVELOPMENT**
OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR WEST AFRICA

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August 3, 1995

MEMORANDUM FOR DIRECTOR REDSO/WCA, Willard Pearson
DIRECTOR, USAID/Nigeria, Stephen Spielman

Walter Earl Shepherd

FROM: Acting RIG/A/Dakar, Walter Shepherd

SUBJECT: Audit of the Quality of MACS Data at REDSO/WCA
(Audit Report No. 7-624-95-008)

This is the final report on the subject audit. We considered your comments to the draft report and have included them as Appendix II. The report contains four recommendations. Recommendations No. 1, 2 and 4 which are addressed to the Regional Economic Development Services Office/West and Coastal Africa (REDSO/WCA) are resolved. Recommendation No. 3 which is addressed to USAID/Nigeria is unresolved pending the Mission's decision to provide a training session to its accounting personnel. Please notify our office within 30 days of the status of actions planned or taken to close the report's recommendations.

I appreciate the cooperation and courtesy extended to my staff by REDSO/WCA and its client-controller missions during the audit.

## Summary of Audit Findings

We reviewed six of the 28 MACS files and found problems requiring corrective actions pertaining to each of the six files. Some of the main problems involved elements in the Project Information Master File (PIM), which were not being updated. Consequently, we recommend that REDSO/WCA implement periodic review procedures and train its personnel to properly update and regularly verify the accuracy of the PIM file. Additionally, we found that REDSO/WCA did not always correctly enter transactions into MACS and that USAID/Nigeria did not always properly complete MACS coding sheets. Further, there were several source documents that REDSO/WCA and USAID/Burkina Faso were unable to locate; thus, the related MACS transactions were considered unsupported

and for report purposes, in error. To correct the above weaknesses, we recommend that REDSO/WCA and USAID/Nigeria hold training sessions with their accounting personnel to emphasize the proper values to be entered into MACS, to review correct coding sheet preparation procedures, and to review document filing procedures. No recommendation is made to USAID/Burkina Faso because the Mission is scheduled to close in September 1995.

## Introduction

In view of the fact that USAID must operate with increasingly scarce funds, the Agency is undertaking a new and aggressive effort to change the way data and information are managed. Such an effort is critical to our future: in the modern workplace, be it business or government, a high-quality, reliable information system is no longer a luxury—it is a necessity.

To ensure that the data in the entire USAID system is of high quality—and therefore useful to managers concerned about project status and pipeline reports—the Office of Information Resource Management (IRM) is undertaking a major initiative. It is centralizing data collection and improving the management of information by creating a "data warehouse" (see Appendix III) that will be a repository for data from all Agency systems. One of the first steps in bringing data to this warehouse is the PIPE (Project Information and Pipeline Evaluation) initiative. The PIPE initiative is a joint IRM and Financial Management project that will combine MACS data from the missions and financial data from USAID/Washington, allowing all Agency managers timely and comprehensive information on USAID projects worldwide.

For this system to succeed, the MACS data from all of the missions must be of the highest accuracy. In support of IRM's work, the Office of Audit is conducting a series of audits designed to evaluate the quality of data in the MACS files. Our audit of the West Africa Accounting Center (WAAC) at REDSO/WCA, which provided MACS services for itself and 21 countries[1] in West Africa, is thus, an important part of this effort. The audit covers the period from October 1, 1991 through January 26, 1995.

[1] These countries are listed in Appendix VII.

## Audit Objective

The audit was designed to answer the following question:

- Is the data in REDSO/WCA's Mission Accounting and Control System (MACS) accurate?

## Audit Findings

REDSO/WCA's MACS data was accurate in 10 of the 39 data elements reviewed; however, the other 29 data elements contained significant errors. We considered errors to be significant if the error rate for a data element was five or more percent.

| RESULTS OF OUR REVIEW | | | |
|---|---|---|---|
| **MACS Files** | **Data Elements Reviewed** | **Elements With Significant Errors** | **Elements With No Significant Errors *** |
| Budget Allowance Transaction (BAT) | 3 | 1 | 2 |
| Reservation/Obligation Transaction (ROT) | 4 | 1 | 3 |
| Commitment Transaction (COT) | 7 | 7 | 0 |
| Disbursement Transaction (DIT) | 10 | 8 | 2 |
| Advance Transaction (ADT) | 8 | 7 | 1 |
| Project Information Master (PIM) | 7 | 5 | 2 |
| **Total** | **39** | **29** | **10** |

*(Error rates for each of these elements can be found in Appendix IV.)*

The 29 significant errors were caused by three different problems:

1. MACS data was not always updated properly,

2. MACS data was not properly entered/Coding sheets were not properly prepared, and

3. Documentation was lacking to support transactions.

Since USAID managers worldwide will rely on information in the Agency's data warehouse for making decisions on where and how to allocate scarce resources, it is critical that the data coming from each mission's MACS be accurate and complete. Therefore, the efforts of REDSO/WCA to ensure the integrity of data in MACS will contribute to the Agency's overall goal of providing accurate and timely information on all project activity worldwide in USAID.

REDSO/WCA provided MACS services to four USAID Missions which had Controllers (i.e. USAID/Benin, USAID/Burkina Faso, USAID/Nigeria, and USAID/The Gambia). These client-controller missions completed and forwarded MACS coding sheets to REDSO/WCA personnel who would, based upon the coding sheets, enter each mission's data into the MACS. As for REDSO/WCA's non-Controller client missions, REDSO/WCA served as the Controller. Accordingly, to isolate problem areas, we have classified the significant errors noted in the report (except for the PIM file errors for which REDSO/WCA had updating responsibilities) as belonging to REDSO/WCA or to one of its four client-controller missions. An analysis of each problem area and recommendations to correct the problems are discussed in detail below.

## 1. Files Not Always Updated Properly

Data in REDSO/WCA's MACS was inaccurate because the information was not updated according to procedures established by the MACS User's Guide (Release 18). These procedures detail the need to:

- verify data elements, including the Project Agreement Date, Project Assistance Completion Date, Terminal Disbursement Date, Life of Project and Project Amount Authorized, when entering information into the system;

- periodically review the data elements and adjust them as required (for Project Information).

We reviewed seven data elements in 61 of the 253 records (24.1 percent) of REDSO/WCA's Project Information Master file (PIM). The review found that information in five data elements—Project Agreement Date, Project Assistance Completion Date (PACD), Life of Project, Project Amount Authorized, and Terminal Disbursement Date—was not always maintained accurately and contained significant error rates. These error rates are shown below.

| DATA ELEMENT | ERRORS CAUSED BY FILES NOT BEING UPDATED PROPERLY | ERROR RATE |
|---|---|---|
| Project Agreement Date (PIM) | 6 | 9.84% |
| PACD (PIM) | 4 | 6.56% |
| Project Amount Authorized (PIM) | 6 | 9.84% |
| Terminal Disbursement Date (PIM) | 9 | 16.72% |
| Life of Project (in years) (PIM) | 12 | 19.67% |

The information in these data elements was inaccurate because REDSO/WCA did not always ensure the data was updated when new information was received. In addition, although REDSO/WCA had previously performed reviews and sent out cables to client missions requesting them to notify WAAC of changes to be made to project information in MACS, response from project managers was generally not forthcoming. Consequently, project accountants were not aware of which project information in the MACS needed to be updated.

For example, six Project Amount Authorized and four PACD data elements were not always updated when projects were changed or amended. Further, when the PACD data element was updated, the Mission did not always recalculate the Terminal Disbursement Date (calculated by adding 9 months to the PACD) and the Life of Project (calculated by determining the number of years between the PACD and the Project Agreement Date) data elements. Specifically, we found 9 incorrect Terminal Disbursement Dates (16.72 percent) and 12 incorrect Life of Project years (19.67 percent). It should be noted that errors in the PACD and Terminal Disbursement Date data elements could lead USAID managers to improperly obligate funds after a project's completion date or to disburse funds after a project's terminal disbursement date.

In addition, almost 10 percent of the Project Agreement Date data elements—a data element that doesn't change—were in error because accounting personnel did not always verify that the data in the MACS record was accurate. For example, it was often necessary to enter estimated project data in the Project Information Master file before a grant agreement was actually signed. Accounting personnel created a project record and assigned a project number to the proposed grant. These steps were necessary to allow the entry of budget and other accounting information into MACS for planned projects. However, once the project agreement was signed, accounting personnel did not always revise the information in MACS to correspond with the approved project/grant agreement. If the project information files had been periodically reviewed, it is likely that the errors described above would have been detected and corrected.

**Recommendation No. 1: We recommend that the Director, REDSO/WCA:**

**1.1 correct the errors found in the Project Agreement Date, Project Assistance Completion Date, Project Amount Authorized, Terminal Disbursement Date and Life of Project data elements identified in this report to ensure the information is accurate;**

**1.2 train personnel in the proper method of updating information in the Project Information Master file; and**

**1.3 conduct quarterly reviews of the data entered into the Project Information Master to ensure the data is accurate.**

## 2. Data Not Entered/Not Coded Correctly

Data was not entered correctly in five of the six MACS data bases we tested. The most significant errors occurred in the Advance Transaction File, which had 8 Advance Type errors, 6 Accountability Date errors and 5 Advance Amount in Local Currency errors. However, significant errors were also found in the Disbursement Amount in Local Currency (7 errors) and the Commitment End Date (6 errors) data elements of the DIT and COT files, respectively. These data elements can be used for management control purposes. Thus, any significant errors in these elements could lead to improper management decisions. The errors are illustrated in the following chart.

| SIGNIFICANT ERRORS CAUSED BY INCORRECT DATA ENTRY AND/OR CODING SHEET PREPARATION | | | | | | |
|---|---|---|---|---|---|---|
| DATA ELEMENT | REDSO/ WCA | USAID/ NIGERIA | USAID/ BURKINA FASO | USAID/ BENIN | TOTAL ERRORS CAUSED BY INCORRECT DATA ENTRY | TOTAL NUMBER OF ERRORS |
| Accountability Date (ADT) | 2 | 4 | 0 | 0 | 6 | 10 |
| Advance Type (ADT) | 5 | 2 | 1 | 0 | 8 | 12 |
| Advance Amount in Local Currency (ADT) | 2 | 3 | 0 | 0 | 5 | 9 |
| Amount Disbursed in Local Currency (DIT) | 3 | 2 | 2 | 0 | 7 | 14 |
| Commitment End Date (COT) | 3 | 1 | 1 | 1 | 6 | 11 |

The following additional data entry and coding sheet errors were also noted. These errors are not significant by themselves, but become significant when combined with errors due to a lack of supporting documents (see page 9).

| INSIGNIFICANT DATA ENTRY/CODING SHEET ERRORS | | |
|---|---|---|
| **Data Element** | **Additional Data Entry/ Coding Sheet Errors** | **Total Number of Errors** |
| Obligation Document No. (DIT) | 2 | 9 |
| Budget Allowance Disbursement Amount (DIT) | 1 | 8 |
| Reservation Control No. (DIT) | 1 | 8 |
| Commitment Transaction Amount (COT) | 3 | 8 |
| Earmark Control No. (COT) | 2 | 7 |
| Budget Plan Code (COT) | 1 | 6 |
| Commitment Document No. (COT) | 1 | 6 |
| Budget Allowance Transaction Amount (BAT) | 1 | 4 |
| Obligation Transaction Amount (ROT) | 2 | 5 |
| Advance Transaction Amount (ADT) | 1 | 5 |

The above errors can be attributed to a lack of due care on the part of WAAC accounting personnel while entering transactions into the MACS. For example, there were two instances where REDSO/WCA did not enter the amount of an advance in local currency although the advance had been made in local currency. Further, on 3 occasions, REDSO/WCA entered incorrect advance codes into MACS (e.g. assigning an advance code of "1", which should only be assigned to travel advances, to a non-travel-related advance). However, we were unable to quantify what impact, if any, resulted from these errors.

The errors can also be attributed to coding sheet preparation errors at REDSO/WCA's client-controller missions. For example, USAID/Nigeria did not consistently complete the Advance Amount in Local Currency data element on its MACS coding sheets. Thus, if this data element was left blank on a coding sheet, WAAC accounting personnel would not know whether the Local Currency Amount data element was applicable. Further, accountability dates are not requested on WAAC's currently recommended MACS coding spreadsheets. Thus, WAAC accounting personnel have to estimate the accountability date.

A secondary cause for the above errors is that accounting personnel at USAID/Nigeria did not fully understand which values (numbers, codes, etc.) were to be entered into these fields. USAID/Nigeria stated there had been confusion concerning the proper procedure for coding vouchers, but that during the past year, all of its accountants had traveled to REDSO/WCA to clear up coding issues and to be trained on coding procedures. However, since the audit found that REDSO/WCA staff itself did not always properly enter values into MACS data fields, we believe that a training session to remind accounting personnel of the values to be placed in the ADT, DIT, and COT files should be held at WAAC and USAID/Nigeria.

**<u>Recommendation No. 2:</u> We recommend that the Director, REDSO/WCA:**

**2.1 provide training to West Africa Accounting Center personnel, emphasizing accurate data entry and the correct procedures for determining the values to be placed in the data elements of the Advance Transaction, Disbursement Transaction and Commitment/Obligation Transaction files; and**

**2.2 require the West Africa Accounting Center to revise its Mission Accounting Control System spreadsheet coding format to include accountability dates.**

**Recommendation No. 3: We recommend that the Director, USAID/Nigeria provide training to Office of Financial Management personnel, emphasizing accurate coding sheet preparation and the correct procedures for determining the values to be placed in the data elements of the Advance Transaction, Disbursement Transaction and Commitment/Obligation Transaction files.**

## 3. Documents Not Maintained Properly

U.S. General Accounting Office Internal Control Standards require that all transactions be clearly documented. In addition, these standards require that the supporting documentation be available and easily accessible.

Audited elements in the BAT, DIT, COT, ROT, and ADT files were considered in error because documents supporting the transactions could not be located. Specifically, USAID/Burkina Faso was unable to locate supporting documentation for 3 BAT, 2 DIT, and 3 COT file transactions. In addition, REDSO/WCA was unable to locate supporting documentation for 5 DIT, 4 ADT, 3 ROT, and 2 COT file transactions. The chart below summarizes these errors.

| ERRORS DUE TO A LACK OF SUPPORTING DOCUMENTATION | | | | |
|---|---|---|---|---|
| DATA ELEMENT | REDSO/ WCA | USAID/ BURKINA FASO | TOTAL ERRORS CAUSED BY A LACK OF DOCUMEN-TATION | TOTAL NUMBER OF ERRORS IN DATA ELEMENT |
| Budget Allowance Transaction Amount (BAT) | 0 | 3 | 3 | 4 |
| Amount Disbursed in Local Currency (DIT) | 5 | 2 | 7 | 14 |
| Obligation Document No. (DIT) | 5 | 2 | 7 | 9 |
| Budget Allowance Disbursement Amount (DIT) | 5 | 2 | 7 | 8 |
| Reservation Control No. (DIT) | 5 | 2 | 7 | 8 |
| Federal Outlay Code (DIT) | 5 | 2 | 7 | 7 |
| Disbursement Office Code (DIT) | 5 | 2 | 7 | 7 |

| | | | | |
|---|---|---|---|---|
| Budget Plan Code (DIT) | 5 | 2 | 7 | 7 |
| Transaction Type Code (DIT) | 5 | 2 | 7 | 7 |
| Commitment End Date (COT) | 2 | 3 | 5 | 11 |
| Commitment Transaction Amount (COT) | 2 | 3 | 5 | 8 |
| Earmark Control No. (COT) | 2 | 3 | 5 | 7 |
| Budget Plan Code (COT) | 2 | 3 | 5 | 6 |
| Commitment Document No. (COT) | 2 | 3 | 5 | 6 |
| Commitment Transaction Amount/ Washington (COT) | 2 | 3 | 5 | 5 |
| Call Forward Date (COT) | 2 | 3 | 5 | 5 |
| Obligation Transaction Amount (ROT) | 3 | 0 | 3 | 5 |
| Advance Type (ADT) | 4 | 0 | 4 | 12 |
| Accountability Date (ADT) | 4 | 0 | 4 | 10 |
| Advance Amt. in Local Currency (ADT) | 4 | 0 | 4 | 9 |
| Advance Transaction Amount (ADT) | 4 | 0 | 4 | 5 |
| Advance Number (ADT) | 4 | 0 | 4 | 4 |
| Project Number (ADT) | 4 | 0 | 4 | 4 |
| Commitment/Obligation Doc. No. (ADT) | 4 | 0 | 4 | 4 |

Some of the supporting documents for the above transactions could not be located because they had been removed from their file. That is, there was evidence that the document had been originally filed properly, but that the document had been removed and not refiled correctly. In addition, some supporting documents could not be located because no voucher number or schedule number had been entered into the MACS. Since these numbers serve as the basis for the Mission's filing system, it is very difficult to locate a document without them. Further, WAAC personnel had not prepared journal vouchers to support two upward adjustments.

Finally, USAID/Burkina Faso claimed that its unsupported transactions had been placed in storage, but did not forward evidence of this fact to RIG/A/Dakar. Accordingly, for report purposes, these transactions were considered in error. No recommendation has been made to USAID/Burkina Faso because the Mission is due to close on September 30, 1995.

**Recommendation No. 4: We recommend that the Director, REDSO/WCA:**

**4.1 conduct a training session with West Africa Accounting Center personnel to review filing system procedures and to emphasize the proper refiling of documents to ensure that documentation to support all transactions entered into the Mission Accounting and Control System can be located; and**

**4.2 conduct a training session to remind West Africa Accounting Center personnel of the need to input schedule numbers, voucher numbers, or other reference numbers into the Mission Accounting and Control System to ensure supporting documentation is easily accessible.**

## Management Comments and Our Evaluation

REDSO/WCA and USAID/Nigeria concurred with the findings in the audit report, but did offer additional comments to clarify certain issues raised in the report. When considered appropriate, the draft report was changed to incorporate these comments.

To address Recommendation No. 1, REDSO/WCA stated that it is taking the following actions: 1) instructing its project accountants to correct the errors identified in the audit report, 2) developing a training course for appropriate personnel which includes modules on updating project information, and 3) initiating a procedure to ensure that a review of data in the Project Information Master file is a regular part of the semi-annual Section 1311 reviews. Based on REDSO/WCA's comments, Recommendation No. 1 is considered resolved. It can be closed when the errors in the Project Information Master file have been corrected, the planned training course has been completed, and a copy of the procedure making data in the PIM file a regular part of the 1311 review has been reviewed by RIG/A/Dakar.

Regarding Recommendation No. 2, REDSO/WCA stated that the training course mentioned above will include a module on data entry. In addition, it has requested its client-controller posts to use the MACS spreadsheet coding

format to include accountability dates. Accordingly, this recommendation is considered resolved. It can be closed 1) after the training course outline has been reviewed by RIG/A/Dakar and the training course has been completed and 2) when REDSO/WCA provides evidence that all of its client-controller missions are in compliance with the revised spreadsheet coding format.

Regarding Recommendation No. 3, USAID/Nigeria stated that although there had been confusion concerning the proper procedure for coding vouchers during the period audited, all of its accountants have travelled at one time or another during the past year to REDSO/WCA to assist in clearing up coding issues and to be trained in coding procedures. Further, it believes that its current coding procedures are sufficient to ensure the accuracy of the Mission's MACS data and requested the recommendation to be closed upon final report issuance. However, we believe that since the audit found that WAAC personnel itself did not always properly enter values into MACS data fields, USAID/Nigeria should still hold a training session to remind its accounting personnel of the values to be placed in the ADT, DIT, and COT files. Accordingly, this recommendation is still considered unresolved.

Concerning Recommendation No. 4, REDSO/WCA stated that the planned training course to address Recommendations No. 1 and 2 will include a module on records maintenance and filing for WAAC administrative staff. Specifically, the module will emphasize the importance of replacing documentation in the appropriate files after use and will address the need to include input schedules and voucher numbers into the MACS to cross-reference supporting documentation. Based on REDSO/WCA's comments, this recommendation is considered resolved. It can be closed after a copy of the training course outline has been reviewed by RIG/A/Dakar and after the training course has been completed.

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# SCOPE AND METHODOLOGY

## Scope

The Regional Inspector General for Audit, Dakar audited the quality of data maintained in the MACS files of REDSO/WCA in accordance with generally accepted government auditing standards. Performed during the period from February 22, 1995 through March 21, 1995, at REDSO/WCA, the audit included the review of six files and 39 data elements (21.4 and 5.2 percent respectively) from a universe of 28 MACS Transaction/Master files and 757 data elements. These six files contained information whose accuracy is considered critical by agency managers. If the error rate was significant (more than five percent) on any of the data elements, we also evaluated the cause and made the appropriate recommendations.

## Methodology

The Office of Audit consulted with Financial Management officials in Washington, D.C. and identified the MACS files and key data elements that would be reviewed for each file. We analyzed REDSO/WCA's transactions for the period October 1, 1991 to January 26, 1995 from 6 of the 28 MACS Transaction/Master Files[2]:

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

We selected a statistical sample for each of the six data files that would provide a confidence level of 90 percent and a precision level of plus or minus four percent. For each data element reviewed (dollar amounts, dates, document numbers, etc.), we determined whether the data in MACS was supported by

[2] A listing of MACS Transaction/Master files is in Appendix V.

information from a source document(s). Based on the results of these determinations, we calculated error rates for each data element and assessed whether the error rate was significant. An error rate of five percent or greater was considered significant. Data elements with an error rate of less than five percent were considered accurate for reporting purposes. We statistically projected the number of errors in the MACS files by multiplying actual number of errors in our statistical sample by the total number of entries in each MACS file.

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JUL 17 1995

**MEMORANDUM**

Date: July 12, 1995

From: Kimberly A. Finan, Acting Director, REDSO/WCA

RE: Response to Draft Audit Report on the Quality of MACS Data at REDSO/WCA

To: Thomas B. Anklewich, RIG/Audit/Dakar

We have reviewed the draft audit report of the quality of MACS data at REDSO/WCA received on May 30, 1995. We appreciate the additional time granted to allow us to formulate our comments. We believe that the draft report was well written and includes some appropriate recommendations. However, we offer the comments below for clarification of certain issues raised in the draft report.

Problem 1: Files not updated properly (page 4)

REDSO/WCA concurs with this finding, though we believe it would be more accurate to say, "Files not always updated properly". REDSO/WCA does have written procedures for updating data elements in the Project Information Master file. And West Africa Accounting Center (WAAC) project accountants do occasionally perform updates of the data. It should be noted, however, that it is not only the responsibility of the project accountant to ensure that this data is accurate. REDSO/WCA procedures clearly state that project managers at REDSO/WCA and WAAC client missions have a responsibility to highlight changes to project informational data and inform WAAC of necessary changes to the data in the Mission Accounting and Control System (MACS). Accordingly, there is a joint responsibility shared between project management and the accounting center to ensure the accuracy of MACS reports.

In any case, the audit evidence demonstrated that the project information data elements in REDSO/WCA's MACS had significant error rates. REDSO/WCA will take appropriate action to address these errors and to avoid them in the future, as noted in our response to the recommendation below.

Recommendation No. 1; We recommend that the Director, REDSO/WCA:

1.1 correct the errors found in Project Agreement Dates, Project Assistance Completion Dates, Project Amount Authorized, Terminal Disbursement Date and Life of Project data elements identified in this report to ensure the information is accurate;

1.2 train personnel in the proper method of updating information in the Project Information Master file; and

1.3 conduct quarterly reviews of the data entered into the Project Information Master to ensure the data is accurate.

1

To address Recommendation 1.1, WAAC projects accountants have been instructed to correct the errors in the Project Information Master file as identified during the audit. The spreadsheet provided by RIG in the E-mail of June 19, 1995 is being used to effect these corrections.

In response to Recommendation 1.2, WAAC will develop and hold a training course for appropriate REDSO/WCA staff which includes modules on updating project information, performing accurate data entry, and maintaining adequate project files and documentation. The course will be developed in-house, and it is anticipated that the training will take place during two morning sessions after the close of the fiscal year (October 1995). A course outline will be forwarded to RIG within 30 days.

Regarding Recommendation 1.3, REDSO/WCA has previously performed reviews and sent out cables to client missions requesting them to notify WAAC of changes to be made to project information in MACS. Response from project managers has not generally been forthcoming. Consequently, project accountants are not often provided with much in the way of source documentation to make adjustments in MACS. However, to address this recommendation, WAAC will ensure that the review of data in the Project Information Master is a regular part of Section 1311 reviews which are conducted at least twice each fiscal year with the assistance of project managers. In addition, one of the modules of the training course to be developed above will emphasize the need for continuous review (and updates if necessary) of data in the Project Information Master file by project managers and project accountants. REDSO/WCA believes that these measures will adequately meet the concern expressed by Recommendation 1.3.

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Problem 2: Data not entered/not coded correctly (page 6)

In the draft report, RIG asserts that data entry errors at REDSO/WCA can be attributed to a lack of due care on the part of WAAC accounting personnel and coding sheet preparation errors by client missions. We would add that it is inevitable that a certain amount of errors will occur when manually entering large volumes of information to a financial database. However, given the significance of the error rates in the ADT, DIT and COT files, REDSO/WCA concurs that coding sheet errors and the lack of a certain amount of due care contributed to the inaccuracy of the data.

RIG also noted that accounting personnel at REDSO/WCA did not have a full understanding of the values to be entered into all MACS fields. Given the experience level of most WAAC staff, we believe that any lack in understanding amongst our personnel is extremely limited. It is not clear from the draft audit report which occurrence of errors related to the lack in understanding. Until this statement in the report is clarified, REDSO/WCA takes exception to its inclusion in the final report.

Recommendation No. 2: **We recommend that the Director, REDSO/WCA:**

**2.1** provide training to West Africa Accounting Center personnel, emphasizing accurate data entry and the correct procedures for determining the values to be placed in the data elements of the Advance Transaction, Disbursement Transaction and Commitment/ Obligation Transaction files; and

**2.2** require the West Africa Accounting Center to revise its Mission Accounting and Control System Spreadsheet coding format to include accountability dates.

2

Regarding Recommendation 2.1, the training course to be developed as described in the comments to Recommendation 1 will include a module on data entry. This module may include discussion of how to determine values to be placed in data elements of the appropriate MACS files if this is found to be a weakness of WAAC staff during the course development. But until this lack of understanding can be more clearly established, we request that the reference to determining values of data elements be withdrawn from the recommendation and the narrative on page 8.

With respect to Recommendation 2.2, WAAC has requested controller posts using the MACS Spreadsheet coding format to include accountability dates. REDSO/WCA will inform RIG when controller post are in compliance.

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Problem 3: Documents not maintained properly (page 9)

REDSO/WCA regrets that it was unable to locate supporting documentation for all transactions in the sampling. As was stated in the draft report, it appears that most of the documentation required was originally on file and errors occurred as a result of incorrect refiling or unreturned documents. In the case of advance and disbursement data, schedule and voucher numbers should have been entered into the MACS system. It is believed that such errors will be avoided in the future by more careful and complete data entry.

Recommendation No. 4: We recommend that the Director, REDSO/WCA:

4.1 conduct a training session with West Africa Accounting Center personnel to review filing system procedures and to emphasize the proper refiling of documents to ensure that documentation to support all transactions entered into the Mission Accounting and Control System can be located; and

4.2 conduct a training session to remind West Africa Accounting Center personnel of the need to input schedule numbers, voucher numbers, or other reference numbers into the Mission Accounting and Control System to ensure supporting documentation is easily accessible.

Regarding Recommendation 4.1, the training course to be developed as described in the comments to Recommendation 1 will include a module on records maintenance and filing for WAAC administrative staff. The module will also emphasize the importance of replacing documentation in the appropriate files after use. With regard to the need to input schedule and voucher numbers as noted in Recommendation 4.2, the course module on data entry will address the need for their inclusion in the MACS coding structure for cross-referencing of documentation.

.....

After reviewing the preceding comments and actions taken by REDSO/WCA, we hope that RIG will consider each of the recommendations above as resolved. REDSO/WCA will provide RIG with a copy of the training course outline when completed, and we will advise RIG of the dates on which the course was given.

JUN 30 1995

*United States Agency for International Development*
*USAID/NIGERIA*

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U.S.A.

**Memorandum**

TO: Thomas Anklewich, RIG/A/Dakar

FROM: Stephen Spielman, USAID Affairs Officer
Lagos, Nigeria

SUBJECT: Draft Audit Report No. 7-624-95-XXX
Audit of the Quality of MACS Data at REDSO/WCA

DATE: June 23, 1995

Following are the Mission's comments on the subject draft report.

IG Recommendation No. 3

We recommend that the Director, USAID/Nigeria provide training to Office of Financial Management personnel, emphasizing accurate coding sheet preparation and the correct procedures for determining the values to be placed in the data elements of the Advance Transaction, Disbursement Transaction and Commitment/Obligation Transaction files.

USAID Response

The coding problems identified by the MACS audit occurred during the period 09/02/92 - 07/28/94. During this period, there was so much confusion concerning the proper procedure for coding vouchers. The confusion was mainly due to lack of written procedures to ensure consistency in application. The coding problem was aggravated by the fact that USAID/Nigeria did not have the e-mail connectivity at the time, so communication between Abidjan and Lagos was limited to telephone and fax lines which unfortunately were not always available, and/or DHL deliveries which had a 2-3 day turnaround time. During the past year, all our accountants have travelled at one time or another to Abidjan to assist in clearing up the coding issues and be trained on coding procedures. In August 1994, REDSO/WAAC recommended the use of a new coding sheet format, a Lotus spreadsheet that lists in summarized form all vouchers processed at a given time. This new coding format, which is reviewed by a senior accountant and approved by the controller prior to submission to REDSO, has eliminated our coding problems.

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Also, in November 1994, USAID/Nigeria was finally linked to the worldwide e-mail network, which made communication between Abidjan and Lagos, a lot easier and faster, resulting in more timely and more accurate data for MACS posting. Differences between Lagos' coding and Abidjan's posting are now mostly due to timing differences. Any other differences are immediately communicated and resolved via e-mail.

In summary, our current coding procedures that include the WAAC-recommended spreadsheet format, the related review by a senior accountant and approval by the controller prior to submission to REDSO, and the "on-line" e-mail communication link between Lagos and Abidjan, are sufficient to ensure the accuracy of coded data prior to MACS posting. Based on the above discussion, we request that Recommendation no. 3 be closed upon final report issuance.

## USAID'S INFORMATION MANAGEMENT

This new USAID effort to establish a quality information system is described in the Agency's Information Systems Plan (ISP).[3] A primary goal of this plan is to have corporate data managed at the Agency level rather than "owned" by each individual office.

Using an information engineering methodology, models of the Agency's business processes and data requirements were created. These models were then broken into eight logical Business Areas. Each Business Area represents related functions within the Agency that share similar business processes and data needs. Each of these eight areas will be studied in depth, in a process called Business Area Analysis (BAA).

The Business Area Analysis (BAA) provides a greater level of detail on the functions in each area and provides a basis for designing system requirements. Each BAA 1) continues to model the data requirements and business functions, 2) includes this information in the Agency's electronic repository, and 3) reconciles the new models back to the Agency-wide models. This results in a high degree of standardization, stability, and reusability.

Currently three BAA's are being conducted—Core Accounting, Procurement, and Budgeting. The inter-dependencies of these three business areas are high and will require significant sharing of data. Therefore, to facilitate the systems development work, IRM is planning a data warehouse that will allow movement to a data sharing environment.

Populating this data warehouse will begin with transferring MACS transaction level data into the warehouse. The Core Accounting BAA, which includes the AWACS[4] project, needs a functioning warehouse to provide the most benefit to the Agency.

Smaller initiatives are under way to begin the transition to a corporate database. PIPE (Project Information and Pipeline Evaluation) currently brings in summary MACS and FACS data, to provide project status and pipeline information to Agency managers. In order to make sound decisions, it is important that managers using such information know the quality of the data being used.

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[3] *Information Systems Plan*, Volume I: Report To Management, February 1993.

[4] AID/Washington Accounting and Control System.

## REDSO/WCA MACS FILES AND ELEMENTS REVIEWED

| MACS FILES/ELEMENT | UNIVERSE | NUMBER IN SAMPLE | ERRORS IN SAMPLE | ERROR RATE | PROJECTED ERRORS IN UNIVERSE |
|---|---|---|---|---|---|
| **BUDGET ALLOWANCE TRANSACTION** | | | | | |
| Budget Plan Code | 2,160 | 78 | 3 | 3.85% | * |
| Transaction Amount | 2,160 | 78 | 4 | 5.13% | 111 |
| Project Number | 2,160 | 78 | 3 | 3.85% | * |
| **RESERVATION/OBLIGATION TRANSACTION FILE** | | | | | |
| Obligation Number | 35,380 | 81 | 1 | 1.23% | * |
| Reservation Control Number | 35,380 | 81 | 1 | 1.23% | * |
| Budget Plan Code | 35,380 | 81 | 1 | 1.23% | * |
| Transaction Amount | 35,380 | 81 | 5 | 6.12% | 2,183 |
| **COMMITMENT TRANSACTION FILE** | | | | | |
| Commitment Doc. Number | 12,082 | 80 | 6 | 7.50% | 906 |
| Earmark Control Number | 12,082 | 80 | 7 | 8.75% | 1,057 |
| Call Forward Date | 12,082 | 80 | 5 | 6.25% | 755 |
| Budget Plan Code | 12,082 | 80 | 6 | 7.50% | 906 |
| Transaction Amount (AID/W) | 12,082 | 80 | 5 | 6.25% | 755 |
| Transaction Amount (Mission) | 12,082 | 80 | 8 | 10.00% | 1,208 |
| Commitment End Date | 12,082 | 80 | 11 | 13.75% | 1,661 |
| **DISBURSEMENT TRANSACTION FILE** | | | | | |
| Obligation Doc. No. | 93,571 | 81 | 7 | 8.64% | 8,085 |
| Reservation Control No. | 93,571 | 81 | 6 | 7.41% | 6,934 |
| Commitment Doc. No. | 93,571 | 81 | 2 | 2.47% | * |
| Earmark Control No. | 93,571 | 81 | 2 | 2.47% | * |
| Budget Plan Code | 93,571 | 81 | 7 | 8.64% | 8,085 |
| Disbursing Office Code | 93,571 | 81 | 7 | 8.64% | 8,085 |
| Federal Outlay Code | 93,571 | 81 | 7 | 8.64% | 8,085 |
| Local Currency Disbursement | 93,571 | 81 | 14 | 17.28% | 16,169 |
| Budget Allow. Disbursement | 93,571 | 81 | 8 | 9.88% | 9,245 |
| Transaction Type | 93,571 | 81 | 7 | 8.64% | 8,085 |
| **ADVANCE TRANSACTION FILE** | | | | | |
| Advance Number | 12,268 | 80 | 4 | 5.00% | 613 |
| Obligation Document No. | 12,268 | 80 | 0 | 0.00% | * |
| Commitment Document No. | 12,268 | 80 | 4 | 5.00% | 613 |
| Project Number | 12,268 | 80 | 4 | 5.00% | 613 |
| Advance Type | 12,268 | 80 | 12 | 15.00% | 1,840 |
| Accountability Date | 12,268 | 80 | 10 | 12.50% | 1,534 |
| Advance Transaction Amount | 12,268 | 80 | 5 | 6.25% | 767 |
| Local Currency Amount | 12,268 | 80 | 9 | 11.25% | 1,380 |
| **PROJECT INFORMATION MASTER FILE** | | | | | |
| PACD | 253 | 61 | 4 | 6.56% | 17 |
| Authorized Amount | 253 | 61 | 6 | 9.84% | 25 |
| Agreement Date | 253 | 61 | 6 | 9.84% | 25 |
| Terminal Disbursement Date | 253 | 61 | 9 | 16.72% | 42 |
| Host Country Contribution | 253 | 61 | 2 | 3.28% | * |
| Project Number | 253 | 61 | 0 | 0.00% | None |
| Life of Project (in years) | 253 | 61 | 12 | 19.67% | 50 |

*** Error rates less than five percent were not considered significant.**

**MACS TRANSACTION AND MASTER FILES**
**NUMBER OF DATA ELEMENTS**

| MACS FILE NAME | # OF ELEMENTS PER RECORD |
|---|---|
| Operating Expense Budget Master | 10 |
| Operating Expense Budget Transaction | 12 |
| Budget Allowance Master File | 13 |
| Budget Allowance Transaction File | 12 |
| Reservation Master File | 17 |
| Obligation Master File | 37 |
| Reservation/Obligation Transaction File | 20 |
| Project Information Master File | 115 |
| Project Information Transaction File | 25 |
| Condition Precedent Transaction File | 96 |
| Project Element Master File | 13 |
| Project Element Transaction File | 12 |
| Direct Reimbursement Authorization (DRA) Master File | 16 |
| Direct Reimbursement Authorization (DRA) Transaction File | 17 |
| Earmark Master File | 20 |
| Earmark Transaction File | 19 |
| Commitment Master File | 41 |
| Commitment Transaction File | 25 |
| Advance Master File | 22 |
| Advance Transaction File | 30 |
| Planned Expenditures Master File | 13 |
| Planned Expenditures Transaction File | 15 |
| Accrual Transaction File | 18 |
| Prepayment Amortization Transaction File | 23 |
| Disbursement Transaction File | 28 |
| Interface Disbursement/Advance File | 36 |
| Interface Disbursement/Advance Reject File | 35 |
| Prepayment Amortization File | 17 |
| **Totals 28 MACS FILES** | **757 Elements** |

## GLOSSARY OF ACRONYMS

**AID/W** - USAID/Washington

**ADT** - Advance Transaction File

**AWACS** - AID/Washington Accounting and Control System

**BAA** - Business Area Analysis

**BAT** - Budget Allowance Transaction File

**COT** - Commitment Obligation Transaction File

**DIT** - Disbursement Transaction File

**DRA** - Direct Reimbursement Authorization

**IRM** - Information Resource Management

**ISP** - Information System Plan

**MACS** - Mission Accounting and Control System

**PACD** - Project Assistance Completion Date

**PIM** - Project Information Master File

**PIPE** - Project Information and Pipeline Evaluation

**ROT** - Reservation/Obligation Transaction File

**APPENDIX VII**

## COUNTRIES WHO RECEIVED MACS SERVICES FROM REDSO/WCA/WAAC

1. Benin
2. Burkina Faso
3. Cameroon
4. Cape Verde
5. Central African Republic
6. Chad
7. Congo
8. Cote d'Ivoire
9. Equatorial Guinea
10. Gabon
11. Guinea **
12. Guinea Bissau
13. Ghana **
14. Liberia
15. Mauritania
16. Nigeria
17. REDSO/WCA
18. Sao Tome
19. Sierra Leone
20. The Gambia
21. Togo
22. Zaire

** Began recording their own MACS transactions as of 10/01/94.