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AUDIT OF
UTILIZATION AND MAINTENANCE OF
SELECTED EQUIPMENT IN PAKISTAN

AUDIT REPORT NO: 5-391-88-8
July 11, 1988

AGENCY FOR INTERNATIONAL DEVELOPMENT
OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR AUDIT
- Singapore -

U.S. POSTAL ADDRESS:
American Embassy
AID/RIG
FPO San Francisco 96699

INTERNATIONAL ADDRESS:
c/o American Embassy
30 Hill Street
Singapore 0617
Tel: 225-1033

July 11, 1988

MEMORANDUM FOR Mr. J. Norris, Director, USAID/Pakistan
FROM: Mr. *Richard E. Derrick* Richard E. Derrick, RIG/A/Singapore
SUBJECT: Audit of Utilization and Maintenance
of Selected Equipment in Pakistan
(Audit Report No. 5-391-88-8)

The Office of the Regional Inspector General for Audit/Singapore has completed its audit of Utilization and Maintenance of Selected Equipment in Pakistan. Equipment covered by this review included certain procurements under the Agricultural Commodities and Equipment Agreement No. 391-0468 and proposed procurements under the Irrigation Systems Management Project No. 391-0467. Five copies of the audit report are enclosed for your action.

Your comments to the draft audit report are attached as Appendix I to this report. The report contains seven recommendations all of which are considered resolved and will be closed upon completion of recommended actions. Please advise me within 30 days of any actions taken to implement the seven recommendations.

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

EXECUTIVE SUMMARY

A.I.D. provided \$31 million for heavy equipment, spare parts and workshop machinery under the Agricultural Commodities and Equipment Program agreement dated April 1982. This equipment was primarily to support the Irrigation Systems Management Project. The Project's objective was to increase productivity of Pakistan's agricultural sector through rehabilitation of 8,700 miles of canals and 2,175 miles of surface drains.

The Regional Inspector General for Audit/Singapore made an economy and efficiency audit in order to evaluate USAID/Pakistan monitoring and controls over utilization and maintenance of equipment procured under the Agricultural Commodities and Equipment Program for the Irrigation Systems Management project, and to determine if USAID/Pakistan took timely and appropriate action when equipment was not fully utilized.

USAID/Pakistan did not adequately monitor equipment utilization and maintenance and consequently, did not obtain and evaluate useful information readily available at the Provincial Irrigation Departments (PIDs). Also, USAID/Pakistan did not take timely and appropriate action when notified about problems of low equipment utilization.

The USAID/Pakistan Controller had performed some end-use checks of equipment utilization, and certain of the equipment, particularly the excavators used to clear large drains in the Punjab Province, had been generally effectively used.

The audit disclosed that a substantial amount of A.I.D.-funded equipment was not being effectively utilized. Nonetheless, USAID/Pakistan management had proposed to fund \$31 million for additional equipment and for overhaul of older equipment under a proposed amendment to the Irrigation Systems Management Project. The audit also found that responsibility for monitoring equipment utilization and correcting reported problems needed to be clearly assigned to a specific operational activity. Also, increased emphasis needed to be placed on assisting the Provincial Irrigation Departments to establish an equipment maintenance system and to begin using A.I.D.-funded workshop machinery.

A substantial amount of equipment funded by A.I.D. was inappropriate, having no specific project need and accordingly was not effectively utilized as required by U.S. Government management standards. Equipment had not been used

for several reasons, including inappropriate A.I.D.-funded procurements. As a result neither USAID/Pakistan nor the Government of Pakistan had achieved maximum economic benefits from the equipment or effectively used resources of up to \$14 million through transfer of unneeded equipment and improved utilization of other equipment. This report recommends USAID/Pakistan take action to ensure A.I.D.-funded equipment is effectively utilized. USAID/Pakistan concurred with the finding and recommendations.

A.I.D. Handbook Three requires that project designers specify the resources needed, such as commodities, to achieve projects outputs and objectives. The USAID Program management had proposed funding of \$31 million for additional equipment and overhaul of older equipment for which no need had been established. This occurred because USAID/Pakistan had not identified project needs, determined that existing equipment was inadequate, or considered the Provincial Irrigation Departments' capability to budget for equipment utilization. The USAID now has the opportunity to more effectively use the \$31 million for project activities that more directly benefit the agricultural sector. This report recommends USAID/Pakistan reevaluate its planned actions to fund \$31 million for new equipment and overhaul of older equipment. USAID/Pakistan concurred in the finding and recommendation.

A.I.D. is required by law and U.S. Government management standards to monitor and evaluate the use and results of its assistance and to ensure that resources are used as effectively as possible. A.I.D.-funded equipment, however, was not effectively utilized. This occurred because USAID/Pakistan had not clearly delineated monitoring responsibilities nor taken prompt corrective action when informed about poor equipment utilization. In addition, USAID/Pakistan did not obtain and analyze equipment utilization reports from the Provincial Irrigation Departments. As a result USAID/Pakistan did not effect savings through more effective use of A.I.D.-funded equipment. This report recommends that USAID/Pakistan improve its ability to take timely remedial action on significant equipment utilization problems. USAID/Pakistan concurred in the finding and recommendation.

The Irrigation Systems Management project paper and the Agricultural Commodities and Equipment program documents recognized the need for an effective Government of Pakistan preventive equipment maintenance program. However, the program established by the Government was ineffective because of cumbersome procedures, inadequate funding, and

inadequate USAID/Pakistan monitoring. As a result, A.I.D.-funded equipment costing over \$24 million, which had been in-country for as long as four years, was not properly maintained and therefore vulnerable to rapid deterioration. This report recommends that USAID/Pakistan take action to ensure an effective equipment maintenance program is developed and implemented. USAID/Pakistan concurred in the finding and recommendation.

Under the Agricultural Commodities and Equipment Program, USAID/Pakistan provided equipment for six workshops that were intended to be used to overhaul the Provincial Irrigation Departments' heavy equipment fleets. Much of the A.I.D.-funded workshop machinery procured for overhauling equipment had yet to be used. The Provincial Irrigation Departments had not budgeted the funds needed for the overhaul of their equipment. As a result, much of A.I.D.'s investment of approximately \$3 million in workshop machinery was at risk of being wasted. The report recommends that USAID/Pakistan take necessary action to ensure the A.I.D.-funded workshops are effectively utilized. USAID/Pakistan concurred with the finding and recommendation.

Office of the Inspector General

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IN PAKISTAN

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PART I - INTRODUCTION

A. Background

The Agricultural Commodities and Equipment (ACE) Program was intended to assist Pakistan to increase productivity in the agricultural sector through A.I.D.-funding of \$300 million for commodities. Some of these commodities were to support A.I.D.'s Irrigation Systems Management (ISM) Project (No. 391-0467) for the rehabilitation and maintenance of Pakistan's irrigation system. This effort was to initially involve about 8,700 miles of canals and about 2,175 miles of surface drains.

A.I.D. had spent about \$31 million since 1983 for heavy equipment, spare parts and workshop machinery acquired under the ACE Program for support of the ISM Project. The heavy equipment and workshop machinery were assigned to the Irrigation Departments in Pakistan's four provinces of Punjab, Sind, Baluchistan, and Northwest Frontier. The Mechanical Division in the Provincial Irrigation Departments were responsible for operating the equipment. Procurement of additional equipment and overhaul of older equipment was being considered under a proposed amendment to the ISM Project.

B. Audit Objectives and Scope

The Office of the Regional Inspector General for Audit/Singapore made an economy and efficiency audit in order to evaluate USAID/Pakistan monitoring and controls over utilization and maintenance of equipment procured under the ACE Program for the ISM project, and to determine if USAID/Pakistan took timely and appropriate action when equipment was not fully utilized.

The review was conducted from August 1987 through February 1988. Audit work included a review of project files and records and discussions with USAID/Pakistan and Government of Pakistan officials. On site work was conducted in Islamabad and the Provinces of Punjab, Sind, and the Northwest Frontier. We visited workshops and equipment storage facilities at selected project sites. Audit work involving equipment in the Baluchistan Province was limited to a review of documents and files available at USAID/Pakistan and contractors offices.

Our review included equipment that arrived in Pakistan from 1983 through November 1987. The audit covered heavy construction type equipment procured under the ACE Program for the ISM project amounting to about \$31 million, including spare parts and workshop machinery, as well as proposed expenditures under the ISM project of \$10 million for new equipment and \$21 million for overhaul of older equipment.

USAID/Pakistan's comments to the draft report have been incorporated into the report as appropriate and the full text of the comments is included as Appendix 1. The review of internal controls and compliance was limited to activities related to the report findings. The audit was made in accordance with generally accepted government auditing standards.

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PART II - RESULTS OF AUDIT

USAID/Pakistan did not adequately monitor equipment utilization and maintenance and consequently, did not obtain and evaluate useful information readily available at the Provincial Irrigation Departments (PIDs). Also, USAID/Pakistan did not take timely and appropriate action when notified about problems of low equipment utilization.

The USAID/Pakistan Controller had performed some end-use checks of equipment utilization, and certain of the equipment, particularly the excavators used to clear large drains in the Punjab Province, had been generally effectively used.

The audit disclosed that a substantial amount of A.I.D.-funded equipment was not being effectively utilized. Nonetheless, USAID/Pakistan management had proposed to fund \$31 million for additional equipment and for overhaul of older equipment under a proposed amendment to the Irrigation Systems Management Project. The audit also found that responsibility for monitoring equipment utilization and correcting reported problems needed to be clearly assigned to a specific operational activity. Also, increased emphasis needed to be placed on assisting the Provincial Irrigation Departments to establish an equipment maintenance system and to begin using A.I.D.-funded workshop machinery.

To improve utilization and achieve maximum benefit from appropriated funds the report has seven recommendations for the establishment and implementation of an improved monitoring system, closer interaction with the PIDs, transfer of equipment, and stronger controls over additional equipment procurements and maintenance programs.

A. Findings and Recommendations

1. Improvements in Equipment Utilization Are Needed.

A substantial amount of equipment funded by A.I.D. was inappropriate, having no specific project need and accordingly was not effectively utilized as required by U.S. Government management standards. Equipment had not been used for several reasons, including inappropriate A.I.D.-funded procurements. As a result neither USAID/Pakistan nor the Government of Pakistan had achieved maximum economic benefits from the equipment or effectively used resources of up to \$14 million through transfer of unneeded equipment and improved utilization of other equipment.

Recommendation No. 1

We recommend that USAID/Pakistan develop procedures to ensure that:

- (a) project and program documents which include procurement of commodities for specific projects also include minimum equipment utilization standards, criteria to measure utilization, and actions to be taken should the standards not be met;
- (b) equipment is technically applicable to in-country project activities, considering environmental conditions and bureaucratic situations;
- (c) direct input and commitment to effectively use equipment is obtained from the Government of Pakistan using organization (such as the civil divisions of the Provincial Irrigation Departments) prior to funding equipment procurements and overhaul programs; and
- (d) each of the four provinces have adequate budgetary capability to effectively utilize equipment before approving additional funding of procurements and overhaul programs.

Recommendation No. 2

We recommend that USAID/Pakistan coordinate with each of the Provincial Irrigation Departments to determine how intra-departmental budgeting and funding procedures could be revised to increase equipment utilization while reducing overall costs of rehabilitating the irrigation systems.

Recommendation No. 3

We recommend that USAID/Pakistan evaluate equipment covered by this audit including the \$5.1 million known problem equipment (see Exhibit 2), that is excess and cannot be effectively utilized, and take necessary action to coordinate:

- (a) directly with using organizations such as the civil divisions to determine which equipment cannot be effectively utilized, and
- (b) with the Government of Pakistan to transfer such equipment.

Discussion

Office of Management and Budget Circular 117 requires that A.I.D. assess the effectiveness and efficiency of development programs on a continuing basis. In effect, A.I.D. is required by U.S. Government management standards to monitor and evaluate the use and results of its assistance to ensure that U.S. Government funds are used as effectively as possible. A.I.D. Handbook 15, Chapter 10, Commodity Arrival and Disposition, dated March 17, 1987 outlined A.I.D. policies and procedures to ensure that, among other things, A.I.D.-funded commodities, whether project or non-project, were effectively used.

With respect to project assistance, USAID's were to ascertain that commodities financed by A.I.D. were being effectively used in the project, or, if not, were transferred as approved by the USAID. Project agreements placed responsibility on the borrower/grantee to ensure that the commodities were used effectively for project purposes, i.e., in accordance with project implementation plans.

USAID/Pakistan, however, funded the equipment under a non-project assistance agreement. The Handbook did not require USAIDs to monitor utilization of equipment purchased under a non-project assistance agreement once it was in the hands of the end user. Accordingly, the resultant Agricultural Commodities and Equipment (ACE) Agreement provided only for the Government of Pakistan to assure that the equipment was used two years after clearing customs. Special equipment utilization provisions to address the projectized aspects of the program were not established although it was clearly intended that the equipment was to be used to support the Irrigation Systems Management (ISM) project.

Because USAID/Pakistan provided funding under a non-project agreement, the A.I.D. Handbook requirements and ACE Agreement provisions for USAID monitoring of equipment utilization were substantially different than those required for project assistance. There was, nonetheless, a USAID responsibility to avoid waste of U. S. Government appropriated funds.

Utilization - A.I.D. funded approximately \$31 million of heavy equipment (see Exhibit 1), related spare parts and workshop machinery for use by the four Provincial Irrigation Departments (PIDs) under the ISM project. This equipment was primarily for canal and drain rehabilitation and maintenance and to a lesser extent flood control. The PIDs had not previously used equipment for canal maintenance and only used it in certain areas in the Punjab and Sind to clear drains. With the exception of the larger drains that required the use of equipment, rehabilitation and clearance was performed by contractor supplied manual labor and small farm tractors.

The introduction of equipment did not change past manual labor practices and therefore the equipment was not used for irrigation system maintenance as anticipated. For example, canals and drains continued to be cleared manually as in the past.

In a memo dated July 14, 1986, a USAID contractor stated that the Main Branch Lower (MBL) was the only project scheme utilizing construction equipment, and that they had very limited success in identifying other projects where equipment could be used productively. As of August 1987, there were approximately 120 A.I.D.-funded canal schemes, and other than the MBL very few if any were utilizing heavy equipment.

Efforts to encourage use of equipment on other irrigation canal projects were not successful largely because much of the equipment should not have been procured. For example, in the Punjab, much of the equipment assigned to the MBL had very little practical use. Other equipment i.e., dozers, scrapers, amphibious backhoes, dredges, compactors, and weed boats were used to a limited extent or not at all. Nearly all of the equipment procured for the Northwest Frontier Province was inappropriate for use on the smaller irrigation systems prevalent in that area. Accordingly, its use was negligible. The Sind made greater use of equipment but still had significant utilization problems.

The following sections discuss some of the constraints to effective equipment utilization in the provinces and the cost of ineffective utilization.

Equipment Utilization in the Punjab Province - A.I.D. provided Punjab 97 items of heavy equipment costing \$12 million. For the most part, this equipment was not effectively used. During the 12 month period covering September 1986 through August 1987, PID monthly reports showed that 24 draglines, backhoes, and excavators costing \$5.5 million were used to clear drains, 37 items of equipment costing \$3 million were assigned to the A.I.D.-funded MBL scheme, four dozers costing \$600,000 were used on various schemes, six trucks and trailers (for which no utilization records were available) were used to move equipment between schemes and 26 items of equipment costing \$2.9 million were unassigned and sitting idle. The 91 items of equipment with utilization records are discussed below.

--- The 24 draglines, excavators, and backhoes were used during 160 or 56 percent of the available 288 months. The utilization potential was much greater since work on drains was possible year round in the Punjab; some work took place during each of the 12 months reviewed and there was additional work that equipment could have been used to accomplish. In this case, according to a PID official, equipment was idle because the civil divisions responsible for approving schemes only had funds budgeted to operate and maintain about 60 percent of equipment capacity.

--- During the period October 1986 through September 1987, 37 items of equipment costing \$3 million were assigned to the Main Branch Lower (MBL) Scheme. This scheme was designed by a USAID contractor to demonstrate benefits of using equipment on irrigation schemes. There were, however, numerous problems implementing the scheme, and work had been suspended pending a decision on increasing the amount A.I.D. would pay the PID.

--- The 26 items of equipment that were not used during the 12 month period reviewed (September 1986 to August 1987) included 5 scrapers, 4 amphibious backhoes, 2 dredges, 4 compactors, 3 weedboats, and 8 dozers. Four additional dozers were used only 17 of the 48 available months. (Two amphibious backhoes were recently used experimentally on two drainage schemes).

Equipment Utilization in the Sind Province - A.I.D. provided 86 items of heavy equipment costing \$6.7 million to the Sind Provincial Irrigation Department. Uses of 64 items are discussed below.

- Thirteen backhoes and excavators were used for clearing drains. While the overall monthly utilization for this equipment was good, averaging 130 hours, potential utilization was higher. For example during a three month period one backhoe was used an average of 339 hours per month.
- A.I.D. funded 16 scrapers, 18 dozers, 8 10-ton dump trucks, and 2 front end loaders. Use of this equipment was very limited. At the time of the audit, some of the scrapers were being used to remove silt from an irrigation canal. Although the situations in which the scrapers can be used in this manner are limited, this novel application may help increase utilization.
- AID funded five eight-ton dump trucks that had never been used because there were no front end loaders for loading materials. This matter was reported by the IG auditors in October, 1985 when they recommended front end loaders for trucks be procured.
- AID funded two weed boats that were used for a short period to clear weeds from a canal. However, the canal was subsequently rerouted which coincidentally eliminated the weed problem and the need for the boats which have been sitting idle rather than being transferred.

Equipment utilization in the Northwest Frontier Province - A.I.D. provided 14 items of heavy equipment costing \$1.6 million to the Northwest Frontier Province (NWFP) Irrigation Department for maintenance of irrigation canals and drainage systems. Very little, if any of this equipment was used effectively. In fact with the exception of two dump trucks the equipment was generally idle.

For example, during a recent 22 month period three excavators costing about \$538,000 were used a total of only 7 out of the available 66 equipment months. Also, AID funded a tubewell drill that cost \$435,000. It was used in one demonstration project and then to drill one 500 foot well and not used since. The Provincial Officer responsible for the equipment had been attempting to transfer or exchange it without success.

Equipment Utilization in the Baluchistan Province - A.I.D. provided 29 items of heavy equipment costing \$2.6 million to the Baluchistan Province Irrigation Department. The audit did not include examination of files and equipment in Baluchistan Province. USAID/Pakistan files included only one utilization report developed by the PID. This report which was for the period September 1985 through March 1986 reported very little utilization.

Other Equipment - The USAID should have considered total equipment availability and utilization when considering the purchase of new equipment. The audit found that equipment funded in the past by various donors was substantially underutilized. This equipment was similar to that funded by A.I.D. under the ACE agreement. For example, in Punjab thirty two draglines and backhoes in operating condition were used only about 30 percent of the available months. Furthermore, eleven dozers in service during the 12 month period reviewed were used only 63 of the available 132 months, twenty scrapers in operating condition were used only 93 of the available 240 months, and three motor graders and four compactors were in operating condition but were not used.

Other equipment assigned to the Main Branch Lower scheme in Punjab included 5 front end loaders, 3 motor graders, 3 excavators and one crane. One front end loader was never used and the other four were used an average of 53 hours a month. The three motor graders had an average monthly utilization of 46 hours. One of the three hydraulic excavators was never used and the average monthly utilization for the other two was 23 hours. The crane was used only 174 hours during the entire 12 month period.

Reasons for Poor Equipment Utilization - Equipment was poorly utilized for a number of reasons. For example, most of the A.I.D.-funded canal projects did not require or economically justify use of heavy equipment of the type purchased. The PIDs did not adequately budget for equipment use and intra-departmental funding procedures further limited equipment use. To alleviate these constraints USAID/Pakistan needed to work closely with the PIDs (1) to fully evaluate and overcome problems to effective equipment utilization and (2) to transfer equipment that could not be effectively used. Certain of the causes leading to ineffective utilization are discussed below.

A.I.D.-Funded Projects - Although USAID/Pakistan procured much of the equipment to be used on irrigation system maintenance and rehabilitation, irrigation canal work funded

by A.I.D. did not require use of equipment. While excavators and backhoes were generally used for drain clearance, projects involving irrigation canals were considered too small for equipment use. For example, most of the canal work involved shaping the embankment road and extending it no more than one or two feet. Even if the scope of the projects were enlarged the embankment roads on the smaller canals were too narrow for equipment. For larger canals, use of equipment was not practical as the adjacent land was under cultivation and there were no access roads or right-of-way. The PIDs had historically used contract labor and small farm tractors to perform this work. They continued to do so on the A.I.D.-funded projects as they considered it more practical and cheaper.

Accordingly, we believe that before equipment is purchased, USAID/Pakistan should ensure the equipment can be technically used for authorized activities in Pakistan.

Civil Divisions Not Consulted - The mechanical divisions were responsible for the equipment and actual work involving the use of PID equipment. The civil divisions developed the scope of work, which determined the use of contract labor or PID equipment for irrigation schemes. Civil divisions, however, were not consulted regarding the procurement of A.I.D.-funded equipment to be used on the schemes. Accordingly they felt no responsibility to design schemes to foster equipment use. We believe that greater direct input and commitment from the PID civil divisions should precede future A.I.D.-funded equipment procurements and overhaul programs.

Budgetary Commitment - Although equipment is owned by the Provincial Irrigation Departments, procedures require its civil divisions to budget funds for its use. For example hourly charges for a hydraulic excavator were \$36.90 (642 Rs.). We were informed that standards for annual equipment use in Punjab had been established at 1,500 hours. Accordingly, based upon this standard the civil divisions would need to obtain annual budget authority of \$55,350 (963,000 Rs) to ensure effective utilization of just this one A.I.D.-funded item of equipment. Over its estimated 10 year life budget authority of \$553,500 would be needed to effectively utilize this one hydraulic excavator.

Effective utilization of A.I.D.-funded equipment in the Northwest Frontier Province (NWFP) would require annual budget authority of about \$469,000 and \$4.7 million over its 10 year life. Similarly the Punjab PID would need to budget \$37.7 million (656,520,000 Rs) to ensure effective utilization of only its A.I.D.-funded equipment over a 10 year life.

Unless other provisions for intra-departmental equipment use occur, such as revisions in fund transfer procedures discussed below, very substantial increases in budget authority will be needed if equipment is to be effectively utilized. Accordingly, we believe that USAID/Pakistan should not fund equipment which is beyond the Government of Pakistan's capability to budget for effective utilization.

Intra-Departmental Funding - In some cases equipment may not have been effectively used because the PIDs' civil divisions did not want to pay the PIDs' mechanical division for the use of the equipment. The civil divisions preferred to use manual labor which they believed to be cheaper. PID funding procedures did not encourage the use of equipment over manual labor.

Equipment rather than labor could possibly have been used by the PIDs in some instances and at other times equipment such as draglines could have been used to a greater extent. In these cases ineffective equipment, utilization was to some extent, caused by the PIDs intra-departmental funding procedures. For example, the Northwest Frontier Province Subdivisional Engineer in charge of equipment could not provide equipment to a civil subdivision unless payment was made for prior equipment usage. This problem was compounded by the fact that the civil divisions and their contractors rarely requested equipment because, in addition to it being considered inappropriate for the work, it was too costly to rent.

A mechanical division engineer in the Punjab province said that draglines sat idle because the civil divisions lacked funding to pay for their use.

While these funding procedures enhanced accountability and encouraged fiscal responsibility, they also promoted ineffective use of equipment which now represents a sunk cost. Sight was lost of the fact that the civil and mechanical divisions were both part of one irrigation department that had a job of maintaining the irrigation system.

Cost of Ineffective Equipment Utilization - A.I.D.-funded equipment that had not been effectively used and some that had never been used. In these cases not only was the procurement of the equipment wasteful, but so were the associated costs of shipping, maintenance and repair facilities, and the hiring and training of support staff. Of the 391 items of A.I.D.-funded equipment, only the draglines and excavators were clearly needed and effectively utilized. The need and effective utilization of the

remaining equipment costing over \$14 million was questionable. In fact the audit showed that equipment costing at least \$5.1 million (see Exhibit 2) was not effectively used.

Unless USAID/Pakistan can coordinate with PIDs to significantly improve utilization, these appropriated funds will be wasted. Accordingly, we believe USAID/Pakistan should take all possible actions to ensure effective equipment utilization.

Conclusion - USAID/Pakistan funded equipment through an agreement that did not have provisions for ensuring effective utilization. Much of the equipment was not appropriate for project activities for a number of reasons including a lack of input from the civil divisions who decided whether to use contract labor or equipment and who budgeted for and funded the irrigation system work. The equipment rental charges, that the civil divisions must fund, further lowered equipment utilization. Even after USAID/Pakistan and the PIDs exhaust all efforts to effectively utilize equipment, it is probable that a substantial number of items will be excess to actual needs. These items should be identified and transferred to where they will be effectively used.

Management Comments

USAID/Pakistan management concurred in the finding and recommendations. They asked that reference to disposal action be deleted from the finding and recommendations because the equipment is the property of the Government of Pakistan and there is no provision for disposal in the Agricultural Commodities and Equipment program agreement. They also made some suggestions of a minor editorial nature.

Office of Inspector General Comments

Recommendations 1-3 are resolved and will be closed upon completion of the corrective action. As requested all references to disposal action in Recommendation No. 3 and in the body of the report have been deleted since USAID/Pakistan management is correct regarding the absence of provisions for disposal of unneeded equipment in the program agreement. We nonetheless believe that USAID/Pakistan should make every effort to encourage the Provincial Irrigation Departments to dispose of unneeded equipment such as the \$435,000 tubewell drill and to reprogram any sales proceeds to further ISM project objectives. We also made all suggested editorial changes.

2. USAID/Pakistan Has Opportunities to More Effectively Use Funds Proposed for Additional Equipment Expenditures.

A.I.D. Handbook Three requires that project designers specify the resources needed such as commodities to achieve projects outputs and objectives. The USAID/Pakistan Program management had proposed funding of \$31 million for additional equipment and overhaul of older equipment for which no need had been established. This occurred because USAID/Pakistan had not identified project needs, determined that existing equipment was inadequate, or considered the Provincial Irrigation Departments' capability to budget for equipment utilization. The USAID now has the opportunity to more effectively use the \$31 million for project activities that more directly benefit the agricultural sector.

Recommendation No. 4

We recommend that USAID/Pakistan:

- (a) reevaluate the need for and utilization of new equipment valued at \$10 million included in its May 1987 draft proposal for the Irrigation Systems Management Project paper,
- (b) reevaluate the need for and likely utilization of the \$21 million equipment overhaul program proposed under the Irrigation Systems Management Project amendment (phase II), and
- (c) define minimum utilization standards for new and overhauled equipment and specify corrective actions if the standards are not met.

Discussion

A.I.D. Handbook Three requires that project designers specify the resources needed such as commodities and technical assistance to achieve project outputs and objectives. Furthermore, A.I.D. Handbook 15 requires USAIDs to establish a system to ensure effective utilization and maintenance of A.I.D. financed commodities. Expenditures of \$10 million for new equipment and \$21 million to overhaul older equipment were proposed by USAID/Pakistan. Although a detailed listing for new equipment and parts lists for older equipment had been prepared, specific uses for this equipment had not been identified by USAID/Pakistan. USAID had not committed funds for these purposes as of February 1988. In order to employ good management practices each item of equipment to be procured or overhauled should have clearly defined needs, proposed uses, and a reasonable

assurance that the equipment use will justify its procurement. A reevaluation of both proposals is needed as discussed below.

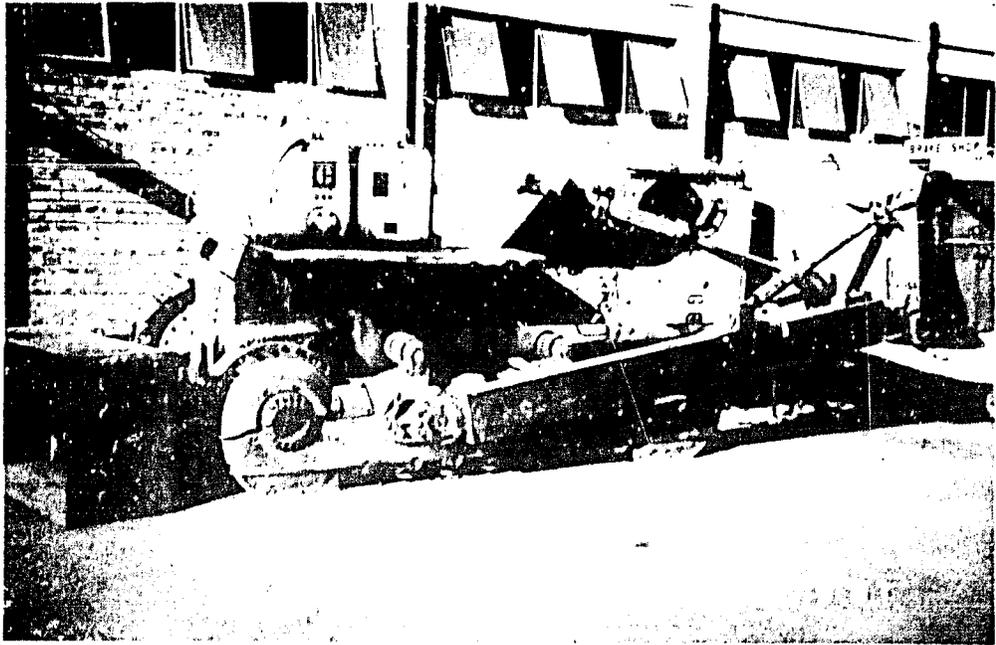
Planned New Equipment Procurements - \$10 Million - In its May 1987 draft amendment, USAID/Pakistan planned to provide \$10 million to fund a third tranche of equipment for the Irrigation Systems Management Project. The proposed listing for the new equipment included 35 additional draglines and excavators, 32 dozers, 18 motorized scrapers, 6 six-ton vibratory compactors, various trucks, cranes and numerous other items.

It was not clear at the time of the audit which, if any, of these items would actually be procured and information on specific needs for the equipment were not available. In fact, USAID/Pakistan had planned to procure equipment for the PIDs without specifically identifying project needs and had not determined that existing equipment was inadequate to meet needs that might arise. Also equipment needs were not based upon equipment utilization work plans. Coordination with the Civil Divisions who must plan and budget for equipment use was lacking.

Planned Overhaul Of Older Equipment - \$21 Million - USAID/Pakistan had planned to finance the overhaul of older equipment owned by the Provincial Irrigation Departments. However, the equipment to be overhauled was not for any specific project and USAID/Pakistan lacked adequate assurance that the equipment was needed or would be used.

USAID/Pakistan contracted for a plan to be prepared for the overhaul program, and in November 1987 this plan was in the latter stages of completion. This USAID/Pakistan directed task had taken two years and required preparation of four manuals totalling over 1,000 pages that included detailed parts lists for each of 535 items of equipment in the four provinces to be overhauled. This equipment included 83 dozers, 103 scrapers, 14 drilling rigs, 24 draglines, 6 motor graders, 37 backhoes and various other items of heavy equipment. In addition to the equipment, there were plans for the overhaul of 120 vehicles for the Punjab Province.

A survey by USAID/Pakistan contract engineers showed that the equipment to be overhauled was in extremely poor condition due to lack of sufficient preventive maintenance, substandard field repairs, extensive misuse and cannibalization. The survey team concluded that an intensive and expensive effort would have to be made to recondition this equipment before it would once again be usable.



Dozer at Moghalpura workshop in Punjab to be overhauled as part of the USAID proposed equipment overhaul program.



Truck at Moghalpura workshop in Punjab to be overhauled as part of the USAID proposed equipment overhaul program.

The contractor identified 5 major constraints to a successful overhaul program as insufficient funds, insufficient staff and personnel, underqualified managerial and supervisory staff, underqualified technical personnel, and insufficient spare parts. All of the actions proposed by the contractor to overcome these constraints involved additional funding to be provided by the USAID, including funds for special pay rates to help attract qualified staff.

In a September 1987 memo to the USAID/Pakistan Mission Director, we asked for documentation showing the need for and specific use planned for each item of equipment to be rebuilt. We also asked for any documents showing the Government of Pakistan's commitment to fully utilize the rebuilt equipment for authorized purposes. A USAID/Pakistan official subsequently told us that a final decision on the overhaul program had not been made and accordingly did not provide the requested documentation.

As with the new equipment, in proposing the overhaul program USAID/Pakistan had not adequately addressed (1) the amount of PID equipment in an operational status, (2) past utilization and (3) the absence of well defined substantiated needs for the equipment planned for overhaul. Also, USAID/Pakistan had not given adequate consideration to the cost of utilizing this equipment. For example, to effectively utilize this overhauled equipment the four PIDs would need to budget approximately \$14 million annually for its operation.

Conclusion - We believe that prior to funding either new equipment or overhaul of existing equipment the Mission Director should require a careful review of the actual utilization that could be reasonably expected. USAID/Pakistan should be assured that there is a specific and continuing need for the items to be overhauled and that utilization standards will be met.

Management Comments

The USAID management concurred in the finding and recommendation.

Office of Inspector General Comments

Recommendation No. 4 is considered resolved and will be closed when USAID/Pakistan completes the corrective actions.

3. USAID/Pakistan Needed to Assign Responsibility for Monitoring Equipment Utilization and For Resolving Reported Problems.

A.I.D. is required by law and U.S. Government management standards to monitor and evaluate the use and results of its assistance and to ensure that resources are used as effectively as possible. A.I.D.-funded equipment, however, was not effectively utilized. This occurred because USAID/Pakistan had not clearly delineated monitoring responsibilities nor taken prompt corrective action when informed about poor equipment utilization. In addition, USAID/Pakistan did not obtain and analyze equipment utilization reports from the Provincial Irrigation Departments. As a result USAID/Pakistan did not effect savings through more effective use of A.I.D.-funded equipment.

Recommendation No. 5

We recommend that USAID/Pakistan improve its ability to take timely remedial action by establishing procedures to:

- (a) ensure that necessary action will be taken to remedy significant equipment utilization problems as they become known,
- (b) assign clear responsibility for monitoring equipment and taking corrective action to an operational activity such as the Office of Agricultural and Rural Development, and
- (c) obtain periodic utilization status reports from the Government of Pakistan on A.I.D.-funded equipment and evaluate utilization to determine appropriate corrective action.

Discussion

The Foreign Assistance Act requires A.I.D. to establish a management system that includes the adoption of methods for comparing actual versus planned results of programs. Also, A.I.D. is required by law and U.S. Government management standards to monitor and evaluate the use and results of development assistance to ensure that U.S. Government funds are used as effectively as possible. USAIDs have a number of sources of information that can be used to help ensure A.I.D.-funded resources are effectively utilized. Although

not specifically required by A.I.D. handbooks, good U.S. Government management practices would be to fully consider this information and when warranted take action necessary to correct reported problems. As discussed below, USAID/Pakistan management was informed of severe equipment utilization problems as early as October 1985 by the Inspector General (IG) and subsequently by the USAID Controller in two of his equipment utilization reports. Corrective action, however, was not taken.

USAID Management Did Not Correct Known Problems - Poor equipment utilization had been reported to USAID management in the past but corrective action was not taken. In October 1985, the IG reported (Audit Report No. 5-391-86-1) to the Mission Director that much of the A.I.D.-funded equipment had not been effectively used and in fact, 135 items costing over \$4.4 million had not been used at all for periods ranging from 8 to 14 months. The USAID Controller reported equipment utilization problems in two separate end use reports dated September 21, 1986, and February 10, 1987. The USAID Controller cited reasons for ineffective utilization as (1) lack of heavy construction work, (2) intra-departmental funding procedures for equipment rental, (3) a belief that use of equipment instead of labor would substantially increase project cost, (4) canal banks that were too narrow to accommodate equipment, and (5) inappropriate equipment. Our audit found that these reasons continue to be dominant factors for ineffective equipment utilization.

Monitoring/Corrective Actions - USAID/Pakistan was generally aware of poor equipment utilization. However, USAID/Pakistan did not obtain available information on equipment utilization within the PIDs. The three PIDs visited during the audit were maintaining data which could have been provided to USAID/Pakistan on a periodic basis. With this information USAID/Pakistan would have been in a better position to resolve equipment utilization problems in a more timely manner.

When poor utilization was brought to its attention USAID/Pakistan management did not take corrective action in part, because clear responsibility was not assigned. For example, management responses to the 1985 IG report and to the USAID Controller's end use reports attempted to justify the procurements and equivocated on corrective actions that would be taken. Accordingly, similar problems still existed at the time of this audit and we believe they are likely to continue until USAID/Pakistan establishes a process to remedy significant equipment utilization problems as they

become known. By not addressing problems as they were reported, USAID/Pakistan in effect, denied benefits to the agricultural sector that could have been derived from more effective use of equipment costing at least \$5.1 million.

Part of the problem with the existing process was the lack of clear responsibility within USAID/Pakistan for taking corrective action. Since the equipment was purchased under a program rather than project agreement, there was no project officer to automatically assume this responsibility. By memo dated April 20, 1987, the Chief, Office of Agricultural and Rural Development (O/ARD) made some effort to partially remedy this problem. In his memo to the Deputy Mission Director he stated:

"ARD has no on-going relationship with respect to flood control nor do we envision any project type activities involved in flood control. Further, for flood control equipment ARD's responsibilities will cease after assisting provincial authorities with the procurement of this equipment and ascertaining that such equipment is delivered to the appropriate provincial departments."

The Chief, O/ARD went on to say that monitoring and corrective action on flood control equipment would be handled by the Office of Financial Management, and that monitoring use of the A.I.D.-funded drilling rig would be handled by the Regional Affairs Officer in Peshawar. This guidance did not include any mention of equipment purchased for irrigation and drainage work. Also, it was not practical to implement because the specific equipment procured for flood control purposes was not identified or segregated. Additionally, neither the Controller nor the current Chief, Office of Agricultural and Rural Development were aware of the memo. In any case, the Controller was not in a position, organizationally, to initiate corrective action on equipment utilization problems. Accordingly, responsibility still needed to be assigned.

Conclusion - USAID/Pakistan management had been repeatedly informed of situations involving poor utilization of A.I.D.-funded equipment but these problems had not been corrected. We believe that USAID management should take action now to fully resolve equipment utilization problems. Additionally, USAID/Pakistan needs to assign responsibility for monitoring utilization of equipment and initiating corrective action to an operational activity. This activity should obtain periodic status reports from the PIDs on equipment operational status.

Management Comments

USAID/Pakistan concurred in the finding and recommendation.

Office of the Inspector General Comments

Recommendation No. 5 is resolved and will be closed when USAID/Pakistan provides evidence that the corrective actions are completed.

4. USAID/Pakistan Was Not Successful In Assisting the Provincial Irrigation Departments to Establish a Preventive Equipment Maintenance System.

The Irrigation Systems Management project paper and the Agricultural Commodities and Equipment program documents recognized the need for an effective Government of Pakistan preventive equipment maintenance program. However, the program established by the Government was ineffective because of cumbersome procedures, inadequate funding, and inadequate USAID/Pakistan monitoring. As a result, A.I.D.-funded equipment costing over \$24 million, which had been in-country for as long as four years, was not properly maintained and therefore vulnerable to rapid deterioration.

Recommendation No. 6

We recommend that USAID/Pakistan:

- a) assist the Provincial Irrigation Departments to develop an equipment preventive maintenance program which includes provisions for planning, scheduling, and budgeting for the maintenance; and
- b) request the Government of Pakistan to report on the Provincial Irrigation Department's preventive maintenance program.

Discussion

Both the Agricultural Commodities and Equipment (ACE) Program Assistance Approval Document and the Irrigation Systems Management (ISM) Project Paper recognized the need for the Government of Pakistan to establish an effective equipment maintenance program. Also Handbook Three, Chapter Three emphasized the importance of the host country institutions' satisfactorily meeting its roles and responsibilities.

The technical assistance contractor was still working on a computer based maintenance tracking and monitoring program as of February 1988. Installation of the program was not certain for a number of reasons including problems in hiring and training qualified computers operators. USAID/Pakistan had not made interim provisions for routine monitoring of equipment maintenance. Accordingly, the Provincial Irrigation Departments (PIDs) had not installed and funded a maintenance program that would enable them to plan, schedule, budget, and perform routine and preventive

maintenance of equipment and to prepare appropriate reports on the status of equipment maintenance. This was due, in part, to the PIDs not budgeting sufficient funds for equipment maintenance.

Lack of an effective maintenance program reduced the usefulness of the PIDs' equipment fleets. Much of the older equipment was either deadlined or subject to frequent breakdown due to inadequate routine preventive maintenance. Also, since only the machinery that was being used received even minimal maintenance, the many items of equipment with low utilization were not generating maintenance funds and therefore did not receive the maintenance necessary to prevent deterioration.

Without an effective maintenance program A.I.D.-funded equipment costing over \$24 million, which had been in Pakistan for up to four years, is highly vulnerable to rapid deterioration.

Management Comments

USAID/Pakistan concurred in the finding and recommendation.

Office of Inspector General Comments

Recommendation No. 6 is resolved and will be closed when the Provincial Irrigation Departments establish an equipment preventive maintenance program and the Government of Pakistan submits reports on the preventive maintenance program.

5. Workshops Have Not Been Used As Intended for Maintaining Equipment Fleets

Under the Agricultural Commodities and Equipment Program, the USAID provided equipment for six workshops that were intended to be used to overhaul the Provincial Irrigation Departments' heavy equipment fleets. Much of the A.I.D.-funded workshop machinery procured for overhauling equipment had yet to be used. The Provincial Irrigation Departments have not had the funds needed for the overhaul of their equipment. As a result, much of A.I.D.'s investment of approximately \$3 million in workshop machinery was at risk of being wasted.

Recommendation No. 7

We recommend that USAID/Pakistan coordinate with each Provincial Irrigation Department to determine how workshop machinery can be effectively utilized with minimum additional A.I.D. funding for equipment overhaul or find other uses for this machinery.

Discussion

Under the Agricultural Commodities and Equipment (ACE) Program, USAID/Pakistan provided machinery costing over \$3 million for six workshops; three in the Punjab and one each in Sind, Baluchistan, and the Northwest Frontier Provinces. These workshops had two functions: (1) the fabrication of parts for the irrigation system structures and (2) the maintenance of the Provincial Irrigation Departments' (PID) equipment fleets. The Irrigation Systems Management Project Paper stated that the workshop equipment and spare parts were to be procured to maintain the PIDs' old and new equipment fleets.

Commissioning of the workshops lagged behind schedule, but by November 1987 five of the six workshops, although generally unused, were at or near operating capability. At the Moghalpura workshop in Punjab the machinery for fabricating and repairing components of the irrigation system was being used, but the machinery for overhauling construction equipment was idle and had, in fact, never been used. At the Bhalwal workshop in Punjab, the fabrication machinery was in use, but use of the overhaul machinery had been limited - three draglines had been overhauled since May 1987. The workshop at Peshawar in the Northwest Frontier Province was near operational status and some vehicles had been overhauled. The Jamshoro workshop in the Sind was not operational because of construction delays.

The Executive Engineer in charge of the Moghalpura workshop stated that although the workshop machinery was operational and employees had been trained, funds were not available for equipment overhaul. He said the workshop machinery would not be used unless USAID provided funds. The lack of funds similarly limited the utilization of the other workshops. Although the Bhalwal workshop has overhauled three draglines, the level of work was substantially less than required for effective utilization of that facility. In the Northwest Frontier Province there was concern that the heavy equipment owned by the PID was not enough to provide sufficient maintenance and overhaul work to even cover the salaries of the workshop employees that had been hired and trained.



Some of the A.I.D.-funded machinery comprising the Moghalpura equipment overhaul workshop that has never been used.

Much of the \$3 million of A.I.D.-funded workshop machinery was not used. Effective utilization of the A.I.D.-funded workshop machinery depends upon substantial long term funding for equipment repair and overhaul. Therefore, USAID should determine how the machinery in each workshop can be effectively utilized without the PIDs relying upon additional A.I.D. funding for equipment overhaul. If the PIDs cannot fund the anticipated equipment maintenance then the workshop machinery will not be effectively utilized and the A.I.D.-funds expended for that equipment will have been wasted.

Management Comments

The USAID concurred in the finding and recommendation.

Office of Inspector General Comments

Recommendation No. 7 is resolved and will be closed when USAID/Pakistan determines how the workshop machinery can be effectively utilized.

B. Compliance and Internal Control

Compliance

USAID/Pakistan procured equipment to be used for the Irrigation Systems Management Project under a commodity import program type agreement rather than a project agreement. Accordingly normal A.I.D. requirements pertaining to the monitorship of project commodity utilization were not applicable to equipment covered by this audit. The review of compliance was limited to the findings presented in this report.

Internal Control

Finding No. 3 discussed the need for better USAID/Pakistan monitoring of equipment utilization and for developing a system to ensure known problems are corrected. Finding No. 4 discussed the need for better USAID/Pakistan monitoring of the Provincial Irrigation Departments' provisions for ensuring routine and preventive maintenance of A.I.D.-funded equipment was performed. The review of internal controls was limited to the findings presented in this report.

AUDIT OF
UTILIZATION AND MAINTENANCE OF SELECTED EQUIPMENT
IN PAKISTAN

PART III - EXHIBITS AND APPENDICES

Exhibit 1

Equipment Procured - First & Second Tranches
September 30, 1987

	<u>No.</u>	<u>Cost</u>
Dozers	41	\$ 3,065,994
Draglines	22	5,129,164
Backhoes	20	3,389,279
Excavators	8	1,620,250
Dump Trucks	41	2,643,880
Flat Bed Trucks	4	161,754
Scrapers	27	2,451,485
Compactors	147	1,118,067
Low Bed Trailers	5	552,679
Frontend Loaders	4	195,842
Dredges	6	696,416
Water Trucks	13	854,209
Fuel & Lube Trucks	23	1,254,181
Weed Cutting Boats	5	144,607
Tube Well Drill	1	434,652
Mobile Crane	1	238,445
Motor Graders	2	123,501
Miscellaneous	21	302,790
Total	<u>391</u>	<u>\$24,377,195</u>
	===	=====

Equipment with Low or No Utilization

September 30, 1987

	<u>Punjab</u>	<u>Sind</u>	<u>NWFP</u>	<u>Total</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Dozers - Desser	5			5	\$157,237	\$ 786,185
Dozers - Case	3		1	4	59,522	238,088
Dozers - Deere			1	1	26,937	26,937
Scrapers	5			5	137,450	687,250
Amphibious Backhoes	4			4	174,950	699,800
Mudcat Dredges	2			2	116,070	232,140
Weedboats	3	2		5	28,921	144,605
Compactors - 6 ton	4		1	5	56,827	284,135
Dumptrucks - 8 ton		5	4	9	45,037	405,333
Backhoes			2	2	184,461	368,922
Tube Well Drill			1	1	434,652	434,652
Motor Graders		2		2	61,751	123,502
Dragline			1	1	168,669	168,669
Lube Trucks			2	2	63,229	126,458
Low Bed Trailer			1	1	140,181	140,181
Water Trucks		4		4	66,456	265,824
Total	26	13	14	53		\$5,132,681
	***	***	***	***		*****

(4) ACTION AID2 INFO AMB DCM

Appendix 1

*
 VZCZCGP0085
 PP RUEHGP
 DE RUEHIL #1173 1451032
 ZNR UUUUU ZZH
 P 241032Z MAY 88
 FM AMEMBASSY ISLAMABAD
 TO AMEMBASSY SINGAPORE PRIORITY 0912
 BT
 UNCLAS ISLAMABAD 11173

LOC: 299-301 152
 24 MAY 88 1036
 CN: 34438
 CHRG: AID
 DIST: AID

ADM AID

FOR RIG/A/S RICHARD DERRICK FROM J. PAUL GUEDET,
 DIRECTOR, (ACTING)

E.O. 12356: N/A

SUBJECT: MISSION COMMENTS ON DRAFT AUDIT OF UTILIZATION
 - AND MAINTNANCE OF SELECTED EQUIPMENT

REF: YOUR MEMO OF APRIL 22, 1988

1. THE MISSION HAS NO DISAGREEMENT WITH THE FINDINGS AND RECOMMENDATIONS IN THE DRAFT REPORT AND CONCURS IN ALL THE RECOMMENDATIONS EXCEPT THE WORDS QUOTE OR DISPOSE UNQUOTE IN PART (B) OF RECOMMENDATION NO. 1. SINCE THE EQUIPMENT IS THE PROPERTY OF THE GOVT. OF PAKISTAN, AND THERE IS NO PROVISION FOR DISPOSAL IN THE PROGRAM AGREEMENT WE DON'T SEE HOW WE CAN COORDINATE DISPOSAL. WE HAVE, HOWEVER, ALREADY INITIATED ACTIONS WITH PROVINCIAL IRRIGATION DEPARTMENTS TO UTILIZE EQUIPMENT AND/OR TRANSFER TO OTHER ORGANIZATIONS TO EFFECT UTILIZATION.

2. WE DO OFFER THE FOLLOWING SPECIFIC COMMENTS:

- EXECUTIVE SUMMARY, PAGE 2, SECOND PARA, THIRD SENTENCE - PLEASE DELETE THE WORDS QUOTE DISPOSAL OR UNQUOTE.
- PAGE 3, FIRST FULL PARA, FIRST SENTENCE, PLEASE INSERT THE WORDS QUOTE HAD NOT UNQUOTE AFTER THE WORD MANAGEMENT.

RESULTS OF AUDIT - PART II

- PAGE ELEVEN, SECOND PARA, FIRST SENTENCE - ELIMINATE QUOTE AVOID FURTHER WASTE OF UNQUOTE AND SUBSTITUTE QUOTE ACHIEVE MAXIMUM BENEFIT FROM UNQUOTE.
- PAGE TWELVE, FIRST PARA, LAST SENTENCE - ELIMINATE QUOTE DISPOSAL OR UNQUOTE.

3. THE MISSION APPRECIATES THE CONSTRUCTIVE AND POSITIVE ATTITUDE OF RIG/A IN THIS AUDIT AND ASSURES THAT WE HAVE ALREADY INITIATED ACTIONS IN RESPONSE TO RECOMMENDATIONS IN THE DRAFT REPORT. RAPHEL

RECEIVED

25 MAY 88

RIG/A/S

List of Recommendations

Recommendation No. 1

We recommend that USAID/Pakistan develop procedures to ensure that:

- (a) project and program documents which include procurement of commodities for specific projects also include minimum equipment utilization standards, criteria to measure utilization, and actions to be taken should the standards not be met;
- (b) equipment is technically applicable to in-country project activities, considering environmental conditions and bureaucratic situations;
- (c) direct input and commitment to effectively use equipment is obtained from the Government of Pakistan using organization (such as the civil divisions of the Provincial Irrigation Departments) prior to funding equipment procurements and overhaul programs; and
- (d) each of the four provinces have adequate budgetary capability to effectively utilize equipment before approving additional funding of procurements and overhaul programs

Recommendation No. 2

We recommend that USAID/Pakistan coordinate with each of the Provincial Irrigation Departments to determine how intra-departmental budgeting and funding procedures could be revised to increase equipment utilization while reducing overall costs of rehabilitating the irrigation systems.

Recommendation No. 3

We recommend that USAID/Pakistan evaluate equipment covered by this audit including the \$5.1 million known problem equipment (see Exhibit 2), that is excess and cannot be effectively utilized, and take necessary action to coordinate:

- (a) directly with using organizations such as the civil divisions to determine which equipment cannot be effectively utilized, and
- (b) with the Government of Pakistan to transfer such equipment.

Recommendation No. 4

We recommend that USAID/Pakistan:

- (a) reevaluate the need for and utilization of new equipment included in its May 1987 draft proposal for the Irrigation Systems Management Project paper,
- (b) reevaluate the need for and likely utilization of the \$21 million equipment overhaul program proposed under the Irrigation Systems Management Project amendment (phase II), and
- (c) define minimum utilization standards for new and overhauled equipment and specify corrective actions if the standards are not met.

Recommendation No. 5

We recommend that USAID/Pakistan improve its ability to take timely remedial action by establishing procedures to:

- (a) ensure that necessary action will be taken to remedy significant equipment utilization problems as they become known,
- (b) assign clear responsibility for monitoring equipment and taking corrective action to an operational activity such as the Office of Agricultural and Rural Development, and

- (c) obtain periodic utilization status reports from the Government of Pakistan on A.I.D.-funded equipment and evaluate utilization to determine appropriate corrective action.

Recommendation No. 6

We recommend that USAID/Pakistan:

- a) assist the Provincial Irrigation Departments to develop an equipment preventive maintenance program which includes provisions for planning, scheduling, and budgeting for the maintenance; and
- b) request the Government of Pakistan to report on the Provincial Irrigation Department's preventive maintenance program.

Recommendation No. 7

We recommend that USAID/Pakistan coordinate with each Provincial Irrigation Department to determine how workshop machinery can be effectively utilized with minimum additional A.I.D. funding for equipment overhaul or find other uses for this machinery.

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