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AUDIT OF THE
PHILIPPINE BICOL INTEGRATED AREA
DEVELOPMENT III PROJECT
PROJECT NO. 492-0289

AUDIT REPORT NO. 2-492-86-05
June 3, 1986

UNITED STATES GOVERNMENT

Memorandum

TO : Mr. Frederick W. Schieck
Director, USAID/Philippines

DATE: June 3, 1986

FROM : Leo L. LaMotte *LaMotte*
RIG/A/Manila

RIG/EA-86-188

SUBJECT: Audit Of The Philippine Bicol Integrated Area
Development III Project (Project No. 492-0289)

This report presents the results of audit of payments made by AID for construction of an irrigation project in Bicol, Philippines. The audit was an economy and efficiency audit focused mainly on the construction of water regulation and irrigation facilities because these components account for \$3 million of the \$3.5 million in AID project funds obligated. The audit objectives were to determine whether (1) the USAID complied with Agency regulations regarding the Fixed Amount Reimbursement Agreement method used to finance the construction cost, and (2) USAID management controls for this arrangement were adequate and properly implemented.

Because of procedural weaknesses in the Mission order, the USAID had not fully adhered to Agency regulations regarding the fixed Amount Reimbursement Agreement method of financing projects. USAID also did not have fully in place, or had not properly implemented adequate controls to ensure effective and economical administration of this method of financing projects. As a result, the USAID does not know whether payments of over \$1 million for completed construction work were reasonable or appropriate. Moreover, should construction work proceed as envisioned by the Government of Philippines implementing agency, the USAID should negotiate a reduced reimbursable payment of about \$157,000 for the anticipated reduced scope of construction work.

This report recommends that the USAID revise its Mission orders to ensure the Fixed Amount Reimbursement Agreement method of financing projects is carried out efficiently, economically and in compliance with Agency regulations. This report also recommends that the USAID closely monitor completion of construction work and negotiate an appropriate reduction in the reimbursable amount.

Written comments provided by your office to the draft report were carefully considered. Changes were made to the report where appropriate. USAID comments addressing report content, conclusions and recommendations are attached as Appendix 1 to the report.

Please advise our office within 30 days of the action taken or planned to clear the report recommendations. Thank you for the courtesies extended to the audit staff on this assignment.

Attachment: a/s

EXECUTIVE SUMMARY

In August 1979, USAID/Philippines approved a loan to the Philippine Government to help finance Bicol Integrated Area Development III, an irrigation project in the Rinconada/Buhi-Lalo region of the Bicol River Basin in southern Luzon. As of November 1985, the obligations under the loan amounted to \$3.5 million and disbursements under it totaled \$1.3 million. Activities financed by AID under the project included the construction of major water regulation facilities in the Lake Buhi vicinity, rehabilitation and construction of irrigation facilities and access roads in the Lalo area, and procurement of equipment for system operation and maintenance.

This was an economy and efficiency audit which focused mainly on the construction of water regulation and irrigation facilities because these components accounted for \$3 million of the \$3.5 million in AID funds obligated. The audit objectives were to determine whether (1) the USAID complied with Agency regulations regarding the fixed amount reimbursement method used to finance the construction cost, and (2) USAID management controls for this payment arrangement were adequate and properly implemented.

According to USAID officials and consultant evaluation reports, the Bicol Integrated Area Development III Project was achieving its objectives. The major structures had been completed in accordance with Agency standards. The irrigation system is serving an area of 3,168 hectares -- 81 hectares more than initially expected.

AID regulations state that: (1) Fixed Amount Reimbursement Agreement payments are to be made on the basis of estimated construction costs, reviewed and approved by AID; (2) a clear and complete record be maintained to justify the basis for payments; (3) the grantee/borrower assumes the risk of cost increases; and (4) payments are made only when completed construction work meets AID approved plans and specifications. In the Bicol Integrated Area Development III Project, we found the reasonableness of cost estimates could not be determined; estimated construction costs for a major subproject were based on incomplete design plans; and AID assumed a portion of increased construction costs. This happened because the USAID order did not provide adequate guidance on: review of cost estimates submitted by the implementing agency; the maintenance of records which formed the basis for payments; the monitoring of construction changes made during project implementation that would affect the cost estimates on which payments are made; and the criteria on when the reimbursable amount should be adjusted to reflect significant changes in scope of work during project implementation. As a result, AID assumed more of the risk of

construction cost increases than it should have; did not know whether payments made for completed construction work were reasonable; and the reimbursement amounts were not amended to reflect project scope changes totaling at least \$844,000.

We recommended that USAID/Philippines revise its operating procedures to ensure Fixed Amount Reimbursement Agreements are carried out economically and in accordance with Agency guidelines. The USAID agreed that the USAID Mission order can be modified on matters addressed in the audit report, but disagreed that scope changes should change the reimbursable amount. The Fixed Amount Reimbursement Arrangement concept was designed to allow the implementing party to benefit from managerial efficiencies, but not from scope changes and this needs to be specified in the Mission order.

The fixed amount reimbursement agreement provides for mutually agreed modification of its terms and conditions. Because of environmental and social problems, the Philippine implementing agency may reduce by 25 percent the excavation work originally planned for the Barit River Channelization Subproject. Should the excavation work be reduced as proposed, the Fixed Amount Reimbursement Agreement amount for this subproject should also be reduced by \$157,684.

We recommended that USAID/Philippines negotiate an adjustment to the reimbursable amount for this subproject, based on an approved scope change. The USAID stated that since the Agency was paying for an output and the subproject met its objective of delivering a certain volume of water to targeted fields, an adjustment to the Fixed Amount Reimbursement Agreement for the reduced scope of work is not appropriate. According to AID regulations, the USAID should reimburse the implementing party when work is completed according to the pre-approved plans and specifications, not on the basis of an output, and this should be specified in the Mission order and implemented accordingly.

Office of the Inspector General

AUDIT OF THE
PHILIPPINE BICOL INTEGRATED AREA
DEVELOPMENT III PROJECT

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AUDIT OF THE
PHILIPPINE BICOL INTEGRATED AREA
DEVELOPMENT III PROJECT

PART I - INTRODUCTION

A. Background

USAID/Philippines obligated \$3.5 million under Loan No. 492-T-056A&B to finance the Bicol Integrated Area Development III, an irrigation project in the Rinconada/Buhi-Lalo area of the Bicol River Basin in southern Luzon. As of November 4, 1985, AID had disbursed \$1,325,226 of the funds obligated.

The Project Assistance Completion Date originally was June 30, 1985, but in April 1985 was extended to December 31, 1985. The Philippine Government has requested and USAID has informally agreed to another extension.

Activities funded by AID under the Project included (1) construction of major water regulation facilities in the Lake Buhi vicinity; (2) rehabilitation and construction of irrigation facilities and access roads in the Lalo area, and procurement of equipment for system operation and maintenance; (3) support of improved water management systems, farmer organizations, and farm family training; and (4) continuation of pilot-level up-land development subprojects in the Lake Buhi watershed.

The Philippine Government National Irrigation Administration was responsible for managing the activities related to irrigation construction, water management, and farmer organizations.

B. Audit Objectives And Scope

This was an economy and efficiency audit focused mainly on the construction of water regulation and irrigation facilities. These components accounted for \$3 million of the \$3.5 million in AID funds obligated.

The audit objectives were to determine whether (1) Agency regulations were complied with regarding the Fixed Amount Reimbursement Agreement (FARA) method used by USAID to pay for construction cost, and (2) USAID management controls for FARA arrangements were adequate and properly implemented.

In performing the audit, we reviewed project papers, accounting records, trip reports, evaluations and correspondence in USAID files. We requested copies of the Philippine Government's original cost estimates on which the FARA was based, but neither USAID nor Philippine Government officials were able to locate them. However, the Philippine Government implementing agency did provide "reconstructed" cost estimates, which we

used for our review and analysis of construction scope changes in the project. We also interviewed USAID and Philippine Government officials having major project responsibilities.

The audit was performed during the period August 1985 to December 1985 and was made in accordance with generally accepted government auditing standards.

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PART II - RESULTS OF AUDIT

Because of procedural weaknesses in a Mission order, the USAID had not fully adhered to Agency regulations regarding the Fixed Amount Reimbursement Agreement method of financing projects. USAID also did not have fully in place or had not properly implemented adequate controls to ensure effective and economic administration of this method of financing projects. Moreover, if remaining construction work continues as planned, the reimbursement agreement for the Bicol Integrated Area Development III Project will need to be amended because of a major scope change.

We did very limited audit work regarding the performance of the project. However, according to USAID officials and consultant evaluation reports, the Bicol Integrated Area Development III project was achieving its objectives. The major structures had been completed in accordance with Agency standards. The irrigation system is serving an area of 3,168 hectares -- 81 hectares more than initially expected. In addition, a large portion of the USAID response to the draft audit report was devoted to how well the project was managed and how successful the project was in meeting its objectives. See pages 1 to 5 of Appendix 1 for USAID comments on project performance.

A. Findings And Recommendations

1. USAID Guidance Needed For Efficient Use Of The Fixed Amount Reimbursement Agreement Method Of Payment

AID regulations state that: (1) Fixed Amount Reimbursement Agreement (FARA) payments are to be made on the basis of estimated construction costs, reviewed and approved by AID; (2) a clear and complete record be maintained to justify the basis for payments; (3) the grantee/borrower assumes the risk of cost increases; and (4) payments are made only when completed construction work meets AID approved plans and specifications. In the Bicol Integrated Area Development III Project (BIAD III), we found the reasonableness of cost estimates could not be determined; estimated construction costs for a major subproject were based on incomplete design plans; and AID assumed a portion of increased construction costs. This happened because the USAID order did not provide adequate guidance on: review of cost estimates submitted by the implementing agency; the maintenance of records which formed the basis for payments; the monitoring of construction changes made during project implementation that would affect the cost estimates on which payments are made; and the criteria on when the reimbursable amount should be adjusted to reflect significant changes in scope of work during project implementation. As a result, AID assumed more of the risk of construction cost increases than it should have; did not know whether payments made for completed construction work were reasonable; and the reimbursement amounts were not amended to reflect project scope changes totaling at least \$844,000.

Recommendation No. 1

We recommend that USAID/Philippines revise Mission Order No. 1026.6 to ensure Fixed Amount Reimbursement Agreements are carried out economically and in accordance with AID Handbook guidelines. At a minimum these revisions should:

- a. require detailed review of the plans, specifications and cost data to ensure Fixed Amount Reimbursement Agreements cost estimates submitted by the grantee/borrower are reasonable;
- b. require maintenance of complete and accurate records which form the basis for the agreed upon Fixed Amount Reimbursement Agreements cost estimates;
- c. require close monitoring and evaluation of project and subproject implementation to ensure significant scope changes are not being made without the approval of AID;

- d. include criteria under which a Fixed Amount Reimbursement Agreement should be amended to reflect scope changes that have a significant cost impact and specify any other circumstances which justify an amendment;
- e. clarify that payments made shall be only for satisfaction of requirements identified in approved plans and specifications and not for a level of output; and
- f. clarify that any payments made shall be specified at the amount of the cost estimated in the currency to be expended so that such payments shall remain fixed and not fluctuate with the prevailing foreign currency exchange rate.

Discussion

AID Handbook 3, Appendix 3-J contains the general guidance on the use of the FARA method of financing projects. USAID Order 1026.6 supplements the AID Handbook and establishes the guidelines and formats regarding the use of FARA in the Mission. However, the USAID order provides very limited guidance for ensuring FARA estimates are reasonable and actual payments made under this reimbursement mechanism are reasonable.

Reasonableness Of FARA Estimates Cannot Be Determined - We could not verify the validity of the FARA cost estimates because of the lack of records. Moreover, at least one major subproject estimate was based on incomplete design plans. Consequently, we could not determine whether payments by the USAID for completed subprojects were reasonable.

AID Handbook 3 points out that reimbursement under a FARA is not based on actual cost. Rather the amount of reimbursement is fixed in advance based upon reasonable cost estimates which have been reviewed and agreed to by AID and the borrower or grantee. Since reimbursements under the FARA arrangement are based on estimates, it is essential that the estimates be realistic.

These estimates were to be developed by the Philippine Government National Irrigation Administration (NIA) and reviewed and approved by the USAID. The reasonableness of the BIAD III FARA cost estimates could not be ascertained. According to the FARA, copies of the agreed upon original plans, specifications, and cost estimates for each subproject element were to be maintained at the NIA and at the USAID Office of Capital Development. Officials of these offices were not able to locate the original estimates on which the FARA amounts were based. While there was correspondence which stated USAID officials had reviewed and approved the plans and specifications, there was no specific evidence in the files of the USAID or NIA showing what was actually done by the USAID to review or approve the cost estimates.

In any event, at least one major FARA subproject cost estimate was based on incomplete design. For instance, a footnote in the FARA stated that the estimated cost for the Barit River Channelization (originally estimated to cost \$890,000 ^{1/}) subproject was rough order of magnitude because applicable design plans were incomplete. As discussed on page 13, it still remains uncertain as to what construction work is required to complete this project and what is done to review the estimates for approval.

In summary, the USAID needs to maintain a complete and accurate record of the basis for FARA cost estimates in order to serve as a management control on the FARA arrangement. Otherwise, changes in the original scope of work and the impact on cost cannot be adequately evaluated. In addition, there is no record to show that payments made for completed work are reasonable. In this respect, we believe the USAID order on FARA should be revised to ensure USAID operating personnel maintain a complete and accurate record of the basis behind agreed upon FARA amounts.

Management Comments

USAID agreed to revise the Mission Orders on FARA to ensure a complete record is maintained in Mission files on what forms the basis of FARA cost estimates.

FARA Increase Was At Variance With Agency Guidelines - Our review showed that the USAID did not follow Agency guidance which states that changes in FARA amounts shall not be made after they are formally agreed to by AID and the grantee/borrower. In this respect, the USAID agreed to pay a larger percentage of the irrigation system construction cost than initially provided for in the FARA.

According to Agency guidance, AID's commitment to reimburse the amounts specified in the FARA shall not vary regardless of fluctuation in actual costs. If unforeseen cost increases are encountered, these are to be borne by the grantee/borrower. If actual cost is less than the estimated amount agreed to in the FARA, the AID contribution will not be reduced.

The initial FARA, dated March 30, 1982, between AID and the Government of the Philippines (GOP) stated that "A.I.D's commitment to reimburse the amounts specified in (the FARA) shall not vary regardless of fluctuation in actual cost." The FARA provided that AID would reimburse 58 percent of the estimated \$6.045 million construction cost.

1/ FARA exchange rate used to compute the dollar amount was 18 pesos to \$1.

Although Agency guidelines and terms of the original FARA prohibited increasing AID's share of the estimated cost, the USAID, in June 1984, increased its commitment under the FARA from 58 to 75 percent of the estimated construction cost. In justifying the increase, USAID officials stated that because of two peso devaluations, the AID dollar loan could purchase a significantly larger amount of pesos which was the currency used to pay for the construction costs. USAID officials also stated the intent had always been, as provided for in the project paper, for AID to finance 75 percent of the construction cost.

By June 1984, more than two years after the original FARA was signed, the GOP implementing agency reported that actual costs of most subprojects were far exceeding FARA estimated costs. Consequently, the effect of USAID raising the percentage was to help the GOP pay for these increasing costs.

Agency regulations are silent on what conditions should exist which may justify increasing FARA amounts after they are formally agreed to by AID and the recipient implementing agency. Therefore, we believe the USAID should obtain guidance from the Assistant Administrator, Bureau for Asia and Near East on what circumstances might justify changes in FARA amounts. This guidance should then be used to revise the USAID Mission guidance so that USAID operating personnel have criteria for amending FARA amounts.

In summary, while it may not have been intended by the USAID, the effect of raising the FARA percentages was the absorption by AID of a portion of the cost increases the project was experiencing. This was contrary to the intent of Agency regulations which states the risk of all cost increases will be placed on the borrower/grantee in FARA arrangements.

Management Comments

USAID stated that the Agency had a "fixed commitment" under the original FARA of \$3.5 million to pay for 75 percent of the originally estimated total pesos construction costs. USAID explained the project paper had contemplated that AID would finance 75 percent of the original construction cost estimate. However, the USAID further noted the original FARA was not executed until nearly two years after the project was authorized. Thus, the \$3.5 million would only cover 58 percent of the total estimated project construction cost because of inflation and the prevailing foreign exchange rate. Moreover, the USAID stated that between the original FARA of August 1980 and the FARA amendment of September 1985 there were peso devaluations which again allowed the Agency to finance 75 percent of the original estimated construction.

USAID also brought up other matters which are not included in its written response to the draft report. At the exist conference, for instance, USAID officials stated the FARA was not the proper payment instrument to use for BIAD III because this project was too large, very complex and required several years to complete the work. Consequently, the construction cost was subjected to high inflation during project implementation. As a way to equitably overcome the improper use of the FARA, we were told that AID/Washington agreed to approve the amendment which increased AID commitment to pay a larger portion of the peso construction cost.

Office Of Inspector General Comments

We disagree that AID was committed to finance a "fixed commitment" under the original FARA of \$3.5 million. The Agency was committed to finance a "fixed amount" of the estimated pesos construction cost and not estimated dollar cost. In this respect, the reimbursement amounts are in estimated pesos. The dollars at prevailing exchange rates are used to make reimbursements for these estimated pesos cost of construction.

The basis for the USAID interpretation is the "dollar limitation clause" which is contained in Part III 7.C, in the FARA agreement, as quoted:

"A.I.D.'s commitment to reimburse the amount(s) stated in Part III B above is subject to such amounts being obtainable from the U.S. \$3,500,000 which have been earmarked for this activity. This U.S. dollar amount is based upon an estimated exchange rate of U.S. \$1.00 = P8.00, but should the exchange rate vary so that the amount of dollars necessary to purchase the Pesos specified in Part III B is greater than the amount stated herein, then the U.S. dollar limitation stated herein shall be the controlling limit to AID's commitment to reimburse. The foregoing sentence notwithstanding, the Parties may agree in writing, to increase the limitation contained herein, if it appears that additional dollars are needed to purchase the Pesos necessary to reimburse the amounts stated in Part III B; provided that, such dollars are available to the Project for this purpose. Likewise, the Parties may agree, in writing, to decrease the limitation contained herein, if it appears that more dollars are earmarked than are necessary to purchase the Pesos necessary to reimburse the amount stated in Part III B."

The section clearly shows that the fixed amount to be reimbursed is pesos and recognizes that the dollar amount may change because of exchange rates. In our opinion, this clause is properly drafted and to either interpret the dollar limitation as the fixed amount or write future FARAs that way would

violate the intent of the FARA which is to reimburse a fixed amount of the estimated construction costs, which are peso costs. A fixed dollar amount would reimburse an amount varying according to the prevailing exchange rates. The dollar limitation is carefully drafted into this clause to prevent obligating more funds than are available for this purpose and in no way is intended to represent the fixed amount for reimbursement.

Because of an apparent misinterpretation of the "dollar limitation clause" in the FARA, it is imperative that Mission Order 1026.6 provide clarity on this matter. However, before the Mission order can be clarified, the USAID should seek legal advice from AID/W General Counsel on the purpose of the "dollar limitation clause" and the Agency commitment under FARA to pay a "fixed" dollar or local currency amount for estimated local construction cost. We also believe that the order should provide clarity on when FARA amounts can be changed after they are agreed to by the participating parties.

Construction Scope Changes - USAID made payments for BIAD III subproject elements without considering the cost impact of the numerous scope changes totaling at least \$844,000. As a result, the USAID does not know whether the payments made to the GOP for completed construction work were appropriate and reasonable.

According to AID Handbook 3, reimbursements under the FARA arrangement are made upon physical completion of a project or subproject or a quantifiable element within the project. The Handbook also requires that the AID Mission, with its own staff or consultants, monitor and conduct periodic inspections to satisfy itself that the project is being implemented in accordance with agreed to specifications. According to the FARA, once the USAID has received the request for reimbursement from the GOP, the USAID will make a final inspection of the specified facilities. If the USAID finds the facilities have been built in accordance with approved plans and specifications, the USAID certifies completion and initiates disbursement procedures.

At the time of our audit, USAID made payments totaling \$1.055 million under the FARA for completed BIAD III subproject elements. The most recent payment was May 9, 1985. The payments were made based on the certification of the USAID site engineer that the facilities were satisfactorily constructed in accordance with the AID approved plans and specifications.

However, numerous construction scope changes were made during project implementation. The plans and specifications referred to by the site engineer were updated to reflect the scope changes. However, the FARA subproject amounts were not amended regarding these scope changes. Many of the scope changes were quite significant and had a major impact on the estimated cost

on which the FARA payments were based. For example, service roads for upgrading existing irrigation systems structures were reduced by 24 kilometers. The FARA subproject amounts should have been but was not reduced by about \$285,000 for the decrease in service road requirements. In another example, an additional 355 vehicle and pedestrian crossings were constructed that were not included in the original design of the irrigation system. The FARA subproject amounts should have been, but was not raised by about \$122,800 to account for the increase in the crossings.

Table 1 below summarizes some of the scope changes in BIAD III. See Exhibit 1 for a summary of the cost impact of these and other scope changes.

Schedule Of Some Scope Changes
In The BIAD III Irrigation Project

<u>Item</u>	<u>Initial Program</u>	<u>Actual Construction</u>	<u>Difference</u>	<u>Percentage</u>
Service Roads on Existing structures (km)	27	3	(24)	(88)
Lateral I Service Road (km)	7	16	9	128
Rehabilitation of Main Canal (km)	10	8	(2)	(20)
Drainage Structures in Upper Lalo	6	22	16	267
Farmditches (km)	125	177	52	42
On Farm drains (km)	39	8	(31)	(79)
Main & Secondary Drains & structures (km)	22	-	(22)	(100)
Parshall Flume	21	-	(21)	(100)
Turnouts & Division Boxes	401	248	(153)	(38)
Installation of Gates	401	136	(265)	(66)
Vehicle & Pedestrian Crossings	56	411	355	634

USAID was well aware of the changes in scope of work. However, the USAID site engineer told us no attempt was made to analyze the effect these and other scope changes had on the FARA amounts. The USAID site engineer took the position that since the facilities constructed met the intent of the project, the reimbursements should be made as set out in the FARA. More specifically, the site engineer stated:

"...The FARA, with few exceptions, refers to a series of overall project elements, in accordance with agreed plans and specifications....

The objective is to provide a project element that is complete, satisfactory and functional. The plans and costs are all approved before implementation. The fact that changes in design take place as the work progresses is very normal as long as the element to be reimbursed is complete in every practical sense, satisfactory and functional...

...costs may be decreased due to reduction in certain work items within an element. On the other hand, certain work items are being increased. As noted earlier, the FARA project elements do not reflect such details. We would have to go into the detailed plans to try to identify the quantities for specific work items. The FARA does state 'AID may not reimburse for the completion of a project element unless it is completed fully in accordance with the agreed upon plans and specifications'."

We were told by the site engineer and Philippine Government officials that most subprojects on which the original FARA estimates are based have lost their identify because of construction scope changes. In addition, we spent considerable audit effort trying to reconstruct the actual cost of the FARA subprojects, but were unable to do so because of the way the implementing agency accumulated actual project costs. Because of these conditions and the possibility of other as yet unidentified scope changes, it is not possible to determine what payments the USAID should have made for completed construction work. However, as discussed on page 13, the USAID can and should take action to amend the remaining FARA amount for the Barit River Channelization Subproject.

In summary, the USAID did not evaluate the cost effect of the scope changes and consequently made FARA payments without knowing whether such payments were reasonable. In this regard, we believe the Mission order on FARA should be strengthened to ensure subsequent scope changes are supported by realistic estimates and significant scope changes are accounted for by amendments to the FARA amounts.

Management Comments

USAID stated that the FARA was based upon cost estimates for overall project elements -- established solely for ease in arriving at total cost estimates and in monitoring. Further, the USAID said that if every change in a functional project element requires an adjustment to the FARA, project implementation and monitoring would be extremely cumbersome and the FARA would not be a useful mechanism. USAID explained that it is to avoid such minor increases and decreases in costs that FARAs are employed. Otherwise, the system of modifications apparently envisioned in the audit report will be the same as

that used in non-FARA construction contracting in which every change in plans and inputs is the subject of a change order that may result in increases or decreases of the contract price.

As an example, the USAID noted that a FARA covering typhoon resistant schools may be based initially on a particular roof design using certain materials. If during construction it becomes necessary to use different materials or designs, AID will normally concur in design and material changes so long as the desired output will still be obtained. However, any concomittant changes in the construction costs are not taken into consideration. To do so would convert the FARA into a construction contract subject to modification by change orders.

Office Of Inspector General Comments

We do not agree that under the FARA the Agency is buying an output and FARA estimates for elements of subprojects are established solely for arriving at total cost estimates. For instance, each of the FARA amounts in BIAD III represented estimated construction cost for divisible and discrete elements of the irrigation system and were to be accepted by the USAID upon inspection to ensure that they compared to plans and specifications. Payments were made by the USAID when these individual elements were considered successfully completed. The USAID did not monitor the cost impact of the scope changes that were made to the project and as a result, the Agency probably paid more than it should have for the irrigation system. In view of the misapplication of AID procedures for managing FARA, it is necessary for the Mission order to require successful completion of projects be determined according to plans and specifications, not output, and to do so requires a systematic approach to making adjustments for scope changes.

In BIAD III, numerous and substantive changes were made to the project which significantly impacted on the reimbursement amounts. Moreover, the payments made by the USAID were based on completion of individual subproject elements and not on the completion of the entire irrigation system. Therefore, unless the cost impact of scope changes to these discrete FARA estimates are evaluated, the USAID cannot be assured that payments for completed subproject elements are reasonable.

We will close c and d of Recommendation No. 1 after the revisions to the USAID order on FARA satisfies our concerns on this matter.

2. Reimbursement Amount May Need To Be Reduced Because Of Reduced Construction Work

The Bicol Integrated Area Development III Project (BIAD III) Fixed Amount Reimbursement Agreement (FARA) provides for mutually agreed modifications of its terms and conditions. Because of environmental and social problems, the Philippine Government implementing agency may reduce by about 25 percent the excavation work originally planned for the BIAD III Barit River Channelization Subproject. Therefore, should the excavation work be reduced as proposed, the FARA amount for this subproject should also be reduced by about \$157,000.

Recommendation No. 2

We recommend that USAID/Philippines:

- a. obtain a formal decision from the Government of the Philippines on its plans for completion of the Barit River Channelization subproject,
- b. negotiate an adjustment to the Fixed Amount Reimbursement Agreement amount to reflect any agreed changes in the original scope of work, and
- c. perform a final inspection of the subproject to determine its conformity with the amended Fixed Amount Reimbursement Agreement.

Discussion

As quoted below, the FARA has a provision for modifications and amendments:

"The terms and conditions of this Reimbursement Agreement may be amended or modified only in writing by authorized representatives of the Parties to the Project Agreement."

One of the major subprojects of BIAD III, which will provide a water supply for irrigation and hydropower in the Rinconada Area, is the deepening of a three-kilometer upper stretch of the Barit River Channel. This channelization subproject had an original plan of excavating 222,877 cubic meters of common and rock materials and constructing road and drainage facilities. Any reduction of the excavation work would lower project benefits because the amount of water available for irrigation and generation of electric power would be reduced.

The Philippine Government National Irrigation Administration (NIA) records showed that as of November 15, 1985, excavation work actually completed was 165,393 cubic meters, or about 75

percent of that originally planned. NIA officials told us that they may not perform more excavation work because completion of such work may adversely effect the environment and livelihood of the project area residents. They noted that the dredging of the Barit River has resulted in the immediate lowering of the water level in Lake Buhi. Thus, fishcages were stranded high and dry, fish spawning grounds had become dry, pump wells in six barangays dried up, and health and sanitation problems increased due to decayed organic matter in the drawdown areas. NIA officials concluded that there may be a need for another feasibility study in order to determine effective solutions to these problems.

Since the FARA subproject amounts are based on cost estimates and not the actual cost of completed work, any adjustment to the FARA should be made on the basis of agreed modifications in the original plans and specifications. For the channelization subproject, only about 75 percent of the excavation work is likely to be actually completed. If the intended change is agreed upon, there should be a reduction in the FARA amount, which would equate to \$157,684, or 25.79 percent of the estimated cost to complete excavation work, as originally planned. See Exhibit 2, which shows how the reduction in the FARA amount was computed.

In summary, the decision to complete the excavation work as originally planned remains uncertain. However, if the NIA decides not to proceed with further excavation, then the FARA amount for the channelization subproject should be adjusted accordingly. Therefore, the USAID should negotiate an adjustment to the FARA based on the work contemplated and monitor the progress of this subproject to determine conformity with the amended FARA.

Management Comments

USAID stated that the audit fails to reflect the premises underlying the use of a FARA in the BIAD III project. It noted that the FARA provides for construction of major water regulation facilities and rehabilitation construction of irrigation facilities and access roads. Therefore, the output financed under the FARA is an irrigation system and not individual subprojects elements. Consequently, there is no need to adjust the FARA amount unless the project fails to produce the projected results -- to deliver a planned volume of irrigation water to the fields below the dam.

USAID also stated that while it is true that the project engineers prefer not to continue further excavation of the river channel due to the decision not to dig deeper does not preclude other activities necessary to deliver the planned volume of irrigation water to the fields below the dam. For example, the

engineers are considering widening the channel instead of digging deeper. While this would result in a minor change of plans, it would still result in the satisfactory, functional completion of this project element. The total cost might be more or it might be less than that estimated in the FARA. The USAID concluded the changes, however, are expected to be minor, certainly not in the neighborhood of the amount stated in the audit report.

Office Of Inspector General Comments

The output anticipated in BIAD III is a functional irrigation system that should deliver an increased volume of water to targeted fields. However, in terms of financing the system, the FARA payments are based on discrete subproject elements. Also, according to AID regulations, payment should be made on satisfactory completion according to plans and specifications and not on the basis of a completed irrigation system or on certain outputs. Consequently, should there be a significant deviation in construction activities regarding a particular FARA subproject element, (scope change) then the FARA amount for that subproject element should be amended to reflect the change in estimated cost. Otherwise an unnecessary burden of increased cost may be placed on the implementing agency or AID may pay more than it should for construction work.

The implementing agency may, in fact, widen the channel instead of deepening it which was the basis for the FARA subproject estimate. Nevertheless, if the implementing agency performs no further construction work, the FARA amount should be reduced by about \$157,000. The amount of the reduction was derived from the reconstructed estimated cost supplied by the implementing agency (See Exhibit 2).

Accordingly, the USAID should carry out the report recommendation which requires the Mission to negotiate an adjustment to the FARA amount based on agreed changes to the original scope of work.

B. Compliance And Internal Control

Compliance

As discussed in this report, the audit showed non-compliance with agency regulations which allow FARA arrangements to be used when cost estimates are determined to be reasonable and where design and specifications have been fully developed. We recommended that the Mission amend its Mission order to ensure compliance. We noted no other areas of non-compliance.

Internal Control

AID regulations and the FARA arrangement provide that USAID will pay a fixed amount and that the other party to the agreement assumes all other risks including any cost increases. They may benefit from managerial efficiencies or absorb the cost of managerial inefficiencies. It is not intended that the other party to the FARA either benefit or absorb costs resulting from currency fluctuations or from necessary or desirable scope changes. However, USAID/Philippines internal controls did not prevent the USAID from raising the fixed amount initially agreed to by AID and the Philippine Government implementing agency. In addition, the USAID internal control system did not prevent significant scope changes or subject the scope changes to an approval or FARA arrangement revision process. We recommended USAID procedures on FARA be revised to ensure this payment mechanism is used efficiently and in compliance with Agency regulations.

AUDIT OF THE
PHILIPPINE BICOL INTEGRATED AREA
DEVELOPMENT III PROJECT

PART III - EXHIBITS AND APPENDICES

EXHIBIT 1COST EFFECT OF REDUCING/ADDING ITEMS TO ORIGINAL SCOPE OF WORK 1/

<u>Work Item</u>	<u>Number of Units Reduced or Added</u>	<u>Actual Cost</u>	
		<u>Per Unit</u>	<u>Total for No Units Changed</u>
<u>Reductions</u>			
Existing Main Canal Rehabilitated	2.104 km	\$ 3,533	\$ 7,433
Service Roads on Existing Laterals	23.949 km	11,919	285,448
Extension Area Lateral Service Roads and Structures	1.709 km	5,947	10,163
Farm Drains	31.328 km	764	23,935
Turnouts and Division Boxes	153 units	191	29,223
Gates Installed	265 units	130	34,450
Reduction in Channelization Excavation (See Exhibit 2)			<u>157,684</u>
Total Estimated Cost of Items Reduced			<u>\$548,336</u>
<u>Additions</u>			
Drainage Structures in Upper Lalo	16 units	\$ 155	\$ 2,480
Left Connector Canal Service Roads and Structures	.356 units	60,647	21,590
Lateral I Extension and Service Roads	8.865 km	14,942	132,461
Main and Supplementary Farm Ditches	51.621 km	325	16,777
Vehicle and Pedestrian Crossings	355 units	346	<u>122,830</u>
Total Estimated Cost of Items Added			<u>\$296,138</u>
Total Estimated Cost Of Project Scope Changes			<u>\$844,474</u>

1/ The Philippine Government implementing agency provided us the actual project costs which we used to evaluate the cost impact of these scope changes. We used the exchange rate of P18 = \$1 to compute the dollar values.

REDUCED SCOPE OF WORK FOR THE
BIAD III BAIT RIVER CHANNELIZATION SUBPROJECT

Reconstructed Original Estimate For Channelization
Excavation Work (See note below)

1. Rock Excavation (222,877 cu.m. x 35% x \$5.05556/cu.m.)	\$ 394,369
2. Common Excavation (222,877 cu.m. x 65% x \$2.09056/cu.m.)	302,860
3. Hauling of Excavated materials (88,200 cu.m. x \$1.33778/cu.m)	<u>117,992</u>
4. Total estimated cost	<u>\$ 815,221</u>

AID Share Of Estimated Cost For Excavation
Work Originally Planned

1. <u>Total Estimated Cost times FARA Percentage =</u>	<u>FARA Amount</u>
$\frac{\$815,221}{75}$	<u>\$ 611,416</u>

Estimated Reduction In FARA Amount

1. <u>Scope Initially Planned less Scope Currently Planned =</u>	<u>Scope Reduction</u>
$\frac{222,877 \text{ cu.m.}}{165,393 \text{ cu.m.}}$	<u>57,484 cu.m.</u>
2. <u>Scope Reduction divided Scope Initially Planned =</u>	<u>Scope % Reduction</u>
$\frac{57,484 \text{ cu.m.}}{222,877 \text{ cu.m.}}$	<u>25.79</u>
3. <u>Scope Percent Reduction times FARA Amount =</u>	<u>FARA Reduction</u>
$\frac{25.79}{\$611,416}$	<u>\$ 157,684</u>

Note:

There was no available record of the original estimates; however, the Philippine Government implementing agency provided the above reconstructed estimates for this subproject. We used the exchange rate of P18 = \$1 to compute the dollar values.

UNITED STATES GOVERNMENT

Memorandum

APPENDIX 1
(Page 1 of 9)

TO : Mr. Leo L. LaMotte
RIG/A/Manila

Date: April 21, 1986

FROM : 
Frederick W. Schleck
Director

SUBJECT : Mission Comments on Draft Audit Report on
Bicol Integrated Area Development III Project

We appreciate the opportunity to provide our comments on the subject draft audit report. As we indicated in the exit conference, the Mission has some basic disagreements with the draft report findings, as summarized below.

I. SUMMARY

The Mission believes that the audit presents an inaccurate picture of the project's performance and of the Mission's management of the project. The Bicol Integrated Area Development (BIAD) III Project has been extremely successful and has been managed very well. The project has achieved or exceeded all of its objectives, has been responsive to the needs of the beneficiaries, and has taken careful measures to address the environmental complications of construction and irrigation activities. Management and oversight of the project has been of high quality, due in part to the presence for most of the project's life of an on-site AID assistant project officer supported by a senior Filipino engineer.

The two open recommendations in the draft audit, while not onerous to the Mission, raise misleading implications about current Mission guidance and procedures for Fixed Amount Reimbursement Agreements (FARAs). The first recommendation calls for a revision of the USAID Mission Order No. 1026.6 on FARAs. This Mission Order was revised in 1983, after the FARA for the BIAD III Project was signed. The matters recommended for inclusion in the Mission Order, such as review of design specifications and cost estimates, already are covered by the Mission Order or by Appendix 3-J to AID Handbook 3, which the Mission Order supplements. Nevertheless, the Mission does not disagree that the Mission Order can be modified to highlight such matters or other matters, such as the need to maintain records of the basis for the determination of the reasonableness of cost estimates, which are standard management procedures for all project implementation actions.

The second recommendation in the draft audit fails to reflect the premises underlying the use of a FARA in the BIAD III Project. FARA No. 1 under the Project provides for construction of major water regulation facilities in the Lake Buhí vicinity and rehabilitation



construction of irrigation facilities and access roads. The output financed under this FARA is an irrigation system. The relevant design specifications for purposes of determining the eligibility of the output for reimbursement under the FARA pertain to the delivery of adequate water to a specified area utilizing appropriate systems. In this respect, the river channelization element is not a discrete FARA output in the sense that a particular school building is a separate FARA output in a FARA covering construction of a number of school buildings. In general, the irrigation system covered by the FARA was broken into elements principally in order to enable payments to be made prior to completion of the overall output. Channelization was undertaken in order to satisfy the design specification for the irrigation system of delivering a certain volume of water to the irrigated fields downstream. The cost estimates for this activity were based on estimates of the excavation work required to meet this specification.

II. BICOL IAD III PROJECT PERFORMANCE

A. Achievement of Project Objectives. The BIAD III Project was a well-managed, successful project. As stated in the original draft audit report, the program was found to be "achieving the desired results ... [and] ... the necessary controls were in place to assure the project's sustainability." All major project objectives were achieved or exceeded. For example, the number of hectares to benefit from rehabilitation was originally targetted at 1,100 hectares; the actual number of hectares benefitting from project improvements is 1,192 hectares. Similarly, the objective of making double-cropping feasible for all farmers cultivating within the system was not only achieved, but more than 800 hectares are also being triple-cropped.

There was a full-time USAID (USDH) assistant project officer on site throughout most of the life of project. This officer was supported by an on-site senior Filipino engineer. In addition to the daily supervision and monitoring that this on-site presence provided, there was regular monthly and quarterly project reporting, on both the USAID and GOP side. Finally, USAID/Manila and National Irrigation Administration (NIA) officials met regularly regarding the project and undertook routine visits to the field offices and construction sites.

The project was implemented within the time period allotted for completing major project activities. (The PACD was extended to undertake additional activities in 1984.) Costs were reasonable and in fact \$1.5 million was debilitated in 1985.

Project beneficiaries are enthusiastic and pleased with the project. The 2,450 farm family beneficiaries have been organized into irrigation associations to manage and maintain the system in coordination with NIA. Fee collections within the system (parts of which have only been operational for about a year) were at a 71 percent efficiency, which is extremely high compared to other systems in the Philippines. Farmers

report dramatic increases in their rice harvests after the system became operational, and as mentioned above, double cropping and even triple cropping is now possible.

B. People's Participation in the Bicol Project. The BIAD III Project is one of the first USAID-assisted national irrigation system projects in the Philippines committed to a participatory approach. In the more usual top-down designed projects, irrigation engineers make decisions on their own regarding the best layout of canals, distributaries, and channels; the place of control structures; and the system for rotating water usage. In the Bicol Project, the water-using farmers were invited to participate in the planning, design, implementation, and operation and maintenance of the system. At each step of the planning and design process, farmers were encouraged to comment upon the proposed canal and channel alignments, positions of control structures and turnouts, location of drainage ditches, and the groupings of field channel water-users. Such a participatory approach inevitably results in numerous design changes as implementation progresses. What looks good on a blueprint may require modifications during construction. This was the reason for a number of the design changes that occurred over the course of the project. These changes could not be anticipated when preparing the original plans and specifications, but they were within the general scope of project outputs covered under the FARA (See Attachment A, Section III (B)). In some cases, these changes resulted in minor increases in cost; in others, minor decreases in cost resulted. All of these changes were in the best interest of the project and resulted in greater benefits to the farmers, greater efficiencies in water delivery, and, over the long-term, lower operational costs to the system.

C. Environmental Concerns. The major source of irrigation water in the BIAD III Project is Buhi Lake. From the beginning of the project, it was recognized that long-term success of the project depended upon guaranteeing sufficient water levels in the lake to provide not only for irrigation but domestic water, commercial uses, and power requirements. It was obvious that preservation of the lake would require dedicated efforts to rehabilitate the rapidly deteriorating watershed which drained into the lake.

The Buhi Upland Agro-Forestry component of the BIAD III Project was the proposed solution to the watershed problem. The Upland Agro-Forestry Component sought to provide upland farmers with alternative agro-forestry technologies which would stabilize and rehabilitate the soils on their farms, make it profitable to remain sedentary on the land, and provide them with a viable alternative to the destructive slash-and-burn subsistence strategy that they had been following.

The project was one of the earliest attempts to apply a farm systems approach to upland agriculture. Farmers were organized and encouraged to participate in developing and testing alternative

technologies. Although growing security problems in the upland areas precluded subproject implementation according to plan, some impressive results were obtained and when project activity ceased in 1984, the farming residents in the area had been sensitized to the watershed's problems and begun limited adoption of the new technologies developed under the project.

The BIAD III Project, like most major irrigation projects, had its share of environmental problems. What was remarkable about the Bicol Project, however, was its responsiveness to these problems and its determination to seek understanding and solutions. In early 1983, shortly after the completion of the Lake Buhí control structure, the USAID (USDH) Project Manager stationed in Naga City reported a number of environmental problems developing in and around Lake Buhí that appeared to be caused by the construction of the control structure. These included, *inter alia*:

1. the drying up of shallow wells around the lake that were used for domestic water supply;
2. fluctuating water levels in the lake and river channel below the dam that adversely affected fish cultivation;
3. a sulfurous upwelling within the lake that was toxic to fish.

Due to the occurrence of a major drought at the time, it was difficult to establish a causal relationship between the dam and the identified problems. Nevertheless, USAID/Philippines took several actions to determine the actual cause of the problems and to initiate appropriate action to solve them. First, the Mission proposed the establishment of a local GOP inter-agency working group headed by the Bicol River Basin Development Program Office (BRBDPO) to monitor the identified problems and formulate corrective action.

Next, the Mission financed a fishery expert to study the effects of the identified problems on fish production. The Mission then initiated two surveys by a USAID/Philippines social scientist to determine the nature and degree of social and economic dislocation caused by the identified problems. Most recently, the Mission sought and obtained from AID/W central funds \$9,500 to finance an agro-ecosystems workshop in Naga City to develop an agreed-upon agenda of corrective actions and additional research to respond to the problems created by the control structure/irrigation system.

In addition to the Mission actions, the GOP inter-agency working group has developed an agreement by the concerned parties of an operational plan for the release of water from the lake in a manner that will satisfy the requirements for domestic and agricultural water, fishing, and power and will also minimize environmental problems. The working group is also planning a Level II water system in and around Lake

Buhi to replace the existing shallow wells, eliminating domestic water problems caused by the lake's fluctuations.

III. AUDIT RECOMMENDATIONS

A. Audit Recommendation No. 1.

The recommendation states that the Mission Order on FARAs should be revised. The recommendation is based on the finding in the draft audit report that project documentation regarding the Mission's review and approval of FARA cost estimates was lacking and that the Barit River Channel subproject cost estimate appeared to be based upon incomplete design plans. The Mission does not believe this recommendation is fair or accurate.

While there is no discrete document certifying that the Mission has reviewed and approved the cost estimates upon which the FARA is based, there is ample evidence in the Project files that such a review was performed and approval given. For example, a letter in the files dated October 27, 1980 from Mr. William F. McDonald, Chief, Office of Capital Development (OCD) to NIA Assistant Administrator Cesar Tech advises the latter to "provide us with cost estimates for the various project components After we have reviewed and approved the estimates, USAID will draft the Fixed Amount Reimbursement Agreement for your review and approval" (see Attachment B). Other letters in the files reinforce this directive. Further, Project Implementation Letter No. 11 dated February 18, 1982, which earmarked funds to cover the FARA, states that the FARA, and therefore the cost estimates included in it, was developed collaboratively by USAID and NIA officials (see Attachment C). In the Mission's view, this implementation letter, which was cleared by the Project Committee and signed by the Chief of the Office of Rural and Agricultural Development (ORAD), is the final document approving the cost estimates. Finally, in a memorandum dated March 3, 1986 to Mr. Douglas J. Clark, Chief of ORAD, regarding the draft audit report, OCD Chief Engineer Grayson states that "Oscar Bermillo and I undertook lengthy review of detailed engineering plans, specifications, and cost estimates for the project In all instances, we had recommended revisions in design or construction procedures, and had reviewed and approved all documentation in preparation for bids for construction Our concurrence in the FARA (PIL No. 11 dated February 18, 1982) was based on our conclusion that the estimated costs were reasonable in accordance with approved plans and specifications" (see Attachment D). Contrary to the draft audit report, the Mission did provide RIG/A/Manila with copies of the original plans and specifications in which the estimates were based. Again, there is ample documentation (see Attachment E) demonstrating that the Mission reviewed and approved plans and specifications.

1. Incompleteness of Designs. The draft audit findings on the Barit River Channelization subproject fail to reflect an understanding of the relationship between the engineering task and the development of cost

estimates and of the relationship between the work required and the desired output of a functioning irrigation system in the context of FARA financing. The draft audit report states that cost estimates for the subproject were on a "rough order of magnitude because applicable design plans were incomplete." The above-cited Grayson-Clark memorandum explains the completion status of the design of this rechannelization:

The Barit (or Tabao) River Channelization design and cost estimate was as complete as possible under the circumstances. It would have been impossible to have determined all the physical constraints, and the exact types and quantities of materials involved in lowering the river channel unless the river was temporarily diverted so that data could be obtained in the dry. Such an arrangement was out of the question.

We worked closely with NIA in arriving at sound engineering judgments concerning the steps to be taken to dredge the river channel. Oscar Bermillo and I inspected the site with NIA staff in order to determine how to proceed with NIA's own work force and we continued to make regular visits during the initial activities. Oscar closely monitored and assisted NIA throughout the dredging activities. River channelization is a very difficult engineering and construction undertaking. NIA's work plan has proven to be satisfactory and costs have been maintained at a reasonable level.

The incompleteness of plans and the corresponding roughness of the cost estimate at the time the FARA was executed were necessary consequences of the type of engineering task involved. Estimates of channelization costs are based on rough estimates of the dredging requirements; the work actually required to accomplish the objective of delivering water to the irrigation system normally cannot be ascertained with reasonable certainty until work has commenced and physical conditions are determined.

2. FARA Percentage Increases. Under this same open recommendation, the draft audit report addresses what is believed to be an improper change in FARA amounts after the FARA was executed. The draft audit report states that the original FARA provided that AID would reimburse 58 percent of the peso cost of the estimated \$6.045 million construction cost.^{1/} Amendment No. 1 to the FARA, dated June 4, 1984,

^{1/} The draft audit report incorrectly states (p. 11) that "the FARA provided that AID would reimburse 58 percent of the peso cost of the estimated P3.5 million construction cost." The FARA clearly indicates that the estimated construction costs were P48,357,330, or approximately \$6.045 million at an exchange rate of P8.00 = \$1.00, and that the amount of reimbursement was \$3.5 million, which at the then-prevailing exchange rate was equivalent to P28 million pesos, or approximately 58 percent of total project cost.

modified the FARA to reflect the fact that the fixed commitment under the original FARA of \$3.5 million was then more than sufficient to finance 75 percent of the originally estimated total project cost of P48 million. The draft audit report asserts that by increasing the USAID percentage commitment, the Mission violated the intent of the FARA and removed the risk of cost increases from the borrower/grantee. It also asserts (p. iii) that USAID did not have adequate review and oversight procedures for the FARA.

The project paper contemplated that AID would finance 75 percent of the original cost estimate for construction, but not more than the peso equivalent of \$3.5 million provided under the Project Agreement. This can easily be verified by examining the financial tables of the project paper. For example, Table H-1, Estimated Project Cost by Source of Funding, shows clearly that the AID percentage commitment is 75 percent (see Attachment F).

However, the original FARA was not executed until nearly two years after the project was authorized. Cost escalations had already begun (from P26.9 million to P48.4 million), and by the time the FARA was signed, funds provided by AID under the Project Agreement for construction could only cover 58 percent of the total estimated cost at the then prevailing foreign exchange rate. Within a year, however, the value of the peso began to decrease until it was finally devalued from P8 to P14 to US\$1 in Fall, 1983.

As a result of peso devaluations, AID was then able to finance 75 percent of the total construction cost as estimated at the time the original FARA was executed using the \$3.5 million provided for that purpose. In the amended FARA, the total amount of dollars we committed, converted into pesos, was again equivalent to 75 percent of the total costs, the same percentage we intended in the project paper. As noted in the original FARA, actual peso reimbursements were to be calculated using rates of exchange obtained by AID at the dates of payments under the FARA.

In substance, the agreement committed AID to reimburse 75 percent of the total original estimated construction cost of P48 million, subject to the \$3.5 million limitation. At the time the FARA was executed, the \$3.5 million limitation was operative, and the available dollars could only provide P28 million, or 58 percent. At the time the FARA was amended, the 75 percent limitation was operative, since only \$2.59 million of the available dollars was needed to reimburse 75 percent of the original cost estimate.

The draft audit report states that the amendment to the FARA increased by \$460,000 AID's share of the estimated construction cost. This is incorrect. Since USAID committed the full \$3.5 million in 1982 under the original FARA, but only \$2.59 million in 1984 under the amended FARA, the amendment to the FARA did not cost the U.S. Government an additional \$460,000. Rather, the amendment saved more than \$900,000.

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The FARA amendment did not increase the total construction costs as estimated in the original FARA, even though costs were escalating. Total estimated cost as revised for September, 1985 are now P80 million. The difference of P32 million is absorbed entirely by the GOP.

3. Changes in Scope. The draft audit report criticizes USAID for frequent changes in the scope of work without giving due consideration to the cost impact of these changes. Reasons for many of these changes were given earlier. The FARA was based upon cost estimates for overall project elements (which are established solely for ease in arriving at total cost estimates and in monitoring). The elements do not reflect the level of detail about which the auditors are concerned in their critique regarding changes in scope. If every change in a functional project element requires an adjustment to the FARA, project implementation and monitoring would be extremely cumbersome and the FARA would not be a useful mechanism. In fact, it is to avoid such minor increases and decreases in costs that FARAs are employed. The system of modifications apparently envisioned in the draft audit report in fact is that used in non-FARA construction contracting in which every change in plans and inputs is the subject of a change order that may result in increases or decreases of the contract price. In contrast, FARAs contemplate reimbursement for completion of an output that meets certain specifications. Modification in the inputs are not reflected in changes in the reimbursed amount, even if there are corresponding cost savings. Thus, for example, a FARA covering typhoon resistant schools may be based initially on a particular roof design using certain materials. If during construction it becomes necessary to use different materials or designs, AID will normally concur in design and material changes so long as the desired output will still be obtained. However, any concomitant changes in the construction costs are not taken into consideration. To do so would convert the FARA into a construction contract subject to modification by change orders.

The general recommendation in the draft audit report that the Mission Order be revised is not lacking merit. Clearly, gains are to be had by being more specific in Section V (procedures) of the Mission Order. For example, these procedures could spell out in detail the requirements for the review and approval of plans and specifications and for the determination of reasonableness of cost estimates. The section could also specify which documents are to be maintained in the official files and which offices should certify completion of work. However, the recommendation in the draft audit report that criteria for increasing and decreasing costs be specified is incompatible with FARAs for the reasons explained above.

B. Recommendation No. 2.

RIG/A/Manila believes that the estimated 25 to 30 percent decrease in excavation on the Barit River Channel necessitates an adjustment to the FARA. This conclusion reflects a belief that a major

reduction in the scope of work is underway and that it should be reflected in the FARA. While it is true that the project engineers prefer not to continue further excavation of the river channel due to the adverse effects this may have on domestic ground water supplies, their decision not to dig deeper does not preclude other activities necessary to deliver the planned volume of irrigation water to the fields below the dam. For example, the engineers are considering widening the channel instead of digging deeper. While this would result in a minor change of plans (i.e., not reaching the depth in the riverbed as stipulated in the original plans), it would still result in the satisfactory, functional completion of this project element. The total cost might be more or it might be less than that estimated in the FARA. Again, USAID's position is that such changes are to be expected, especially when digging river channels. The changes, however, are expected to be minor -- certainly not in the neighborhood of the \$183,000 stated in the audit.

The audit report goes on to state that the contemplated change in the excavation of the channel will result in decreased project benefits due to a decrease in water availability. This is baseless speculation. As stated earlier, the total number of hectares irrigated already exceeds by nearly 10 percent the planned number of hectares. Further, nearly one-third of the area is being triple-cropped. Since these benefits are already being received, reduction in excavation will not result in decreased benefits to these farmers.

Auditor's Note: The USAID included several attachments to this memorandum. These attachments were reviewed during the course of the audit and taken into consideration before drafting the audit report. Therefore, the attachments have been deleted from the USAID response to the draft report.

List of RecommendationsPage

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Recommendation No. 1

We recommend that USAID/Philippines revise Mission Order No. 1026.6 to ensure Fixed Amount Reimbursement Agreements are carried out economically and in accordance with AID Handbook guidelines. At a minimum these revisions should:

- a. require detailed review of the plans, specifications and cost data to ensure Fixed Amount Reimbursement Agreements cost estimates submitted by the grantee/borrower are reasonable;
- b. require maintenance of complete and accurate records which form the basis for the agreed upon Fixed Amount Reimbursement Agreements cost estimates;
- c. require close monitoring and evaluation of project and subproject implementation to ensure significant scope changes are not being made without the approval of AID;
- d. include criteria under which a Fixed Amount Reimbursement Agreement should be amended to reflect scope changes that have a significant cost impact and specify any other circumstances which justify an amendment.
- e. clarify that payments made shall be only for satisfaction of requirements identified in approved plans and specifications and not for a level of output; and
- f. clarify that any payments made shall be specified at the amount of the cost estimated in the currency to be expended so that such payments shall remain fixed and not fluctuate with the prevailing foreign currency exchange rate.

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Recommendation No. 2

We recommend that USAID/Philippines:

- a. obtain a formal decision from the Government of the Philippines on its plans for completion of the Barit River Channelization subproject,
- b. negotiate an adjustment to the Fixed Amount Reimbursement Agreement amount to reflect any agreed changes in the original scope of work, and
- c. perform a final inspection of the subproject to determine its conformity with the amended Fixed Amount Reimbursement Agreement.

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