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Regional Inspector General for Audit  
Singapore

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**Audit of the  
Quality of MACS Data  
At  
USAID/Philippines**

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**Audit Report No. 5-492-95-009  
March 31, 1995**



U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT



U.S. AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT

March 31, 1995

## MEMORANDUM

TO: Kenneth G. Schofield, Mission Director, USAID/Philippines

FROM: Richard C. Thabet, RIG/A/Singapore

SUBJECT: Audit of the Quality of MACS Data at USAID/Philippines  
(Audit Report No. 5-492-95-009)

This memorandum is our report of the audit of the quality of Mission Accounting and Control System (MACS) data at USAID/Philippines. We considered your comments on the draft report and have included them as an appendix to this report (see Appendix II). Based on your comments and aggressive corrective actions taken during the audit, we consider the recommendations closed upon the issuance of this report.

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

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### Introduction

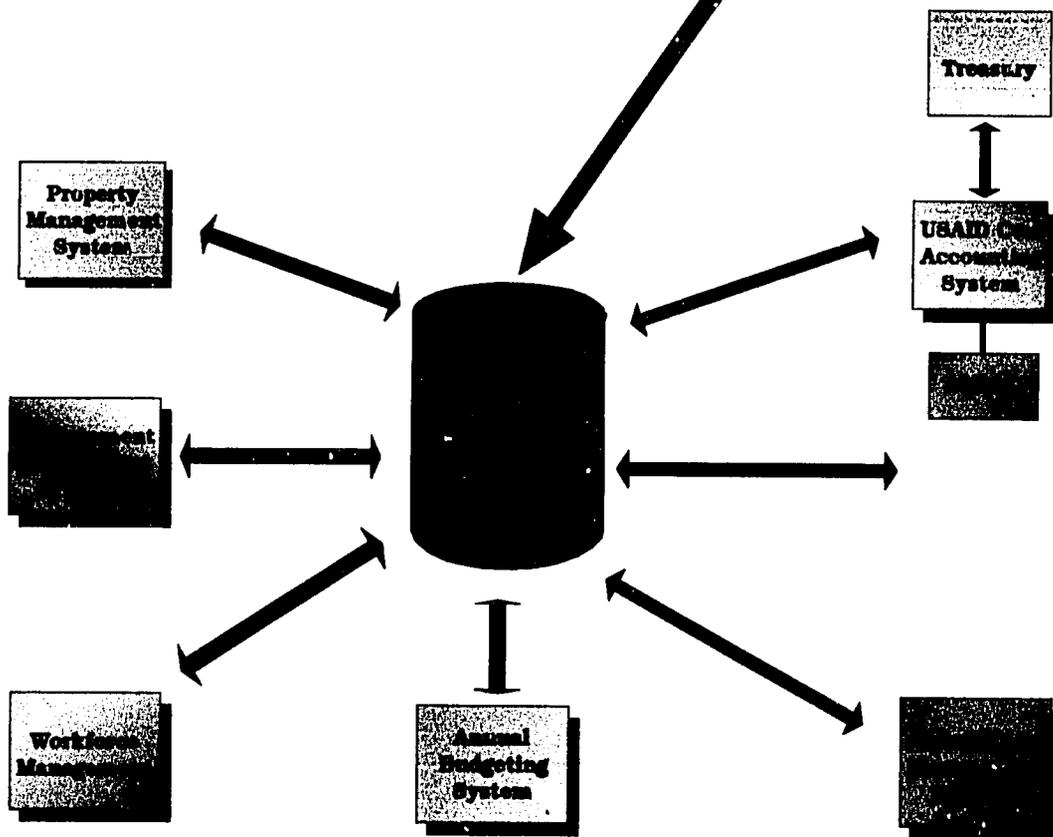
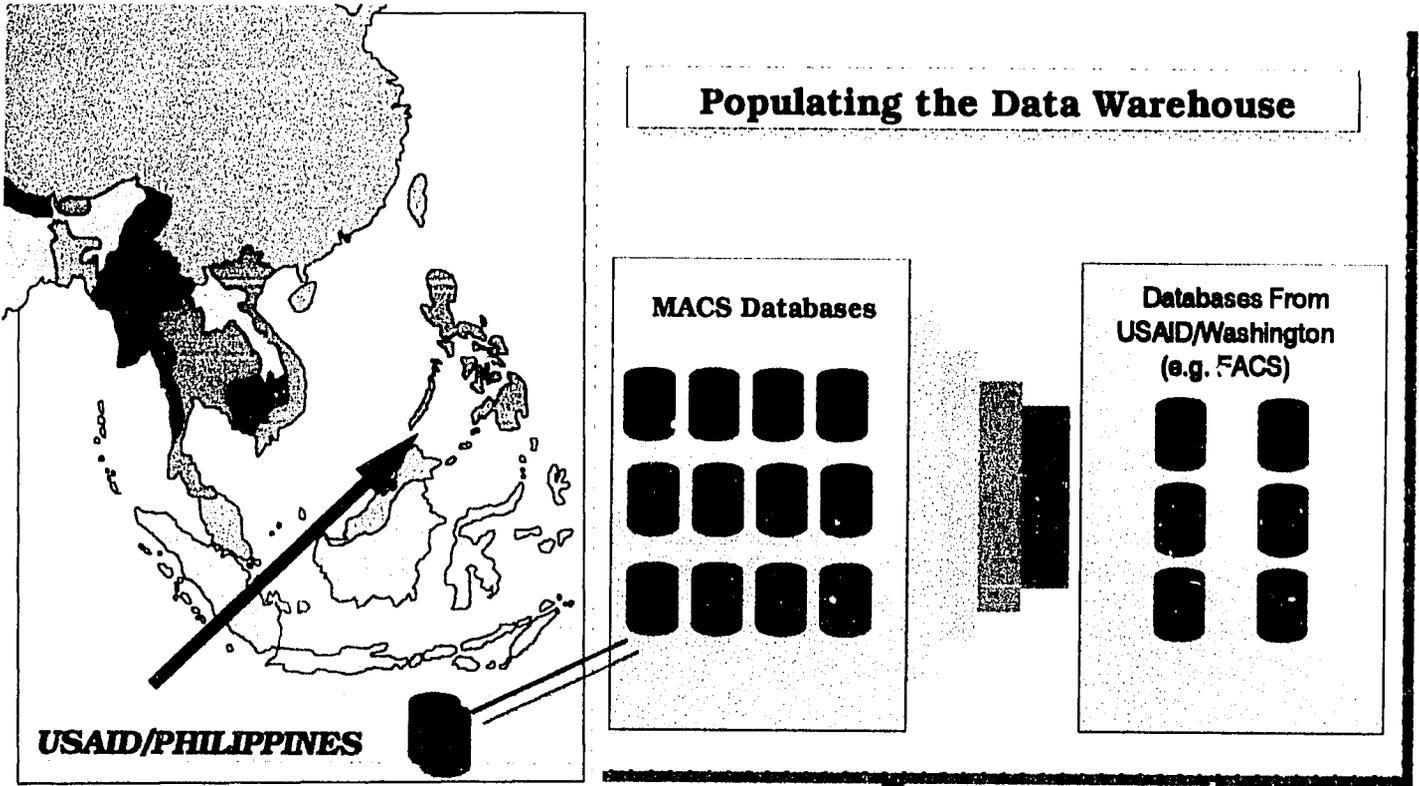
Realizing that USAID must operate with increasingly scarce funds, the Agency is undertaking a new and aggressive effort to change the way data and information are managed. Such an effort is critical to our future. In the modern workplace, be it business or government, a high-quality, reliable information 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 pipelines reports—the Office of Information Resource Management (IRM) is undertaking a major initiative. They are centralizing data collection and

improving the management of information by creating a data warehouse, a repository for data from all Agency systems (see page 3 and Appendix V). One of the first steps in bringing data to this warehouse is the Project Information and Pipeline Evaluation (PIPE) 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 quality. Therefore, in support of IRM's work, the Inspector General's Office of Audit is conducting a series of audits designed to evaluate the quality of data (in the MACS files) which is central to the Agency's work. An important part of the effort is this audit of USAID/Philippines data.

## Populating the Data Warehouse



## Data From USAID's Information Systems

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## Audit Objective

The audit was designed to answer the following question:

- Is the data in USAID/Philippines Mission Accounting and Control System (MACS) accurate?
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## Audit Findings

USAID/Philippines MACS data was accurate in 34 of the 40 data elements reviewed; however the other six data elements contained substantial errors.

RESULTS OF OUR REVIEW			
MACS Files	Data Elements Reviewed	Elements With Substantial Errors	Elements With No Substantial Errors *
Budget Allowance Transaction	3	0	3
Reservation/Obligation Transaction	4	0	4
Commitment Transaction	8	0	8
Disbursement Transaction	10	0	10
Advance Transaction	8	0	8
Project Information Master	7	6	1
<b>Total</b>	<b>40</b>	<b>6</b>	<b>34</b>

(\* Error rates of less than 5% were considered accurate for reporting purposes. Error rates for each of these elements can be found in Appendix III.)

The six errors were the result of (1) document files not being maintained to support transactions and (2) transaction files not being updated.

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 is accurate and complete. Therefore, the efforts of USAID/Philippines 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 activities worldwide in USAID.

Our analysis of the problems and recommendations for corrective actions are discussed in detail below.

**1. Document Files Not Maintained to Support Transactions**

While most project information in USAID/Philippines MACS was accurate, some data was inaccurate because documentation was not maintained in accordance with General Accounting Office (GAO) Internal Control Standards. GAO Internal Control Standards stipulate that all transactions are to be documented by written evidence. In addition, the standard requires that the documentation is available and easily accessible for examination.

We reviewed all 60 of the Mission's Project Information Master (PIM) records. Twenty-seven of the data elements in the records reviewed could not be supported by documentation (as shown in Appendix III).

The Mission did not ensure that documentation to support all entries in MACS was retained and easily accessible. We found that the document files for transactions for project design and support, centrally funded, and regionally funded projects posted to MACS PIM files were not complete. We recognize that the documentation provided to the Mission for these transactions may not be complete. However, the Mission, as the input source for data entered into the MACS, is responsible for supporting the basis of that input. Since documents for the 27 data elements could not be provided for our review, we have classified the entries in these data elements as errors, due to lack of support.

Without support documentation for such transactions, the accuracy and completeness of MACS data cannot be verified. As a result, USAID managers worldwide may be relying on inaccurate and incomplete information when making decisions on where and how to allocate resources.

**Recommendation No. 1: We recommend that the Director of USAID/Philippines, establish procedures necessary to ensure that documentation to support the basis of all transactions entered in the Mission Accounting and Control System is maintained and accessible.**

## **2. PIM File Not Updated**

Project information in the USAID/Philippines MACS was generally correct except for some items that had not been updated. We found that not all information was entered and maintained according to procedures established by MACS User's Guide (Release 19).

MACS User's Guide procedures detail the need to:

- verify 17 data elements, including the Project Number, Agreement Date, Life of Project, Project Assistance Completion Date (PACD), and Terminal Disbursement Date when entering information into the system; and
- periodically review the data elements and adjust them as required.

Since the PIM is the cumulative of project transactions, transactions containing erroneous data elements result in erroneous data in the PIM. For example, the data elements for eight records had not been updated. One record for a project that was not authorized should have been deleted. Since documents used to enter initial project information into MACS do not always contain complete data, some revisions or corrections are necessary. As the project status changes, revisions and updates are required. Two Terminal Disbursement Dates, two Host Country Contribution entries, two Life of Project entries (in years) and one Project Amount were not updated.

The information contained in the PIM file was not periodically reviewed for accuracy as prescribed by the MACS User's Guide. If the project information files had been periodically reviewed, the errors described above would likely have been corrected.

If such data is included in the Agency's data warehouse, key decisions could be made using inaccurate or incomplete information.

**Recommendation No. 2: We recommend that the Director, USAID/Philippines:**

- 2.1 correct the Project Information Master file to ensure that the information is accurate; and**
- 2.2 periodically review the data entered into the Project Information Master file to ensure that the data is correct.**

## MANAGEMENT COMMENTS AND OUR EVALUATION

USAID/Philippines' officials concurred with the report's findings and recommendations. For Recommendation No. 1, the Mission will obtain the necessary documentation to support data in the Project Information Master file. Based on this action, Recommendation No. 1 is considered resolved and closed upon issuance of this report.

For Recommendations No. 2, the Mission has taken corrective action. We reviewed the revised MACS data for the Project Information Master file and we are satisfied that the errors identified during the audit have been corrected. In addition, the Mission plans to perform periodic reviews to ensure that mission personnel are following correct procedures when entering data. These reviews will strengthen the integrity of the MACS by allowing mission personnel to detect and correct errors on a regular basis. Since the Mission has made appropriate corrections and has agreed to perform periodic reviews of MACS data, Recommendation No. 2 is considered resolved and closed upon issuance of this report.

The Mission response to the draft report is included in its entirety (except for annexes) in Appendix II of this report.

## SCOPE AND METHODOLOGY

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### Scope

We audited the quality of data maintained in MACS files of USAID/Philippines in accordance with generally accepted government auditing standards. From October 24, 1994 through November 18, 1994, we performed an audit of six files and 40 data elements from a universe of 28 MACS Transaction/Master files and 757 data elements (21.4 and 5.3 percent respectively). If the error rate was significant for any of the data elements, we also evaluated the cause and made appropriate recommendations.

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### Methodology

After consulting with financial management officials in Washington, D.C., we identified the MACS files and key data elements that we would review for each file. We analyzed the fiscal years 1992, 1993 and 1994 data from the following six MACS Transaction/Master files<sup>1</sup>:

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

We selected a statistical sample for five of the data files that provided a confidence level of 90%, with a precision level of plus or minus 4%, and an expected rate of occurrence of not over 5%. We reviewed 100% of the records in the Project Information Master file. For each data element reviewed (dollar amounts, dates, document numbers, etc.), we determined whether the data in MACS was supported by information from a source document(s). Based on the results of these determinations, we calculated the standard mean error rates for each data element and assessed whether the error rate was significant. A standard mean error rate of 5% or greater was considered significant. Data elements with a rate of less than 5% were considered accurate for reporting purposes. Using the standard mean error rate, we statistically projected the number of errors over the MACS file. These projections indicate the total number of errors estimated for each data element based on the errors found in the statistical sample.

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<sup>1</sup> A complete listing of MACS Transaction/Master files can be found in Appendix IV.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

APPENDIX II  
Page 1 of 5

USAID/Philippines  
APO AP 96440



Fax Nos.: 632-521-5241  
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MAD 2 1005

MEMORANDUM

TO: Mr. Richard C. Thabet  
RIG/A/Singapore

FROM: Kenneth G. Schofield<sup>KGS</sup>  
Director, USAID/Philippines

SUBJECT: Draft Audit Report on Quality of MACS Data at  
USAID/Philippines

REFERENCE: Thabet-Schofield Memo Dated December 12, 1994

Presented below are the comments and actions taken by the Mission to address the recommendations contained in the subject audit report:

1. Recommendation No. 1:

"We recommend that the Director of USAID/Philippines establish procedures necessary to ensure that documentation to support the basis of all transactions entered in the Mission Accounting and Control System (MACS) is maintained and accessible."

Comments on Findings:

The Mission recognizes the importance of complete integrity within the MACS database and will establish procedures necessary to ensure that documentation to support the basis of all transactions entered in the MACS is maintained and accessible. For bilateral and other Mission funded activities such procedures do exist.

For regional and centrally funded projects complete documentation such as was requested for the audit was not available. The Mission will work with the Office of Financial Management in Washington to obtain necessary documentation to support the data in the Project Information File (PIM) for all existing projects.

Based on the above, we recommend that Recommendation No. 1 be considered resolved and closed upon issuance of the final audit report.

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2. Recommendation No. 2:

We recommend that the Director, USAID/Philippines:

- 2.1 correct the PIM File to ensure that the information is accurate;
- 2.2 periodically review the data entered into the PIM File to ensure that the data is correct.

Action Taken:

On Recommendation No. 2.1, Mission has corrected the seven errors identified. Please refer to Annex 2.

On Recommendation No. 2.2, OFM has issued a memorandum to remind the accounting staff that periodic reviews must be performed throughout the year. Please refer to Annex 4.

Based on the above, we recommend that Recommendation No. 2 be considered resolved and closed upon issuance of the final audit report.

Attachments: As stated

cc: IG/A/FA, USAID/W  
ANE/OBA/E USAID/W

USAID / Philippines  
APO AP 96440Fax No.: 632 - 521 - 4811  
Tel. No.: 632 - 522 - 4411

DEC 22 1994

Mr. Richard C. Thabet  
Regional Inspector General for Audit/Singapore  
U.S. Agency for International Development  
FPO AP 96534

Subject: Audit of the Quality of Mission Accounting and  
Control System Data at USAID/Philippines

Dear Mr. Thabet:

You have asked that USAID/Philippines provide a Management Representation Letter in connection with your audit of the quality of Mission Accounting and Control System (MACS) data at USAID/Philippines. Your staff informed us that the audit covered six MACS files and was intended to answer the following audit objective:

- o Are the data in USAID/Philippines' Mission Accounting and Control System (MACS) accurate?

I have asked the Office of Financial Management to make available to your staff all records in our possession for the purpose of the audit. They have assured me that all records in our possession have been made available.

In making the representations contained herein, we relied extensively on USAID's Office of the Inspector General as a primary element of internal control to determine the compliance with applicable laws and regulations, and to ensure the accuracy of accounting and management information.

Based upon the representations made to me by my staff and their concurrence with the representations made herein, and in reliance on your office which has not informed me of any difficulty in obtaining records or information, or of any difficulty in obtaining the full cooperation of the offices and staff involved, I confirm, as a layman and not as a lawyer, the following representations with respect to the audit of the quality of the Mission's MACS data:

1. USAID/Philippines is responsible for: (a) the Mission's internal control system relating thereto; (b) the Mission's compliance with applicable U.S. laws, regulations, and the project agreements relating thereto; and (c) the fairness and accuracy of the Mission's accounting and management information relating thereto.

Mr. Richard C. Thabet

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2. To the best of my knowledge and belief, USAID/Philippines has made available to RIG/A/S auditors all Mission record(s) relating to the audit objective.
3. To the best of my knowledge and belief, Mission records relating to the audit objective are accurate and complete and give a fair representation as to the quality of the Mission's MACS data.
4. To the best of my knowledge and belief, as a layman and not as a lawyer, USAID/Philippines is not aware of any instances which we consider material where financial or management information directly relating to this audit has not been properly and accurately recorded, other than the findings in the draft report.
5. To the best of my knowledge and belief, as a layman and not as a lawyer, USAID/Philippines has made available information regarding any known irregularities which we consider material related to the quality of MACS data involving Mission employees with internal control responsibilities for the matter under audit. For purposes of this representation, "irregularities" means the intentional noncompliance with applicable laws or regulations and/or intentional misstatements, omissions or failure to disclose.
6. To the best of my knowledge and belief, as a layman and not as a lawyer, USAID/Philippines is not aware of any instance (other than what has been included in the draft audit report or reported by the Mission during the course of the audit) in which, in the Mission's judgment, there has been a material noncompliance by the Mission with USAID policies and procedures or violation of U.S. law or regulation, which would substantially impact upon the matter under audit.
7. Following our review of your draft audit report and further consultation with my staff, and to the best of my knowledge and belief, there are no other facts as of the date of this letter (other than those expressed in our Management Comments to the draft report) which would materially alter the conclusions reached in the draft report.

Mr. Richard C. Thabet

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I request that this Representation Letter be included as part of the official Mission comments on the draft report and that it be published as an Annex to the final report.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth G. Schofield". The signature is written in a cursive style with some loops and flourishes.

Kenneth G. Schofield

USAID/Philippines  
MACS FILES AND ELEMENTS REVIEWED

<u>MACS FILES/ELEMENT</u>	<u>UNIVERSE</u>	<u>NUMBER IN SAMPLE</u>	<u>ERRORS IN SAMPLE</u>	<u>UNIVERSE ERROR RATE</u>	<u>PRECISION LEVEL</u>	<u>PROJECTED ERRORS IN UNIVERSE</u>
<b>BUDGET ALLOWANCE TRANSACTION</b>						
Budget Plan Code	672	72	0	< 3.02%		None
Transaction Amount	672	72	0	< 3.02%		None
Project Number	672	72	0	< 3.02%		None
<b>RESERVATION/OBLIGATION TRANSACTION FILE</b>						
Obligation Number	22,112	81	0	< 2.83%		None
Reservation Control Number	22,112	81	0	< 2.83%		None
Budget Plan Code	22,112	81	0	< 2.83%		None
Transaction Amount	22,112	81	0	< 2.83%		None
<b>COMMITMENT TRANSACTION FILE</b>						
Commitment Document Number	6,933	80	0	<2.86%		None
Earmark Control Number	6,933	80	0	<2.86%		None
Call Forward Date	6,933	80	0	<2.86%		None
Training Months	6,933	80	0	<2.86%		None
Transaction Amount (AID/W)	6,933	80	0	<2.86%		None
Transaction Amount (Mission)	6,933	80	0	<2.86%		None
Commitment End Date	6,933	80	3	3.75%	+/-3.47%	*
Budget Plan Code	6,933	80	0	<2.86%		None
<b>DISBURSEMENT TRANSACTION FILE</b>						
Obligation Document Number	36,453	81	1	1.23%	+/-2.02%	*
Reservation Control Number	36,453	81	1	1.23%	+/-2.02%	*
Commitment Document Number	36,453	81	0	< 2.84%		None
Earmark Control Number	36,453	81	0	< 2.84%		None
Budget Plan Code	36,453	81	0	< 2.84%		None
Disbursing Office Code	36,453	81	0	< 2.84%		None
Federal Outlay Code	36,453	81	0	1.20%	+/-1.97%	*
Budget Allowance Amount	36,453	81	0	< 2.77%		None
Transaction Type Code	36,453	81	0	< 2.77%		None
Actual Disbursed Amount	36,453	81	4	4.94%	+/-3.96%	*
<b>ADVANCE TRANSACTION FILE</b>						
Advance Number	15,330	80	0	< 2.87%		None
Obligation Document Number	15,330	80	0	< 2.87%		None
Commitment Document Number	15,330	80	0	< 2.87%		None
Project Number	15,330	80	0	< 2.87%		None
Advance Type	15,330	80	0	< 2.87%		None
Accountability Date	15,330	80	2	2.50%	+/-2.86%	*
Advance Transaction Amount	15,330	80	0	< 2.87%		None
Local Currency Amount	15,330	80	2	2.50%	+/-2.86%	*

\* Error rates of less than five percent were considered accurate for reporting purposes

USAID/Philippines  
**MACS FILES AND ELEMENTS REVIEWED**

	<u>UNIVERSE</u>	<u>NUMBER IN SAMPLE</u>	<u>ERRORS IN SAMPLE</u>	<u>ERROR RATE</u>	<u>PRECISION LEVEL</u>	<u>ERRORS IN UNIVERSE</u>
<b>MACS FILES/ELEMENT</b>						
<b>PROJECT INFORMATION MASTER FILE</b>						
PACD	60	60	4	6.66%		4
Authorized Amount	60	60	5	8.33%		5
Agreement Date	60	60	6	10.00%		6
Terminal Disbursement Date	60	60	6	10.00%		6
Host Country Contribution	60	60	6	10.00%		6
Project Number	60	60	2	3.33%		2
Life of Project (In Years)	60	60	6	10.00%		6

\* Error rates of less than five percent were considered accurate for reporting purposes

**APPENDIX IV**

<b>MACS TRANSACTION AND MASTER FILES NUMBER OF DATA ELEMENTS</b>	
<b>MACS FILE NAME</b>	<b># OF ELEMENTS PER RECORD</b>
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
<b>Totals 28 MACS FILES</b>	<b>757</b>

## USAID'S INFORMATION MANAGEMENT

This new USAID effort to establish a quality information system is described in the Agency's Information Systems Plan (ISP).<sup>1</sup> 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 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 the transferring of MACS transaction level data into the warehouse. The Core Accounting BAA, which includes the AWACS project, needs a functioning warehouse to provide the most benefit to the Agency.

Smaller initiatives are underway to begin the transition to a corporate database. The PIPE 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 are aware of the quality of the data being used.

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<sup>1</sup> Information Systems Plan, Volume I: Report To Management, February 1993.