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Auditor General

A COMPREHENSIVE REVIEW OF
THE GRAIN SILOS PROJECT - AID LOAN 263-K-028
AT ALEXANDRIA AND CAIRO, EGYPT
IMPLEMENTED UNDER HOST COUNTRY CONTRACTING MODE

Audit Report Number 6-263-80-6

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EXECUTIVE SUMMARY

Introduction

AID has agreed to assist Egypt with a project to alleviate the shortage of grain receiving and storage facilities. The project consists of designing, constructing and equipping two grain silo complexes. One will be a 100,000 ton addition to an existing facility at the Port of Alexandria. The other will be a new 100,000 ton facility in the Cairo area. The Alexandria facility will include equipment for unloading grain ships. The loan agreement, which was signed June 29, 1975, provides up to \$44.275 million to cover the dollar costs of the project. Use of loan funds are limited to procurements from U.S. source and origin.

The project is implemented through host country contracts. de Laureal Engineering, Inc. of New Orleans, Louisiana is the architectural and engineering firm. The construction services to date have been procured in Egypt and the equipment is being purchased from the United States. As initially planned, the project was to be completed by June 1979. One reason this could not be achieved was because the de Laureal contract, which was for a 48 month period, was not signed until early 1977 and de Laureal did not commence work until about mid-1977. Apparently, at this time, project completion was envisioned at sometime in mid-1981. During the course of our audit, USAID advised that de Laureal is negotiating for an 18-month extension to their contract which will put completion at about the end of 1982. At the time of our review, the Phase I construction which consisted of earthwork, pilings and foundations, was completed at both sites and the construction contractor was mobilizing to construct the superstructures. Also, procurement of the equipment was reportedly 80 percent under firm order. Prior to the finalization of this report, we were advised that the contractor had completed 2 units of the silo superstructures at each site.

Purpose

This is our initial audit of the Grain Silos Project. Our purposes were to determine whether (a) the performance of the A&E firm and other contractors/subcontractors has been adequate; (b) the construction to date meets contract specifications; (c) the ARE has fulfilled its obligations; (d) dollar expenditures have been proper; (e) there has been compliance with applicable laws, regulations, policies and with the terms of the loan agreement and various contracts/subcontracts; and, (f) USAID's management of project activities has been effective.

Conclusions

Overall, we conclude that USAID management of project activities need to be strengthened. Many of the findings presented throughout this report indicate that, up to the time of our audit, USAID's management approach was too passive to be effective; i.e., rather than actively and closely monitoring the various facets of project implementation, the USAID primarily relied upon others to identify and report project problems, deficiencies in site construction and procedures, testing, and similar matters of concern to project management.

Effective monitoring was further hampered because the supervisory A&E contractor did not thoroughly cover construction activities and problems in monthly and quarterly project status reports and did not submit these reports to the USAID when due. This passive or "hands-off" monitoring stance may be attributed, at least in part, to the fact that the USAID is not a direct party to the host country contracts involved and, therefore, does not have direct authority over project implementation. (See "Project Monitoring," pages 38-43)

Previous AG reports have pointed out numerous problems worldwide in project implementation and control when Host Country contracting is involved. When this type of contracting is used, project officials need to recognize the high probability that a "hands-off" attitude will result in a negative impact on project implementations; in most cases, the progress of the project must be watched closely. Those instances when it is possible to let the project go without close monitoring are few and far between. The interpretation of the extent of such "hands-off" approach during the administration of a host country contract needs to be clarified. The theory of Policy Determination 60 (P60) covering the host country contracting mode needs to be better reconciled to the realities of overseas conditions and day-to-day difficulties in implementing multi-million dollar projects such as the Grain Silos.

In the case of this project, the selection of the supervisory A&E firm raised questions within AID of the nature expected to prompt project officials to watch the project progress very closely. The Chief of the USAID's Capital Development and Engineering Division at the time of de Laureal's approval as the A&E firm, stated for the record that the USAID will need to intensively monitor the A&E firm. Considering the circumstances it was logical that, in addition to the normal monitoring of de Laureal's quantitative inputs, the USAID would also give close attention to the quality of de Laureal efforts especially in regard to the construction supervision.

USAID, however, did not give this special attention to de Laureal and, as a result, was not fully aware of the ineffectiveness of de Laureal's supervision of the construction and of the resultant actual and potential effects of project implementation (See "Selection of the Supervisory Engineering Firm", pages 4-6).

Major continuing project implementation problems were at the project sites. Considering the concerns expressed within AID over the selection of de Laureal as the supervisory A&E contractor, too much reliance was placed on de Laureal's capabilities as opposed to close, active monitoring by USAID project management. These documented concerns within AID over the A&E contractor selection, allegations regarding poor quality construction, and the need for close project monitoring prompted our planning in-depth, comprehensive audit coverage, including engineering assistance and testing of in-place construction; these engineering examinations and tests might normally have been done by the USAID.

The results of that engineering review were quite critical of de Laureal's supervision of construction activities. The following is an excerpt from the consulting firm's report.

" At AID's direction, our efforts were concentrated on Shubra. We concluded that for the Shubra site, specifications were not adhered to for several items of construction. Based on available evidence, the coarse aggregates used are considered potentially deleterious, fine aggregates may have contained excessive salts, some cement was not in accordance with specifications, the filter for subdrains was not in accordance with specifications requirements, the suitability of material used for waterproofing is to be determined, and concrete strength was found to be below specification requirements (but compatible with design requirements). The workmanship and waterproofing was determined to be unsatisfactory and corrective measures are indicated. Some items related to pile design require verifications. Quality control employed during construction to date has not been satisfactory. Guidelines and recommendations for future quality control are provided in the appropriate section of the report.

Index testing of concrete at Alexandria indicated that strength is above design requirements. However, the coarse aggregate used may not meet specification requirements. This issue must be thoroughly addressed as the presence of saline

water conditions would enhance potentially deleterious reaction of the gravel with the cement paste. It appears that workmanship at Alexandria was somewhat better than at Shubra."

The issue that probably caused the greatest concern was whether or not the coarse aggregates (gravel) used in the concrete foundations will be harmful to the concrete. Results of a 90 day expansion test which the consulting firm had performed on a sample of the gravel became available after the issuance of the consulting firm's report. The results showed that the expansion of the aggregate was less than that considered capable of harmful reactivity. This was the first time that the gravel had ever been determined to be suitable. The underlying issue here is the lack of adequate testing procedures by the A&E firm to determine materials suitability prior to use in the structures.

Corrective actions have already been taken on some of the other issues. For example de Laureal has reported that they have taken several actions to avoid further inadequacies in quality control. USAID has confirmed that de Laureal has established a quality control system and that the procedures are being followed. Other issues raised by the consulting firm remain open and require further action by de Laureal and the USAID. (See "Effectiveness of Project Supervision" pages 7-17 for details on the consulting firm's findings and corrective actions needed and taken).

de Laureal has also taken actions regarding its construction supervisory staff in Egypt. They have replaced the project manager and assigned an assistant project manager to the team. Also, they have put a new person in charge of the Shubra site. These actions should have the effect of strengthening the capability of the supervisory team. (See "Other Matters Involving Project Supervision," pages 17-21).

Another area where we found USAID monitoring to be too passive was in regard to Government of Egypt contributions to the project. Certain improvements to the Port of Alexandria were considered to be key elements for the full utility of the project. These were (1) enlarging the quay so that it could accommodate about \$5 million of AID-financed grain unloading equipment and (2) deepening the channel alongside the quay so that it could accept larger ships. We found that these actions were not being carried out as originally planned. The quay was being enlarged but it was not being constructed up from the rock bed so there was a question of stability and the quay's ability to safely take the loads which will be imposed by the grain unloading operations.

Also, the channel along side the quay will not be deepened because this will destabilize the existing quay wall. USAID's reply to our Record of Audit Finding on these issues indicated that since no AID funding was involved in these port improvements, the USAID had no relationship to these activities. The reply further indicated that it was de Laureal's responsibility to assure itself that the quay extension could safely accommodate the grain unloading equipment and to alert the USAID of any deficiencies, actual or potential. But, these Port improvements, an ARE contribution, are an integral part of the overall project, necessary to achieve ARE and AID project objectives. This situation illustrates an extreme example of the "hands-off" attitude in monitoring projects implemented through host country contracting. Their stated position notwithstanding, the USAID is now concerned with this element of the project and plans on retaining the services of a consulting firm to make an assessment regarding quay stability. (See "Host Country Project Contributions - Alexandria Port Improvements" page 21-27)

The USAID approved the expenditure of about \$3.5 million in loan funds for the piling work under the Phase I construction without requiring notification to U.S. business of the availability of the AID-financed work or requesting an AID/W waiver of the notification requirement. The services of the U.S. piling firm were obtained as a subcontract under the prime contract which was advertised for and procured locally. USAID contended that the requirement to advertise in the U.S. was not applicable because the loan financed services were obtained under a subcontract. (See "Notification to U.S. Business", Page 27-29).

We reported to the USAID that the piling subcontractor had procured the equivalent of about \$200,000 of commodities or services from non-U.S. source. Both the Loan Agreement and the fixed unit price subcontract stipulate that commodities and services not of United States source and origin shall not be eligible for AID-financing. The intent of these loan and contract requirements, irrespective of the type of contract involved, is to ensure that the U.S. dollars are spent in the United States. USAID project management officials, however, approved payment of a subcontractor's invoice for \$366,728 although notified several months earlier (through this audit) that the subcontractor's procurements included about \$200,000 from sources and origins outside the United States. The USAID was not clear as to the applicability of source and origin rules. On one hand, they indicated that the rules do not apply to the piling subcontract because it was fixed unit-price contract.

On the other hand, they said that they will review the subcontractor's non-U.S. hard currency expenditures and take action to either bill the subcontractor or request a source waiver. (See "Source and Origin Requirement", pages 29-34). The USAID response did not address the open issue of the subcontractor's Form AID-1440-3 certification regarding procurement from the United States (Page 34).

It seems apparent at this time that the amount of the loan is substantially more than the dollar needs of the project. The loan is for \$44.275 million whereas de Laureal's most recent (February 1980) estimate of final project dollar costs is \$38 million. (See "Loan Amount", pages 35-34).

As part of the comprehensive audit of the Grain Silos Project we reviewed the contract payments made to de Laureal Engineering, Inc., from the funds provided by AID Loan 263-K-028. The results were published in a separate audit report, (No. 6-263-80-5 dated April 28, 1980). One purpose of the audit was to establish final yearly overhead rates (as required by paragraph 8 of the contract) for 1977 and 1978. The audit resulted in several adjustments to the overhead cost pools proposed by de Laureal. The most significant adjustment was our disallowance of \$112,800 in commission payments and \$7,393 expense reimbursement to de Laureal's Egyptian agent. The commission payments were part of a \$180,000 contract with the agent for services he performed in assisting de Laureal obtain the contract. (See "contract payments to de Laureal", pages 44-46).

Recommendations

We have made 12 recommendations to USAID/E and directed one for action to AID/W management. They are included in the text of the report and are also listed in Appendix B.

INTRODUCTION

Background

Project Justification - Egypt imports nearly 75 percent of its food grain needs, 4.5 million tons are expected to be imported during 1980. The only existent modern receiving and storage facilities are two silo complexes, a 48,000 ton facility at the Alexandria Port and a 58,000 ton facility at Cairo. These facilities are not sufficient for the volume imported and about 70 percent of the grain must be handled outside the silo system, in bags and in outside storage. As a result, the grain is exposed to high losses in handling and infestation as well as subject to inefficient movement. In addition, with the enormous congestion in the Alexandria Port, and the necessity of unloading most grain by bagging rather than by bulk, unloading time is considerably lengthened resulting in high demurrage costs. AID agreed to assist with a project to alleviate the situation.

Project Description - The project consists of designing, constructing and equipping two grain silo complexes. One will be a 100,000 ton addition to the existing facility at the Port of Alexandria. The other will be a new 100,000 ton facility at Shubra, which is in the Greater Cairo area. The Alexandria facility will include pneumatic unloading equipment which will move the grain from the ships directly to the silo facility or to railcars, barges or trucks for out-transport. The Shubra facility will serve as the major distribution point for the Cairo area and will replace presently used open storage houses. As initially planned, the project was expected to cost \$44,275,000 and LE 15,547,000 (current rate of exchange is \$1.00 = LE 0.70; at the time the project was planned, the exchange rate was \$2.56 = LE 1.00). The dollar costs are funded by the A.I.D. loan, not to exceed \$44,275,000, to the Arab Republic of Egypt (ARE). The loan dated June 29, 1975 is repayable in 40 years, including a grace period ten years. Annual interest is 2 percent during the grace period and 3 percent thereafter. The General Authority for Supply Commodities (GASC) is the ARE Agency in charge of the project. The office of Industrial and Infrastructure Development and Program Support (IIDPS) is the responsible USAID office.

Project Implementation - GASC selected de Laureal Engineers, Inc. of New Orleans, Louisiana, as the architectural and engineering firm for the project. Negotiations between GASC and de Laureal began in March 1976 and concluded in late October 1976. The contract was signed on February 14, 1977 and de Laureal commenced work on June 19, 1977.

The contract for the Phase I construction, earthwork, pilings and foundations, was awarded in May 1978 to a local firm, MISR Concrete Development Company (MISR). The piling work, which was the most costly segment of this phase, was subcontracted by MISR to a U.S. firm, Raymond International of Delaware, Inc. (Raymond). The first phase, except for the repair of some construction defects, was completed in May 1979. MISR's bid for Phase II, constructing the silos and workhouse, was accepted by GASC in April 1979. MISR and its slipform subcontractor, AB Bygging of Stockholm, Sweden, began slipforming the silos in February 1980. Purchase of the equipment, which is being handled through the de Laureal home office, is reportedly about 80 percent under firm order.

The timeframe needed to complete the project will be substantially in excess of the estimate. In the Project Paper, construction was planned to be completed by June 1979. This could not be achieved because the de Laureal contract was not signed until February 1977 and de Laureal did not commence work until June 1977. The de Laureal contract covers a 48 month period, so the planned completion was apparently extended to June 1981. The USAID advised us that de Laureal is negotiating for an 18-month extension to the contract which will apparently put project completion at about December 1982. The Project Paper showed that the construction was estimated to require two and a half years from the date of the first construction contract. The Phase I construction contract was awarded in May 1978. Considering the proposed extension to the de Laureal contract to December 1982, it appears that the construction is now estimated to require about four and a half years from the date of the first construction contract.

Audit Purpose and Scope

The office of the Area Auditor General/Egypt (AAG/E) directed this initial audit of Loan 263-Y-023, Grain Silos Project. Our purposes were to determine whether (a) the performance of the A & E firm and other contractors/subcontractors has been adequate; (b) the construction to date meets contract specifications; (c) the A&E has fulfilled its obligations; (d) dollar expenditures have been proper; (e) there has been compliance with applicable laws, regulations, policies and with the terms of the loan agreement and various contracts/subcontracts; and, (f) USAID's management of project activities has been effective.

We utilized the services of the engineering consulting firm Converse Ward Davis Dixon Inc. (CWDD) of Caldwell, New Jersey to review project design, construction and supervision. The consultant visited the de Laureal home office in New Orleans and spent three weeks reviewing project activities in Egypt.

(see page 5 for a detailed scope of CWDD's review). An engineer from the Office of Engineering, Bureau of Development Support (DS/ENGR) AID/W, reviewed performance of de Laureal in regard to procurement of project equipment and the performance of de Laureal's various subcontractors. The AID/W engineer also visited de Laureal's home office and the project sites in Egypt. The Area Auditor General/Washington (AAG/W) assisted by reviewing at de Laureal's home office, the documentation supporting the claims for reimbursement and by establishing de Laureal's final overhead rates for 1977 and 1978.

The audit was primarily performed during the last half of 1979. June 30, 1979, was the cutoff date for the review of the reimbursements to de Laureal. Review of project activities in Egypt covered events up until the issuance of the report. See EXHIBIT A for details of the dollar funding of the project and the amounts audited.

Management Comments

During this audit, we used our Record of Audit Finding (RAF) procedure whereby we notified the USAID in writing of our audit findings as they were developed. USAID responded in writing to each of our RAFs. We provided the USAID with copies of reports, test results and other pertinent information as we received this information from CWDD. We also arranged for the CWDD engineer to brief concerned USAID and AID/W officials. On March 25, 1980, we provided the USAID with copies of a draft audit report for their review and comments prior to the issuance of the formal audit report. On May 6, 1980, we met with USAID officials in an audit exit conference. The conference was attended by the Deputy Mission Director, the Assistant Director/IFFS and representatives of the USAID's Legal and Controller offices. On May 12, 1980, we received the USAID's written response to the draft audit report.

The USAID's responses to our RAFs and to the draft audit report were considered in finalizing this report.

FINDINGS, CONCLUSIONS AND RECOMMENDATIO

Selection of the Supervisory Engineering Firm

Although the ARE selection of de Laureal as the architectural and engineering firm (A&E) was approved, responsible USAID and AID/W officials expressed reservations with the selection, primarily on the basis of de Laureal's inexperience on a project of this type and magnitude. Some related concerns included de Laureal's approach - heavy reliance on sub-contractors; completing the work within the planned time; and, impact of a poor job on the USG and AID image. The extent and nature of concerns expressed from the start over the selection of de Laureal alerted responsible USAID project management to the need for monitoring this supervisory A&E firm much closer than might normally be done for a host country contractor.

de Laureal's responsibilities as the A&E contractor are to provide the professional, technical and engineering services necessary for the design and implementation of the Silo facilities. de Laureal has been engaged in the practice of engineering since 1946. It was a private corporation until 1971 when its stock was purchased by Walter Kidde and Company, Inc., of Clifton, New Jersey. The firm continued to operate under the de Laureal name until 1978, when it became a division of Kidde Consultants, Inc. (KCI), a wholly owned subsidiary of Walter Kidde and Company, Inc. KCI continues to use the de Laureal name in regard to the work performed under the Grain Silos Project.

Both AID/W and the USAID expressed dissatisfaction with the choice of de Laureal as the architectural and engineering firm. One AID/W engineer, after attending discussions between AID/W and de Laureal on September 1 and 2, 1976, prepared a memorandum for the files which concluded with:

"As I have expressed in other memos, I am of the opinion that de Laureal is an unsatisfactory choice for handling this job. Their general approach indicates a gross lack of familiarity with the work involved and with overseas work in general. I believe that if de Laureal is selected, these two projects will result in major difficulties, controversial issues; and the jobs will be drawn out over six or eight years instead of about three years, which it should be. (These jobs would

require 14 months concurrently here in the United States). As a result, the Egyptians will be soured on American effort generally and A.I.D. specifically.

These are engineering construction projects and from that standpoint, I have previously expressed my dissatisfaction with the selection of an inexperienced engineering firm to handle the work.

The notice published in the Commerce Business Daily of 9/9/75 states, quote, "The Government of the ARE *** invites submissions of interest and prequalification data from U.S. Architectural and Engineering firms who can qualify through experience with projects of similar types and magnitude-". In this writer's opinion, de Laureal does not have "experience with projects of similar types and magnitude" - which fact is strongly evident in their approach to the work. They apparently are depending almost entirely on Fogles-Power & Jarvis.

If the work is awarded to deLaureal, time may show the award to be an unfortunate choice."

de Laureal actually has three U.S. firms as subcontractors to assist in the design and other technical aspects of the project; Fogles-Power Service Corporation, Axelson Engineering, Inc. and Vaha Aprahamian, P.E. Axelson Engineering, Inc. replaced Jarvis International, Inc. referred to as "Jarvis" in the above memorandum.

The USAID is also on record expressing reservations on the selection of de Laureal. The following is an excerpt from a September 21, 1976, USAID to AID/W cable drafted by the Chief of USAID's Capital Development and Engineering Division:

"We have now come to the end of what must be the most bizarre negotiations most of us have participated in - and we must admit that we are not fully satisfied. Our major concern runs to de Laureal's inexperience in overseas work, which was amply demonstrated by the length of time it has taken to negotiate this contract.

Monitoring this firm will place a higher level of burden on USAID than expected with other firms. Also, a firm that reduces its original estimate by 60 percent during negotiations is not one which instills confidence. We do not, however, see any basis for disapproving the firm for that reason. AID approved de Laureal's inclusion on short list and AID approved de Laureal's technical proposal's being ranked first -- over firms with much more experience. To raise today the experience issue would not pass muster."

Actual amounts involved in the negotiations with de Laureal were substantial. de Laureal's initial cost proposal for the architectural and engineering services was \$12,505,730 and LE 1,843,420. After negotiations lasting more than six months, de Laureal reduced its cost estimate to \$5,832,134 and LE 650,468 which included \$563,279 and LE 391,292 for subcontracts. de Laureal's most recent estimate of its cost is \$10,053,856 and LE 878,586. (See Exhibit C).

Our audit disclosed that AID's concerns over the selections of this A&E contractor were valid. Significant problems materialized and the quality of construction was brought into question. These problems are discussed in succeeding sections of this report, showing the relationship to de Laureal's supervisory responsibilities and pointing up the need to more intensively monitor project implementation.

Effectiveness of Project Supervision

Considering the concerns expressed within AID over the selection of de Laureal as the supervisory A&E contractor, too much reliance was placed on de Laureal's capabilities as opposed to close monitoring by USAID project management. Under de Laureal's supervision, the project experienced problems such as unsatisfactory workmanship, poor quality construction, inadequate testing of materials before use, and construction not meeting contract specifications. Detailed examination also disclosed deficiencies in de Laureal's quality control procedures and documentation of project construction activities. The type of construction and supervisory deficiencies surfaced during this review demonstrate that a "hands-off" attitude in monitoring of projects under the Host Government Contracting Mode does not give full recognition to the realistic, day-to-day difficulties encountered in a high visibility, multi-million dollar project such as this. (A separate report section [p.38] addresses monitoring as a function relating to all aspects of the project.)

Because of documented concerns within AID over the selection of de Laureal as the supervisory A&E contractor, an in-depth audit of project activities was planned. Subsequently, allegations regarding poor quality construction were brought to our attention. These allegations included concerns over the possibility that these grain silos -- the largest in the Mid-East -- might be structurally unsound because of poor quality materials and construction practices. Some of these allegations could be partially verified by visual inspection, e.g., water leakage in the foundation of the workhouse section of the structure at Shubra. Examination of other areas, involving concrete strength, testing procedures, and quality control procedures, for example, required the expertise of a qualified professional engineer. Considering the potential for adverse impact on ARE project objectives and on AID if factual answers were not found, an independent engineer, expert in this area, was obtained through an AID/W contract to assist in the actual field audit of this project.

The findings, conclusions and recommendations presented in this report section are based on the results of a review by the geotechnical consulting firm of Converse Ward Davis Dixon (CWDD) Caldwell, New Jersey. This review was made during September and October 1979. The purpose of this review was to examine the technical aspects of project implementation: i.e., those activities managed by de Laureal, the supervisory A&E contractor. Specific tasks assigned to CWDD were: to determine whether or not design specifications have been and are being complied with; to assess the adequacy of on-site quality control programs employed to date; and, to outline suggestions pertaining to future quality control requirements, staffing and procedures.

The study involved: (a) interviews with de Laureal engineers (both at the home office in New Orleans and in Egypt), de Laureal subcontractor personnel, construction contractor personnel, material suppliers and USAID engineers; (b) reviews and analyses of relevant data, drawings, documents and procedures; (c) inspections of the projects at Shubra and Alexandria; (d) retrieving core samples from the in-place concrete at Shubra and obtaining samples of the materials reportedly used in the concrete at that site; and, (e) testing the strength of the in-place concrete. In addition, samples of the in-place concrete from the Shubra site and of the materials reportedly used in that concrete were submitted to Southwestern Laboratories, Fort Worth, Texas for analysis and testing.

CWDD presented their findings to the AAG/Egypt in a draft report dated November 2, 1979 and a final report dated January 11, 1980. On January 31, 1980, we received a de Laureal report responding to CWDD's findings. CWDD commented on the de Laureal response in a letter to us dated March 13, 1980. These documents are available at the AAG/E office and the USAID/E, both in Cairo, Egypt. Copies are also available in the office of the AAG/W, Rosslyn, Virginia.

The following quotation from the Summary section of the CWDD final report introduces major issues. These issues are discussed in the succeeding subsection, taking into consideration de Laureal's response as well as CWDD's reply to that response.

"At AID's direction, our efforts were concentrated on Shubra. We concluded that for the Shubra site, specifications were not adhered to for several items of construction. Based on available evidence, the coarse aggregates used are considered potentially deleterious, fine aggregates may have contained excessive salts, some cement was not in accordance with specifications, the filter for subdrains was not in accordance with specification requirements, the suitability of material used for waterproofing is to be determined, and concrete strength was found to be below specification requirements (but compatible with design requirements). The workmanship and waterproofing was determined to be unsatisfactory and corrective measures are indicated. Some items related to pile design require verifications. Quality control employed during construction to date has not been satisfactory. Guidelines and recommendations for future quality control are provided in the appropriate section of the report.

Index testing of concrete at Alexandria indicated that strength is above design requirements. However, the coarse aggregate used may not meet specification requirements. This issue must be thoroughly addressed as the presence of saline water conditions would enhance potentially deleterious reaction of the gravel with the cement paste. It appears that workmanship at Alexandria was somewhat better than that at Shubra."

Coarse Aggregates - The coarse aggregate used in the concrete for the piles and foundations at the Shubra site was a desert gravel which, at the time, was considered marginal with respect to alkali-silica reactivity. The laboratory which tested the gravel in November 1978 recommended that it not be used in concrete which will be in contact with groundwater. The laboratory advised that the 90-day Mortar Bar Test is the only method by which the performance of the gravel in concrete can be quantified in terms of likely expansion. Without further testing, the de Laoreal project manager authorized the construction contractor to use the gravel in the concrete for the Phase 1 construction at the Shubra site.

CWDD obtained a sample of the desert gravel from the source quarry and submitted it to a laboratory in the United States for testing. The "quick" tests, similar to the tests previously performed, confirmed that the gravel was potentially reactive; however, the 90-day mortar bar test results, which became available in late February 1980, showed that the expansion at 90 days was substantially less than the amount of expansion normally considered to be capable of harmful reactivity. Based on the results of this test and on the positive results of a de Laoreal study (recommended by CWDD) of other buildings in which desert gravel was used, CWDD concluded that the desert gravel used in the Phase 1 construction at the Shubra site is not expected to be harmful to the concrete.

CWDD could not express an opinion on the aggregate used in the concrete at the Alexandria site because they could not obtain a sample for testing. The construction records did not show nor did the construction engineer or de Laoreal's engineer know the exact source of the aggregate. The construction company engineer said that it most likely came from several gravel quarries in the Alexandria area. The gravel used in the concrete at the Alexandria site was said to be similar to that used at the Shubra site in that they were both desert gravel.

Fine Aggregates - CWDD, upon completion of their review of project activities in Egypt, reported:

"Available project evidence indicates that the sand used because of sulphate content is not according to specification. However, there is some confusion as to what sand was used. As data are limited and contradictory, additional evidence of suitability should be provided by de Laureal."

In responding to the CWDD report de Laureal provided information which they said showed that the sand met specifications; however, the de Laureal project manager had previously told CWDD that this same information had no relevance with regard to what sand was used. Because project documentation is so limited, CWDD concluded that it is doubtful that the issue can ever be resolved.

Cement - CWDD found that some of the available control tests on cement indicated that some cement did not meet the specifications. The tests on the concrete done under CWDD's direction, also indicated that some problems, specifically unhydrated cement, may have developed during the Phase I construction. CWDD said that this is related to cement manufacturing and should serve notice that the cement must be tested frequently, accurately and thoroughly during the next Phase of construction. CWDD recommended that the cement quality be verified by de Laureal before it leaves the plant and that petrographic test on cured cement be made periodically.

In our draft report, we recommended that de Laureal be required to establish procedures which will ensure that the cement used in construction is tested on a systematic basis. The USAID, in reply, stated that de Laureal now has quality control procedures which specify the tests required, frequency and the reporting requirements.

Filter - A filter was constructed around the workhouse for use in lowering the water table around the structure in case inspections of or repairs to the structure should ever be required. CWDD found that the material used in the filter bed did not meet specification requirements with regard to gradation. Because specifications were not met CWDD concluded that it must be proven that the filter will function effectively. They said that such proof should contain documentation that the filter material gradation is such that it will not clog the drain pipes and that it will not be clogged by infiltration of overlying sand. CWDD suggested that a routine filter design computation based on the actual gradation of materials involved should be provided by de Laureal.

Recommendation No. 1

USAID, in coordination with GASC, require de Laureal to (a) perform the necessary computations to determine whether the filter, as constructed, will function effectively; and (b) if the computations show that the filter will not function effectively, have the defective material replaced with material which meets contract specifications.

Concrete Strength -- Because of the inconsistency in available quality control records regarding concrete strength, CWDD decided to take core samples of the concrete for testing to determine whether it met the specified strength. Six core samples were taken from the workhouse pit floor. The strength of these concrete samples averaged 233 Kg/cm². This is below the contract specification of 280 Kg/cm²; however, de Laureal later advised that the design value i.e., the strength used in structural design, is only 210 Kg/cm². Therefore, the design strength was achieved. Tests on the three cores taken in the silo areas resulted in strengths of 213, 273, and 222 Kg/cm². Again, the design strength was met although the strength specified in the contract was not.

Since the design value has been achieved, the strength of the concrete is no longer in question. But the underlying, real issue is that the quality control tests either performed by or supervised by de Laureal erroneously showed, in all cases, that the strength specified in the contract had been achieved. (Quality control is discussed on pages 16 & 17) A side issue is that GASC did not receive full value for its money. GASC contracted for concrete of a specified strength but the construction contractor provided something less. de Laureal, as the agent of GASC, is responsible to protect GASC's interest. In this case however, de Laureal, by accepting the concrete as meeting contract strength specifications, did not fully protect GASC's interest.

In our draft report, we recommended that GASC be advised of this matter. The USAID replied that they have informed GASC of all CWDD findings by providing them with a copy of the CWDD report.

Workmanship and Waterproofing -- The most critical construction defects disclosed by the CWDD review were in the pit of the workhouse. The workhouse is approximately 17 meters by 30 meters with the floor about 7 meters below finished grade. When completed the visible portion will be about 63 meters high.

Specifications called for the walls of the pit to be water-proofed. There was no requirement to waterproof the slab. CWDD's visual observations of the concrete work performed in the workhouse pit revealed the following:

- Unfinished concrete.
- Extensive gravel pockets (honeycombing).
- Exposed steel.
- Water leakage between portions of walls and floor slab, some columns and floor slab, as well as from two holes in the north and south walls.
- Extensive patching.
- Numerous vertical hair cracks extending from floor to ceiling.
- Water seeping through the floor slabs.
- Cold Joints extending around entire wall.
- Portions of walls out of line.
- Birdbaths in floor slab.

CWDD reported that the leakage in portions of the workhouse floor, portions of the walls, slab-wall junctions and column-slab junctions clearly indicates that waterproofing is not functioning as intended. Seepage, they said, could affect the structural integrity of the slab and the walls as there could be a strong potential for steel corrosion. Since the waterproofing of the walls is on the outside of the walls and beneath the surface, CWDD could not be specific as to whether the leakage in the walls was due only to poor workmanship, (implied by the record) or a combination of poor workmanship, omissions and defective waterproofing materials. CWDD reported that because of the lack of project documentation, they were unable to determine whether the waterproofing material applied to the walls was in accordance with specifications. They suggested the contractor or de Laoreal present performance certificates from the suppliers of the materials and documentation to show that such material was used on the job.

CWDD said that leakage through the slab may be due to inexperience and poor workmanship. They noted that there appeared to be a correlation between excessive leakage and heavy concentrations of reinforcing steel, where placing the concrete would naturally be more difficult, compared to areas with less steel reinforcements.

Workhouse Pit Repair - Both de Laureal engineers and USAID engineers agreed with CWDD on the need for corrective actions. The objective is to effect a dry workhouse pit. Subsequent to CWDD's departure from Egypt, we observed the repairs being made. We saw workers chipping out the concrete from the places where water had leaked into the pit. These repairs, apparently, were being made in accordance with the recommendations of a local consultant retained by de Laureal. The consultant recommended breaking out the concrete in the places of the leaks and replacing with rich mortar. CWDD had previously expressed skepticism as to the effectiveness of this plan. CWDD did not cover this issue in their report because it was not within their scope of work. However, in a letter responding to our request, they suggested two methods to effect a dry workhouse pit. The letter is partially quoted below:

"In response to your letter of 20 December 1979, regarding the referenced subject, we offer the following:

As Dr. Issa S. Oweis discussed with you, it is his opinion that the patching work proposed for the workhouse may not result in an effectively waterproofed slab and walls as a) the slab was not waterproofed to start with. It has leaked in at least 13 places by de Laureal count; b) the walls have leaked in two places. This prompts doubt as to the effectiveness of the waterproofing at the time of construction; and c) the slab-wall junctions have leaked in several places.

Based on the above, you may wish to consider the following guidelines for alternative methods of repair:"

CWDD's two alternative suggestions for repairing the workhouse pit are quoted in EXHIBIT B. Briefly, the first alternative was to remove the existing slab and install a new waterproofed slab. The other alternative was to install a new waterproofed slab, using the existing slab as a subbase.

During a visit to GASC on January 6, 1980, we were informed that the leaks in the workhouse pit had been repaired. The official said that the pumps had been shut off for several days (thereby allowing the level of the groundwater to rise above the level of the slab) and the pit remained dry. We subsequently visited the site and noted that the slab was dry. The engineer on site told us that they had shut off the

dewatering pumps for an extended period and no water had seeped up through the floor. There was, however, seepage of water through the north wall. This was a new leak, about a foot or so from the leak that had been repaired. The engineer told us that this new leak would also be repaired. Since the wall was still leaking, it seemed apparent that the waterproofing on the outside of the wall was still defective.

In response to recommendations in our draft report, USAID officials stated that a) the north wall of the workhouse pit is planned to intersect with another structure and, therefore, was designed without waterproofing; and b) leakage there is attributable to this situation which will be resolved structurally. USAID officials further replied that the waterproofing has been accepted as meeting specifications and, based on their own inspections and investigations, they are satisfied with the repairs to the waterproofing. Based on this USAID reply, we are making no further recommendations. We also recommended in our draft report, that GASC and the USAID consider CWDD suggestions for the repair of the pit floor. USAID officials were not receptive to the recommendation. They replied that the workhouse pit has been repaired and to date shows no evidence of continued leaking. Notwithstanding the fact that the floor is dry at present, it is our opinion that in view of the long-term utility of the structure, CWDD's suggestions should be considered. CWDD does have experience in this field and their opinions and suggestions should not be dismissed offhand.

Recommendation No. 2

USAID, in coordination with GASC, consider CWDD suggestions for the repair of the workhouse pit (attached as EXHIBIT B to this report), keeping in mind the need for long-term utility of the structure and the fact that the pit floor is not waterproofed.

Design Calculations - In their report, CWDD raised two questions in regard to structural design. Both questions involved the pilings which support the grain silos structures. One question dealt with the absence of reinforcing steel in the piles and the resultant effect on the lateral capacity of the piles. The other involved the axial capacity of these piles that were not installed to the length or blow count derived from the pile load tests. On both issues, CWDD suggested that de Laureal perform engineering analyses to confirm that the piles, as installed, will adequately support these massive structures.

CWDD analysed the de Laureal response to their final report and concluded that the fundamental issues had not been resolved. The following is quoted from CWDD's reply to de Laureal's response:

With regard to the possible need for reinforcing steel, de Laureal should provide design computations supporting the contention that it isn't needed. In form, this should consist of calculations of pile stresses under design loads (axial and lateral) and moments. Lateral effects should be based on the worst combination of wind and unbalanced silo loading. Further, frictional effects and passive resistance of the mat should not be relied on, as the movement required to mobilize these could be more than that required to direct almost all lateral effects to the pile heads.

As to axial capacity, CWDD has no argument with Kidde Consultants, Inc. contention that the pile test is still considered the proof of the pudding.... However, the results of pile load tests are conclusive and applicable to production piles only if the latter are driven to the same or higher resistance, to the same or longer length, in similar subsurface conditions. As this was not the case on the Grain Silos Project, further demonstration of axial capacity is required for any production piles driven shorter than or to lower resistance than the test piles. Such proof could be in the form of acceptable static analyses."

Recommendation No. 3

USAID, in coordination with GASC, a) require de Laureal to provide design computations to show the lateral and axial capacity of the piles and, b) review the computations to determine that the piles, as installed, will adequately support the structures.

Quality Control - The following is an excerpt from CWDD's report regarding de Laureal's quality control procedures.

"Visual observations and project records appear to indicate that the quality control exercised to date has not been adequate. The records imply continuous problems with construction procedures, seemingly inexperienced personnel, and frequent violations of specification requirements. Evidence of these are poor workmanship in the workhouse, leaky floors and walls in the workhouse, problems with the batching plant, oversanded concrete, concrete strength (lower than specification requirements), an unsatisfactory filter, etc.

The problem of apparent poor quality control was compounded by less than acceptable documentation, i.e. a relatively limited amount of data on the materials used in construction, sparse records of specific actions (if any) taken to remedy deficiencies in construction. The tolerance of repeated violations of specifications by the contractor (e.g. placement of contaminated filter for several days) seems to be indicative of either poor construction management or lack of authority or both."

In addition to their assessment of past quality control procedures and practices, CWDD provided guidelines for consideration in establishing an effective quality control system. The guidelines included discussions of procedures under the following subheadings: Onsite Laboratory, Field Management, Office of Technical Management-Engineering Management/Egypt Office of Technical Management/United States, Liaison between Egypt and the U.S. and Responsibilities of the Construction Contractor.

de Laureal, in response to CWDD's assessment, stated that they have taken certain actions to avoid further inadequacies in quality control, records and reporting. de Laureal reported these actions taken: (a) increasing their expatriate field engineering staff; (b) requiring the construction contractor to have a fully equipped testing laboratory at each site, and, (c) establishing a closed loop quality control procedure to insure that specifications are met and that all tests required are performed and the results evaluated and reported on a timely basis. Based on these reported actions, it would seem that the quality control procedures have been considerably strengthened.

In response to our draft report, the USAID confirmed that de Laureal has established a quality control system and that the procedures are being followed on the project. Therefore, there is no need for a further recommendation.

In response to CWDD comments regarding project documentation, de Laureal stated that they recognize the deficiencies in their past field records and accept CWDD's comments concerning them. They said that they have taken steps to insure that detailed field reports, work orders, site notices, etc. are properly maintained. In our draft report we recommended that during the initial stages of the Phase II construction, the documentation should be reviewed in sufficient depth to ascertain that de Laureal is maintaining a detailed record of project implementation. The USAID responded:

"de Laureal issued Quality Control Manual, January 1980, sets forth in detail project reporting requirements, including forms to be followed. USAID finds these manuals satisfactory to record project implementation. Further, USAID will, on a spot basis, review project record keeping to ensure these reporting requirements are being followed. The Manual is available in IIDPS office."

The response indicates that satisfactory corrective action has been taken.

Other Matters Involving Project Supervision

The issues under this heading are matters related to project supervision but not specifically covered by the CWDD study.

Qualifications of Supervisory Personnel - The findings reported by CWDD reflect adversely on the effectiveness of de Laureal's supervision of the Phase I construction. de Laureal's construction supervision staff in Egypt during this period consisted of the project manager (expatriate), three to four expatriate engineers and three locally hired engineers. In addition, de Laureal utilized engineers employed by its subcontractor, Arab Consulting Engineers, to assist in supervision during peak construction periods. It would seem that de Laureal had a sufficient number of engineers to effectively supervise the construction, yet, the supervision was not entirely effective. The problem, therefore, might be in the quality of the supervision.

Although it was beyond CWDD's scope of work to assess the engineering qualifications or technical capabilities of the construction supervisory staff, their report does stress the necessity of having qualified people in the key positions. The report identified some of the needed qualifications.

For example, the following is a quote from the report regarding the qualifications of the project manager:

"Field Management: The field management should be headed by a field project manager with suitable experience on similar projects. He should be responsible for keeping a running record of all events during construction. He should also have the engineering background required to assess impact of construction technique on design intent and performance and to allow accepting or rejecting work performed by the contractor".

The biographical data available at the USAID and at GASC showed that the educational background of the project manager is in mechanical and in industrial engineering. The bio-data, on the other hand, stated that he had experience in managing other construction projects.

Although the expatriate members of the de Laureal supervisory team were approved by GASC and the USAID, the nature and extent of CWDD's findings require in our opinion, that the qualifications of at least the key people be reevaluated. The team's inability to fully control the construction of the foundations raised obvious questions concerning their ability to effectively supervise the more critical and exacting construction yet to come.

On a visit to de Laureal's office in Cairo on May 7, 1980, we found that the project manager had been replaced. We met the new project manager who told us that he has been assigned as the team leader for the duration of the project, and other management changes have been made: an engineer who has recently completed a grain silos project in the United States has been newly assigned as assistant project manager and a new person has been put in charge of the Shubra site. In response to our draft report, the USAID officials advised that they have reviewed the qualifications of de Laureal's key people in Egypt. They indicated that the key people have the necessary qualifications for their positions. We believe that the supervisory team has been substantially strengthened; therefore, the intent of the recommendation in our draft report has been implemented.

Project Status Reports - The value of the de Laureal project status reports as a USAID and GASC monitoring tool was diminished because the reports were not timely and did not thoroughly cover construction activities and problems. Up to the time of our audit, the USAID did not obtain timely and complete reports needed for effective monitoring.

This situation is a further indication of a "hands-off" attitude toward monitoring this high-dollar, capital project, implemented under the host country contract mode.

The contract requires de Laureal to prepare monthly and quarterly project status reports. The reports are supposed to describe the major project activities for the reporting period and any problems or constraints to progress together with recommended solutions. The reports are to be submitted to both GASC and the USAID -- the monthly report within 20 days after the end of the month and the quarterly reports within 30 days after the end of the applicable three month period.

The reports have not been submitted within the specified timeframes. For instance, as of January 6, 1980, the most recent monthly report was October, 1979. The reports were fairly comprehensive in regard to project design and procurement of equipment which are handled by the de Laureal home office. The reports, however, did not thoroughly cover construction activities and problems. For example, no mention was ever made of the seepage of water into the workhouse pit. An uninitiated reader of the reports would assume that the Phase 1 construction was satisfactorily completed in April 1979; but this is misleading. Actually, as late as December, 1979 the construction contractor was still working to correct the deficiencies in the workhouse pit constructed during Phase 1. Quay 85 is an important part of this overall project, critical to meeting objectives; but, the reports did not even mention the major deviation in the construction of the Quay 85 extension nor the channel-deepening problems. The reports did contain a section for reporting on this project related activity. In addition, the reported financial data was not accurate. For example, the October, 1979, monthly report shows \$5,832,100 and LE 658,900 committed to the de Laureal contract, although the funding had actually been increased to \$6,229,731 and LE 718,079 back in August, 1979.

CWDD was also critical of the monthly reports. The following is an excerpt from their report:

"The monthly reports were reviewed at office of the area Auditor General in Cairo. Such reports did not contain technical details on the project to be used for this study. It is our opinion that the monthly reports are not sufficiently detailed to allow USAID to monitor the adequacy of construction."

In our draft report, we recommended that de Laureal be made fully aware of the needs of both the USAID and GASC for timely and comprehensive project status reports. We pointed out also the need for the USAID to closely monitor project activities during the initial stage of Phase II to ensure that the reports cover activities in sufficient detail so as to be useful as a monitoring tool. USAID officials replied that they have since discussed this issue with officials of KCI, the corporate parent of de Laureal, and that the reports have improved considerably; also, that procedures have been established whereby de Laureal will also report either verbally or by letter when problems arise requiring USAID assistance. The USAID reply also indicated that de Laureal's new project manager is giving closer attention to this facet of operations. Based on the reported actions, we are making no recommendations.

Phase II Aggregates - The contract specifications for Phase II construction require basalt to be used as the coarse aggregate in the structural concrete. Basalt costs considerably more than the desert gravel (used in the Phase I construction) and specifying it undoubtedly added to the contractor's unit price for the structural concrete.

Basalt is a hard, dense volcanic rock. It is the aggregate that the former Shubra site engineer recommended be used for the Phase I construction instead of the desert gravel which was considered to be potentially reactive at the time of the Phase I construction. Basalt is not as readily available as desert gravel and is more costly. According to the manager of the Arab Consulting Engineers, basalt costs about LE 12 per cubic meter versus about LE 5 for desert gravel. The source of the basalt for both the Shubra and Alexandria sites is a quarry located about 25 kilometers east of Shubra and about 200 kilometers from the Alexandria project site.

The Phase II contract, awarded in April, 1979 shows that the construction will require an estimated 35,000 cubic meters of structural concrete. The concrete consists of about 50 percent coarse aggregate. Applying the cost figures shown above, basalt added over LE 120,000 (\$175,000) to the total cost of the concrete as compared with gravel. This approximation does not include additional costs to transport the basalt from near Cairo to the Alexandria project site.

Basalt was apparently specified for Phase II because of the questionable suitability of desert gravel. Results of the CWDD mortar bar test, along with confirming results of de Laureal's study of other construction using desert

gravel, showed that desert gravel is a suitable aggregate to use in concrete. Therefore, we recommended in our draft report that an attempt be made to reduce contract costs by permitting the construction contractor to use desert gravel rather than basalt in exchange for a lower unit rate for structural concrete.

During a May 7, 1980 meeting, de Laoreal engineers told us that the construction contracts have been amended substituting desert gravel for basalt as the specified coarse aggregate for the structural concrete. The project manager told us that a reduction in the unit price of the structural concrete is open to negotiations. The USAID response to our draft report confirmed that desert gravel is now the specified aggregate for the structural concrete. USAID officials stated that the contracts were amended on April 16, 1980, effecting this change.

Based on the actions reported taken, our recommendation has been implemented and cost savings, though not yet determinable, will be realized.

Host Country Project Contributions - Alexandria Port Improvements

Our review disclosed that the ARE has been satisfactorily meeting its commitments under the Loan Agreement with the exception of improvements to the Alexandria Port. These major Port improvements involve (a) extension of Quay 85 and (b) dredging the harbor. These improvements are critical to successful accomplishment of overall project objectives and were incorporated into the Loan Agreement as "Conditions Precedent to Initial Disbursement."

Quay 85 is adjacent to the Alexandria grain silo area and used for unloading grain ships. It was to be enlarged to accommodate new AID-financed grain unloading equipment and the channel alongside was to be deepened in order to accept larger ships. These improvements were considered key elements for the full utility of the project. The construction of the quay extension is substantially behind schedule. More importantly, our review disclosed that the addition to the quay is not being constructed according to the approved design. It is possible that the quay, when completed, will not meet project needs. Moreover, the channel next to the quay will not be deepened as planned.

USAID responses to questions raised during the audit on these matters implied that the USAID had no previous concern or involvement simply because these activities were not AID-financed. But effective use of the AID-financed grain silos and AID-financed equipment at Alexandria are dependent upon timely and successful completion of Port improvements in accordance with overall project plans. These Port improvements, an ARE contribution, are an integral part of the overall project, necessary to achieve ARE and AID project objectives. This situation illustrates an extreme example of the "hands-off" attitude in monitoring projects implemented through Host Country contracting.

Background - Quay 85 needs to be enlarged to accommodate the installation of three, self-propelled unloading towers. This AID-financed unloading equipment will transport the grain from ships directly to the silos or to railcars, trucks or barges for outshipment. The unloading equipment is being financed under the loan at a cost of about \$5 million. The harbor channel alongside the quay can only accept ships containing 30,000 metric tons and having a draft of 32 feet or less. The present handling of larger ships requires partial unloading outside the quay area. Project plans call for deepening the channel so that all ships can be completely unloaded at the quay.

These two needed improvements were incorporated in the Loan Agreement under Section 3.02 (c), Conditions Precedent to Initial Disbursement. This section requires, "...that prior to disbursement, the borrower shall furnish AID assurance that Quay 85 in the Port of Alexandria will be extended and the harbor dredged as required to provide adequate draft for ships, along with detailed plans and a reasonable firm construction schedule for the extension of Quay 85." The ARE had problems complying with this condition, and on September 2, 1977, the USAID solved the impasse of not being able to disburse any loan funds by transferring the condition to Loan Section 3.02, Additional Conditions Precedent. On March 23, 1978, the condition was said to have been met by the ARE's submission of a contract for the extension of Quay 85.

Implementation - The original Quay 85 is about 125 meters in length. Project plans required it be extended 114 meters to accommodate the loan-financed grain unloading equipment and larger ships. The extension was to be built up from a solid foundation. This required first dredging the area to the rock bed, which is at a depth of about 26 meters. This depth has not been reached because the equipment used by the contractor could only dredge to 23 meters.

Officials of the Alexandria Port Authority (the responsible ARE agency) do not foresee any problems in not reaching the rock bed and the construction is continuing; i.e., the fill is being placed on the clay about 3 meters above the rock bed. The Port Officials' justification for waiving contract specifications was based on a study made in September 1979, by a local soils consulting firm. The firm's report showed the rock bed was at a depth of 25 to 26 meters. The report recommended to fill from the dredged depth of minus 23 meters to minus 5 meters and wait until the soil increases in strength before filling to grade. The report suggests placing the fill in two or three stages and monitor to determine that some increase in strength has actually occurred. It recommended that after about one year, filling from the minus 5 meters to grade and installing the equipment. Calculations in the report showed that total settlement could be as high as one meter, with about half occurring during the waiting period. According to the report, the additional half meter settlement after the extension has been brought to grade and the equipment installed should not affect the operation of the equipment. The report showed that the plan to construct the quay extension on top two to three meters of clay had a safety factor of 1.26.

As of September 30, 1979, no action had been initiated by the Port Authority to have the channel alongside the quay dredged so it can accommodate larger ships. The Port officials told us that they did not know when or how this work would be done. We subsequently learned that the draft alongside the quay will not be increased because dredging the extra two meters will destabilize the existing quay wall.

The unloading equipment has been ordered. It was planned so that it would be delivered upon the completion of the quay extension so that it could be installed upon its arrival in Alexandria. With the delay in completing the extension and with the year needed to increase the strength of the quay before installing the equipment, it is apparent that the equipment will not be able to be installed promptly upon its arrival in Alexandria. Therefore, it will have to be stored somewhere in the Alexandria area for a year or so.

USAID Monitoring of Quay 85 and Harbor Dredging - We reported the preceding audit findings to the USAID as our audit field work disclosed the situations. We used the Record of Audit Finding (RAF) procedure to elicit responses and to enable the USAID to take actions deemed necessary at the time rather than wait until the audit is completed. To illustrate the "hands-off" attitude toward monitoring the overall

project under Host Country contracting mode, several of the questions posed in the applicable FAF are presented below along with USAID responses.

Question

Did the USAID agree with the contract modification to construct the quay extension from minus 23 meters rather than constructing from the rock bed?

USAID Response

"The dredging/construction contract referred to in the RAF is between the Alexandria Port Authority (APA), as the owner, and Egyco, a local construction firm, as the contractor. No financing by AID is involved. AID has no relationship to this contract with the APA so agreement was neither requested nor given."

Question

Since the clay adjacent to the quay extension will not be compacted, is there, in the USAID's opinion, any possibility of a lateral movement of the bottom of the quay extension?

USAID Response

"That a particular sub-structure area is not subjected directly to surcharge load does not imply that it is not sufficiently compacted nor that it won't be affected by surcharges imposed elsewhere. Lateral movement is always possible and even probable; effects of such movement must be evaluated and included in the design of the structure. In this case, it is the responsibility of GASC and their design contractor to assure themselves that movement in any direction will be minimized. It is their responsibility to assure that there is sufficient adjustment built into the gantry design to enable the system to accept calculated movement which may occur over time."

Question

How will the additional 1/2 meter settlement of the quay extension that will occur after the equipment is installed affect the operation of the equipment? We understand that the tolerance for the proper operation of the equipment is 0-3 inches.

USAID Response

"Answer (immediately) above includes comments relevant to this question."

Question

What is the current status of the dredging of the channel? Will the dredging be finished by the time the project is completed?

USAID Response

"In discussions with the Chairman of the APA, USAID has been assured that channel dredging as originally contemplated has been accomplished. Additionally, we understand the Chairman is now planning to dredge over a wider area to increase the safety of ship manoeuvres in bad weather, thus decreasing the number of days the port must be closed. Future dredging will require planning and coordination to minimize any effects on the project schedule and overall grain unloading operations."

Auditor's comment

In this question, we were actually referring to the harbor area along side Quay 85. This area, along with the channel needed to be dredged to a depth of 12 meters to accommodate large grain ships. The area alongside the quay will not be dredged because it would destabilize the quay (see USAID response below)

Other USAID Comments

"Minutes of meetings between GASC, de Laoreal and APA show that there was agreement that the draft alongside the quay would not be increased, because dredging an extra two meters would destabilize the existing quay wall. A plan to provide deep water quays located in the position of the present breakwater would provide a draft in excess of 12 meters. However, the entrance channel cannot be more than 12 meters deep because at that depth rock is encountered. It has been proposed by APA and GASC that de Laoreal make a study to evaluate the effects of the proposed new deep water quay on the grain

receiving system. USAID has agreed, in principle, to such a study."

Question

If the USAID determined that the quay extension as being constructed will not meet the needs of the project, what would be the USAID's course of action?

USAID Response

"We believe AFA fully intends to provide a facility adequate to permit normal operation of the grain complex. The procedure and timing may not be optimal from AID's point of view but we do believe a viable facility will be provided."

There will be about \$17 million of AID-financed equipment, including the unloading equipment, procured for the project. The ordering of the equipment and its scheduled shipment were supposedly timed so that it could be installed upon its arrival in Egypt. Now, with the delay in completing the quay extension and the delay in project implementation in general, it is likely that some of the equipment will arrive before the facilities are ready and will need to be stored for a period of time. In view of the fact that warehousing of the equipment in Egypt was not planned and because warehousing at the Port is reportedly in short supply, we believe that the USAID should at least assure itself that the GCS is aware that warehousing may be needed and is making an effort to obtain suitable space.

In our Draft Audit Report, we recommended that the USAID, in coordination with GASC, determine that the General Silos Company is aware that it may be required to provide temporary warehousing for some project equipment. USAID replied that GCS has contracted to provide warehouse space for the Grain Silos Project equipment; therefore, we are making no recommendation.

Conclusion - The improvements to the Alexandria Port, as being constructed, will not meet the intended objectives of the project. A condition precedent in the loan agreement required assurance that the harbor would be dredged so that large grain ships could completely offload at the quay. After clearing the condition precedent, it has

been determined that to increase the draft along side the quay to the planned 12 meters will destabilize the existing quay wall; therefore, it will not be done. The large ships (over 30,000 metric ton capacity) will have to continue to partially unload outside the quay area and the AID-financed unloading equipment will be under-utilized.

The extension to the quay is under construction but because it is not being built up from the rock bed, as originally planned, there is concern as to its long-term stability and capacity to safely take the loads which will be imposed by the grain unloading operations. USAID, in reply to our RAF, implied that since the activity was not AID-funded they had no concern or involvement with it. Subsequent to completion of our audit field work, the USAID has proposed engaging the services of CWDD, at AID expense, to make an independent study regarding the stability of the Quay 85 extension. By letters dated April 15 and 20, 1980, the USAID requested the APA Chairman and the GASC Project Manager, respectively, for signature concurrence with the proposed hiring of CWDD under a direct contract to AID. Assuming those ARE officials concur with USAID now contracting and paying for such study, the basic project problems remain; the harbor channel next to the quay will not be dredged to a sufficient depth to allow complete unloading of ships carrying over 30,000 metric tons; the long-term stability and load capacity of Quay 85 is still uncertain.

The objectives of the project will not be achieved until large grain ships (over 30,000 metric tons) can be safely and completely off-loaded at the quay.

Governing Regulations and Policies

Notification to U.S. Business - The Phase 1 piling work, which involved the expenditure of about \$3.5 million in AID loan funds, was not advertised in the United States as required by AID regulations. Instead, it was awarded to a U.S. firm, Raymond, as a subcontract under the Phase 1 prime contract for earthwork, pilings and foundations. The prime contractor is an Egyptian firm. The advertisement for the prime contract was made in Egypt and addressed to Egyptian firms only. The IFB, however, authorized the construction to be paid for in both Egyptian currency and U.S. dollars. The piling work was the most costly segment of the prime contract. As bid, it amounted to the equivalent of 62 percent of the total prime contract. Raymond was the only U.S. piling firm in Egypt at the time.

Handbook 11, Chapter 2, which covers procurement of construction services financed in whole or in part by U.S. dollars, was reissued on March 1, 1980. The new version is very specific as to the requirement for notifying U.S. business of AID financed work. Paragraph 2.4 in part, provides:

" 2.4 Advertising

2.41 Rule

In furtherance of the rule in 2.3 above, solicitation of potential contractors is effected through widely disseminated advertising. This is accomplished by publishing a notice of the availability of prequalification questionnaires or, if prequalification is not used, Invitations for Bids in the Commerce Business Daily of the U.S. Department of Commerce. If the estimated contract value is under \$500,000, publication in the Commerce Business Daily is not required but may be used."

The paragraph further provides that authority to waive the requirement to advertise in the Commerce Business Daily is vested in the Regional Assistant Administrator.

The superceded chapter did not state the advertising rule as precisely. Paragraph 2A6b did, however, provide: "... When financing of goods and services procured within the borrower country is authorized, payment will be made with local currency."

In reply to our RAF and to our draft audit report, the USAID took the position that there was no requirement to advertise in the U.S. because the U.S. dollar portion of the work was awarded to Raymond under a subcontract. They contended that the Handbook does not require formal competition of subcontract components of a fixed price competitively awarded construction contract. The USAID response did not address the issue of whether Raymond should have been paid in local currency, and not U.S. dollars as stipulated in AID Handbook 11, Chapter 2, paragraph 2A 6b.

Whether or not the dollar-financed work was awarded under a subcontract is beside the point. The advertising rule for the procurement of construction services financed in whole or in part with U.S. dollars is specific. It requires notification to U.S. business in the Commerce Business Daily if the estimated contract value is \$500,000 or more.

The dollar value of the piling work under the Phase I contract was in excess of \$3.5 million. Therefore, it was subject to the rule. If the USAID considered that it was necessary to finance a portion of the contract in dollars and that it was not appropriate to notify U.S. business of this availability of AID-financed work, they should have applied to the Assistant Administrator for the Near East for a waiver of the requirement to advertise in the Commerce Business Daily. It seems to us that without the waiver, USAID did not have the authority to approve this use of AID funds and since Raymond's services were procured locally, that Raymond should have been paid in local currency. To clarify this matter, we are recommending that the USAID seek AID/W guidance.

Recommendation No. 4

USAID (a) request guidance from AA/SER to clarify the AID Handbook requirements on notifying U.S. business of the availability of AID-financed work, based on that guidance, (b) issue appropriate instructions to USAID operating divisions.

If AA/SER advises that the advertising rule was applicable to the \$3.5 million expended under PHASE I construction contract, USAID should request a waiver of the requirement to publish the notification in the Commerce Business Daily (even though it is after-the-fact) in order to establish their authority to approve the use of AID loan funds for services procured locally.

Recommendation No. 5

If the advertising rule was applicable, the USAID request AA/NE for a waiver of the rule for the Phase I construction contract.

Source and Origin Requirements - As noted in the previous section, the piling work under Phase I was done by Raymond under a subcontract financed with AID loan funds. A requirement of the loan agreement and of the Raymond subcontract was that services and commodities financed by AID dollars must be from U.S. source and origin. Our review of compliance with this requirement raised the following issues which need resolution:

- Payment procedures for loan funds disbursed under AID Direct Letters of Commitment.
- Applicability of source and origin rules to fixed-unit-price contracts.
- Actions which should be taken when a contractor has not fully complied with source and origin requirements.

a. Payment Procedures - The Mission has routinely approved progress payments to Raymond under the Phase I construction even though Raymond's payment requests did not contain the Certificates of Source and Origin, required under terms of the AID Direct Letter of Commitment (L/Com). The subcontract, in conformance with the loan agreement, stipulates that the United States is the only authorized source and origin for AID-financed procurement.

At the time of our review, AID had paid Raymond nearly \$3.1 million without this added assurance that Raymond had procured all project commodities and services from the United States. Our review of Raymond's procurement records showed that some of Raymond's hard currency costs for the project were for commodities and services that were not of United States source and origin. We estimated that these costs were equivalent to about \$200,000. We presented these facts to the USAID in our RAF dated October 3, 1979. The USAID responded:

"Piling subcontracts under Phase I construction are unit price contracts wherein the subcontractor is paid for units of work performed, i.e., numbers and lengths of pile driven in place. The dollar costs eligible for reimbursement were estimated on the basis of expatriate personnel costs, U.S. source and origin materials required and equipment owned. The payment documents required by the Invitation for Bid, subsequently reflected in the Letter of Commitment, are inappropriate for a unit price contract. Given the fact that the work has now been completed and the final invoice submitted to GASC by the subcontractor, little would be gained by amending the Letter of Commitment. IIDPS will, in future unit price contracts, assure that payment documentation requirements more closely reflect the type of contract contemplated.

Nevertheless, on October 9, 1979, the piling subcontractor (Raymond International) submitted a statement to the USAID Controller, along with copies of appropriate invoices, vouchers, etc., attesting to U.S. source and origin for all significant dollar commodities purchased under the contract. Contractor owned equipment charged out as rental was not included.

We recommend that RAF No 1 be closed."
(Underscoring Supplied)

In addition to the L/COM payment procedures, this USAID response raised other issues as to whether source and origin requirements are applicable to fixed unit price contracts and whether Raymond has to comply with contract terms. The issue regarding L/COM payment procedures is discussed on page 43. The other issues are discussed in b. and c. below.

b. Applicability of Source and Origin Rules to Fixed Unit Price Contracts - The USAID response raises the issue as to whether source and origin requirements apply to needed commodities and services acquired by a fixed unit-price contractor. We realize, as the USAID stated, "the subcontractor is paid for units of work performed, i.e., numbers and lengths of pile driven in place." However, to perform the units of work, the subcontractor needed to procure the piling shells and other commodities and to procure ocean or air delivery services to transport the shells and other commodities to Egypt. These AID-financed commodities and services acquired by Raymond outside Egypt are subject to the source and origin requirements, stipulated in this loan and subcontract as the United States. Application of source and origin rules to unit price construction contracts is covered in AID Handbook 11, Chapter 2.

In a unit price contract, it is not possible to monitor a contractor's compliance with source and origin requirements from a review of the contractor's claims for payment. The claims, based on units of work performed, do not show any details of the contractor's cost to perform the units. It is unlikely that personnel in the Controller's office, who are not closely associated with the project, would know that commodities and services (services other than those provided by the contractor) are involved. Therefore, a necessary element of control is the contractor's certification that the source and origin requirements have been met. In this piling subcontract, the subcontractor was required to submit with his payment requests, AID Form 1440-3, Contractor's Certificate and Agreement with the Agency for International Development/Contractor's Invoice and Contract Abstract. By signing this form the subcontractor certified, among other things, that he complied with the source and origin requirements. For this reason, the separate Certificate of Source and Origin as required by the L/COM may not have been appropriate in this case. It was not, however, inappropriate for the reason that source and origin rules do not apply to unit-price contracts, as implied by the USAID in response to our RAF.

In our draft audit report, we recommended that the USAID issue clarifying instructions to ensure that all appropriate USAID personnel understand that source and origin rules do apply to fixed unit price contracts. The USAID did not agree with this recommendation as stated. The USAID responded that the applicability of source and origin rules to fixed unit price contracts is unclear at present and they will seek AID/W guidance on the matter and apply the rules in accordance with such guidance. Responding to another related recommendation, the USAID stated that Raymond's non-U.S. procurement is under review and action will be taken to either bill Raymond or request a source waiver.

We do not agree that source and origin rules are unclear with respect to fixed unit price contracts. AID Handbook 11, Chapter 2 clearly covers application of source and origin rules to construction contracts, such as involved here. In this case, both the loan agreement and Raymond's fixed unit price subcontract stipulate that commodities and services not of United States source and origin shall not be eligible for AID-financing. The intent of these loan and contract requirements, irrespective of the type of contract involved, is to ensure that the U.S. dollars are spent in the United States.

The USAID position is ambiguous -- on the one hand, the USAID contends that application of source and origin regulations to fixed unit price contracts is not clear, and, Certificates of Source and Origin are not appropriate for fixed unit price contracts; at the same time, the USAID sets forth that source and origin rules will now be applied to Raymond's non-U.S. procurements under a fixed unit price contract. Since the official USAID position is not clear, we believe guidance on general applicability of source and origin regulations should be obtained and have revised our initial recommendation to better address the needs of this situation.

Recommendation No. 6

USAID/W (a) obtain guidance from AA/SER as to the applicability of source and origin regulations, and, (b) issue instructions to ensure that USAID personnel understand and properly apply source and origin regulations.

c. Contractor Procurements from non-U.S. Sources and Origins - USAID payment approval procedures ignored the fact that compliance with subcontract terms (and loan agreement provisions) was not clearly determined. In conformance with the loan agreement, the ARE subcontract with Raymond stipulates that AID-financed procurements are only authorized from United States source and origin.

USAID project management officials, however, approved payment of a Raymond invoice for \$366,788 although notified several months earlier (through this audit) that Raymond procurements included about \$200,000 from sources and origins outside the United States. (USAID/E was notified by audit RAF dated October 3, 1979; USAID/E payment approval was on December 20, 1979).

Payment requests flow from the subcontractor/contractor through the Borrower's implementing agency, GASC, and supervisory A&E firm, de Laureal, to the USAID. At the USAID, payment requests are approved by IIDPS and then sent to the Controller for processing. The USAID Controller prepares the cables which authorize AID/W to make payments. Actual certifications of the payments are made by an AID/W official pursuant to these USAID-authorizing cables.

During the audit, Controller personnel told us that since this is a unit price construction contract, they were of the opinion that the source and origin requirements are not applicable. They also said that Raymond's invoices were based on units of work performed; therefore, they were not aware that commodities or materials were involved.

There was information available which showed that Raymond estimated the dollar costs for materials, equipment and freight at about \$2.5 million. Through discussions with Raymond's Cairo manager and review of purchase and shipping records which he made available to us, we concluded that the major expenditures were in compliance with the source and origin requirements. The records did show, however, that some of Raymond's hard currency costs were for commodities and delivery services from non-U.S. sources and origins. Many small-item purchases were made from the United Kingdom or other European Community countries and shipped to Egypt via non-U.S. carriers. Also, three pile driving rigs were transported to Egypt on non-U.S. flag vessels. We estimate that Raymond's hard currency costs for non-U.S. procurements of commodities and delivery services was the equivalent of about \$200,000.

In reply to our October 3, 1979 RAF, the USAID stated that Raymond submitted information showing that all significant procurement was of U.S. source and origin. In this RAF we had already noted that the major commodity purchases were from the U.S. and shipped to Egypt on U.S. flag vessels; but, we also reported that about \$200,000 in hard currency was spent on non-U.S. procurement. We reviewed the information provided the USAID by Raymond and found that it contained only documents for U.S. procurement.

\$200,000 is not an insignificant dollar drain. Also, the subcontractor's certification on the Form AID 1440-3 is still an open issue. Since the subcontractor did not fully comply with contract source and origin requirements, the certification is not entirely accurate. We would think the USAID would be interested in this also. However, rather than following through on these issues, the USAID, on December 20, 1979, approved payment of the subcontractor's invoice No. 8 for \$366,788.

Recommendation No. 7

USAID (a) review the subcontractor's non-U.S. source and origin procurements, (b) determine the full extent of the subcontractor's non-U.S. source and origin procurements, and, based on that determination, (c) assure that AID funds are not used to pay for non-U.S. commodities and services, as stipulated in terms of the subcontract.

In response to their request, we provided the USAID with copies of our workpapers on Raymond's non-U.S. procurements. In reply to the draft audit report, the USAID stated that audit workpapers of Raymond's non-U.S. procurement are under review and "... action will be taken to either bill the contractor or request a source waiver."

But, the USAID response does not address all the issues involved. The intended USAID actions are directed toward the audit finding of non-U.S. procurement but not the related open issue of the subcontractor's Form AID 1440-3 certifications. It seems that the USAID needs to look at its payment approval procedures, in this case, and determine whether all pertinent facts were considered, and whether all payment documents, including the Form AID 1440-3 certifications, were properly processed. Considering that the USAID was informed by audit RAF dated October 3, 1979 that Raymond's records showed about \$200,000 in hard currency spent on non-U.S. procurement for this project, the officials approving payment on December 20, 1979 had reason to closely examine payment request documentation with regard to requirements that procurements financed by AID dollars be of United States source and origin. The following recommendation is needed, in view of the USAID response and the circumstances.

Recommendation No. 8

USAID (a) review all approved payments and related documents processed in approving all payments under this subcontract to determine whether Forms AID 1440-3 certifications are reconcileable with the results of the review of non-U.S. source and origin procurements (see Recommendation No. 7). and (b) based on that determination, ensure the proper application of all pertinent Form AID 1440-3 clauses and requirements constituting the Contractor's Certificate and Agreement with AID.

The alternate action of seeking a source waiver, as set forth in the quoted USAID response to our draft audit report, does not seem applicable in resolving this situation. Such waiver, if requested and granted, would apparently contravene terms of legal contract and also circumvent the terms of the Form AID 1440-3 Certificate and Agreement between AID and the contractor.

Loan Amount - It is evident at this time that the amount of the loan is substantially more than the dollar needs of the project. Initially, the project was estimated to cost \$44,275,000 and LE 15,547,000, including escalation and contingencies. On June 29, 1975, the loan agreement was signed making \$44,275,000 available to the Government of Egypt. After completing the preliminary design, de Laoreal prepared a budget which showed that they estimated the project would cost \$34,456,628 and LE 29,425,183, including escalation and contingencies. There have been substantive changes in the cost estimate since the original budget and de Laoreal's most recent Budget Summary (February 29, 1980) shows a final total project cost of \$38,026,775 and LE 19,513,086. (See EXHIBIT C).

At this stage in project implementation, de Laoreal's cost estimate should be fairly firm -- the major construction contracts have been let at fixed unit rates; the majority of the equipment has been ordered under fixed-price contracts; and, the estimate includes a recent update of the A&E costs. Therefore, it seems appropriate at this time to adjust the loan to a more realistic amount in accordance with Handbook 19, 6 C 2 i, which provides.

"Followup on Undisbursed Loan Balances

(1) Geographic Bureau, through Missions, maintain active and continuing surveillance of each loan agreement to assure that the funds obligated therein do not exceed the monetary value of the goods and/or services which AID agreed to finance."

The USAID did not agree with our conclusion as presented in our RAF on this issue. The USAID response stated that there is no substantive evidence that the balance of the loan funds will not be needed before the project is complete. The USAID also responded that it would be poor financial management to deobligate before such evidence is available and to deobligate funds at this stage in project implementation would probably require a return to Congress for additional funding later.

Effective financial management results from effective planning and budgetary controls. All Federal activities are governed in this respect by certain regulations, operating procedures and related controls. A function of audit is to determine whether the Agency is in compliance. In this case, the amount of the loan is more than \$6 million in excess of de Laureal's estimated final dollar cost of the project. In our opinion, this warrants a detailed review of the project which will either confirm that the total loan funds are required for the agreed project or show the amount funds not required. If the review shows that a portion of the loan is not required, action should be taken to deobligate the unneeded funds. The operating procedure is directed to the Geographic Bureau so we are addressing our recommendation to the Bureau for the Near East.

Recommendation No. 9

AA/NE through the USAID, review the financing of the project and either (a) confirm that the total loan funds are needed for the project; or (b) take action to deobligate the unneeded amount of the loan.

Excess Currency Country Requirements - The de Laureal expatriate employees in Egypt had not purchased their Egyptian pounds from the U.S. Embassy although this is a requirement in the GASC-de Laureal contract and in the employees' agreements with de Laureal.

Egypt is designated by the U.S. Treasury as an excess currency country. In excess currency countries, AID-financed contractors and contract expatriate employees are required to purchase their local currency from the U.S. Government. This requirement was incorporated in the de Laureal/GASC contract and in de Laureal's employment agreements with its expatriate employees assigned to Egypt. We provided the Embassy Budget and Fiscal (B&F) Officer with a list of de Laureal employees and requested him to review the Embassy Cashier's records to determine whether the de Laureal employees were complying with this requirement. On November 7, 1979, he advised us that as of that date none of the listed de Laureal employees had filled out a Check Cashier's Identification Card. He said that this card must be completed and on file with the cashier in order for a person to exchange money. The absence of these cards for the de Laureal employees, he said, indicates that they have not procured any local currency from the Embassy.

Our review of de Laureal records and discussions with the team administrative officer disclosed that some of the employees purchased local currency directly from de Laureal. de Laureal receives a small portion of its fixed fee in Egyptian pounds and the records showed de Laureal had sold about \$8,000 worth to four employees. About 90 percent of this was purchased by one employee. de Laureal's administrative officer told us that they used the Embassy exchange rate (L.E. 0.70 to \$1.00) in selling this local currency to their employees. He said they had not sold any local currency since March, 1979.

de Laureal now has ten expatriate employees assigned to the team in Egypt. Except for their housing and utilities, which are paid by GASC, these people live off the local market so their requirements for local currency are not insignificant. We did not question anyone of them as to their source for local currency but it should be noted that local currency is legally available at an exchange rate about ten percent more favorable than the Embassy rate.

The Embassy recently published an Administrative Memorandum reiterating the requirement that all U.S. Government, contract and voluntary agency personnel must purchase their Egyptian pounds through the Embassy cashier. The Memorandum concluded with the following paragraph.

It is of the utmost importance that the regulations governing accommodation exchange transactions be complied with to the fullest extent. Any violation could cause embarrassment to the Embassy and result in disciplinary action being taken against the offender.

Recommendation No. 10

USAID take action to ensure that the contract employees are fully apprised of their responsibilities to purchase Egyptian pounds from the Embassy cashier and of the consequences for noncompliance.

Recommendation No. 11

USAID (a) consult with Embassy officials as to the actions that should be taken when contract employees do not comply with currency exchange requirements; and (b) based on these determinations, take action in the case of de Laoreal employees.

The Embassy has recently revised the accommodation exchange rate from LE 0.70 = \$1.00 to LE 0.81 = \$1.00. In reply to our draft audit report the USAID agreed to implement these recommendations. The USAID response also states the belief that the revision in the exchange rate now obviates the circumstances that led to the delinquency in this matter.

As a part of the monitoring function, we suggest that, in the future, the USAID periodically coordinate with the Embassy B&F Officer to determine whether employees of de Laoreal (and other AID-financed contractors) have filed the required identification cards and are exchanging currency in accordance with contract terms.

USAID Management of Project Activities

Project Monitoring - Many of the findings presented in preceding sections of this report indicate that USAID monitoring of the implementation of the Grain Silos Project has been too passive to be effective. By passive monitoring we mean that the USAID primarily relied upon others to identify and report project problems, deficiencies in site construction and procedures, testing, and similar matters of concern to project management.

Effective monitoring was further hampered because the supervisory A&E contractor did not thoroughly cover construction activities and problems in monthly and quarterly project status reports and did not submit these reports to the USAID when due. This passive or "hands-off" monitoring stance may be attributed, at least in part, to the fact that the USAID is not a direct party to the host country contracts involved and, therefore, does not have direct authority over project implementation.

Previous AG reports have pointed out numerous problems worldwide in project implementation and control when Host Country contracting is involved. When this type of contracting is used, project officials need to recognize the high probability that a "hands-off" attitude will result in a negative impact on project implementation; in most cases, the progress of the project must be watched closely. Those instances when it is possible to let the project go without close monitoring are few and far between.

In the case of this project, the selection of the supervisory A&E firm raised questions within AID of the nature expected to prompt project officials to watch the project progress very closely. In most capital assistance projects, the A&E firm is the USAID's primary source of information on the technical aspects of project implementation. Although the A&E firm is selected by the Host Country in most loan-financed projects, USAID has approval authority over selection of the firm and the terms of the contract. This authority provides a measure of control in that the USAID can assure itself that the firm selected is fully qualified to design the facility and supervise the construction. In the Grain Silos project, however, the A&E firm, because of its inexperience in silo construction and in overseas work in general, did not have the full confidence of AID/W or of the USAID, as discussed in the report section entitled "Selection of the Supervisory Engineering Firm" (page 4). The Chief of the USAID's Capital Development and Engineering Division at the time of de Laureal's approval as the A&E firm, stated for the record that the USAID will need to intensively monitor the A&E firm. Considering the circumstances it was logical that, in addition to the normal monitoring of de Laureal's quantitative inputs, the USAID would also give close attention to the quality of de Laureal's efforts, especially in regard to construction supervision. USAID, however, did not give this special attention to de Laureal and, as a result, was not aware of the ineffectiveness of de Laureal's quality control procedures or of the deficiencies in de Laureal's documentation of project activities.

IIDPS did say that they have spent more time monitoring this project than most, but the extra time was spent in reviewing the IFBs prepared by de Laureal for equipment procurement.

Major continuing project implementation problems, however, were at the project sites. Under de Laureal's supervision, the project experienced problems such as unsatisfactory workmanship, poor quality construction, inadequate testing of materials before use, and construction not meeting contract specifications. Detailed field and project site examination also showed deficiencies in de Laureal's quality control procedures and documentation of project construction activities. Allegations regarding poor quality construction were brought to our attention. These allegations included concerns over the possibility that these grain silos -- the largest in the Mid-east -- might be structurally unsound because of poor quality materials and construction practices. Some of these allegations could be partially verified by visual inspections, e.g., water leakage in the foundation of the workhouse section of the structure at Shubra. Examination of other areas, involving concrete strength, testing procedures, and quality control procedures, for example, require the expertise of a qualified professional engineer. These problems are discussed in preceding sections of this report, showing their relationship to de Laureal's supervisory responsibilities and pointing up the need to more intensively monitor project implementation.

Considering the concerns expressed within AID over the selection of de Laureal as the supervisory A&E contractor, too much reliance was placed on de Laureal's capabilities as opposed to close, active monitoring by USAID project management. As discussed earlier in this report, documented concerns within AID over the A&E contractor selection and the need for close project monitoring prompted our planning in-depth, comprehensive audit coverage, including engineering assistance and testing of in-place construction. These engineering examinations and tests might normally have been done by the USAID.

Also discussed in preceding report sections, the value of the de Laureal project status reports as a USAID and GASC monitoring tool was diminished because the reports were not timely and did not thoroughly cover construction activities and problems. Up to the time of our audit, the USAID did not obtain from de Laureal timely and complete reports needed for effective monitoring. This situation is a further indication of a "hands-off" attitude toward monitoring this high-dollar, capital project, implemented under the Host Country contract mode.

USAID's monitoring of ARE contributions to the project has also been too passive. The USAID's response to our Record of Audit Finding on the Quay 85 extension and dredging indicates a lack of involvement in this phase of project implementation (See report section entitled "Host Country Contributions, p. 21). As an example, in reply to our questions as to whether they agreed with the modification to construct the quay extension from minus 23 meters rather than building it up from the rock bed, the USAID replied:

"The dredging/construction contract referred to in the RAF is between the Alexandria Port Authority (APA), as the owner, and Egyco, a local construction firm, as the contractor. No financing by AID is involved. AID has no relationship to this contract with the APA so agreement was neither requested nor given."

Although AID funds were not involved, the extension of the quay and the dredging of the channel alongside the quay to accommodate large ships (over 30,000 metric ton cargo capacity) were considered key elements for the full utility of the project. USAID is responsible to monitor project activities not only in terms of insuring compliance with loan conditions and proper expenditure of AID funds, but also to insure that project objectives will be met by the end of the project. The improvements to the port facility as now being constructed will not meet project objectives. Also, about \$5.0 million of AID-financed equipment is to be installed on the quay when completed. This fact alone would seem to warrant USAID's involvement during the construction of the quay extension to assure that it is built to specifications. These Port improvements, an ARE contribution, are an integral part of the overall project, necessary to achieve ARE and AID project objectives. This situation illustrates an extreme example of the "hands-off" attitude in monitoring projects implemented through Host Country contracting. The USAID is now, after the fact, pursuing the issue of quay stability and has retained CWDD to make an independent assessment.

Another facet of project monitoring in which the USAID has not become fully involved is contractor compliance with the terms of the contract. We reported to IIDPS that the de Laureal expatriate employees had not purchased their local currency from the U.S. Embassy as required by the de Laureal/GASC contract. IIDPS told us that it was not their responsibility to make sure that the employees purchase their local currency from the U.S. Government.

We realize that this could be a sensitive area in which IIDPS may not wish to become involved; but, according to USAID's directive on project management (Mission Order No. 3-5), the Project Officer is responsible for promptly reporting, for proper action, noncompliance with the terms of the contract.

AID, in its various Handbooks, is described as a planning, financing and monitoring agency. The Handbooks seem to provide ample guidance on the planning and financing processes; but, they are almost totally silent on the subject of project monitoring. The USAID, to its credit, does have a directive on project management. The directive, Mission Order No. 3-5, is referenced to a now obsolete AID Manual Order and covers the duties and responsibilities of the Project Officer.

Monitoring the implementation of an activity such as the Grain Silos Project, where up to \$44 million of AID funds could be involved, is a stewardship function. As such, we believe that it is imperative that the USAID actively monitor the implementation of the project. The USAID should at least do enough active monitoring to, for example, assure itself that the A&E firm is adequately supervising the construction of the facilities. Further, we believe that project monitoring as a stewardship function, is sufficiently important to warrant the development of an individual monitoring plan for each project. Each project, after all, is unique. The Grain Silos Project has actual and potential problems not common to other capital assistance projects and definitely needs an individualized monitoring plan to enable timely and effective decisions and actions directed toward successful achievement of project objectives.

Recommendation No. 12

USAID establish a management plan for the Grain Silos project which will require active monitoring of all important facets of project implementation.

Responding to our draft recommendation, the USAID stated:

"The project is now monitored with both the AAG and CWDD Reports in hand. We believe that these Reports, together with regular site visits, constitute an effective plan. Additionally and mentioned earlier, the Mission is reviewing its monitoring control system for project review and will reissue/revise its instructions as a Mission Order in the immediate future."

We are retaining this recommendation pending completion of USAID actions.

The situations encountered in the implementation of this project do bring out a clear need for AID/W guidance in the area of monitoring projects under the Host Country contract mode. As noted earlier, AID Handbooks do cover adequately the Agency's planning and financing activities but do not address the monitoring function in sufficient detail to meet overseas working needs. Since this audit has only covered one project, we do not believe we have a basis to make a specific, overall recommendation to AID/W on this matter. However, we do believe that the situations involved in this project indicate a need for AID/W management to review the Agency's Handbook guidance, and elicit input from USAID's, with a view toward strengthening project monitoring.

Review of Payment Documentation - We reported (page 30) that the USAID had approved payments to the piling subcontractor although the payment requests submitted by the subcontractor did not contain all the required documentation and, in other respects, did not conform to the specific requirements of the L/COM. The most notable deficiency was that the payment requests did not contain the Certificates of Source and Origin, as required by the L/COM. The USAID response indicated that a Certificate of Source and Origin was not appropriate, for a unit price contract and for that reason payments were approved without this document. If the documentation as specified in the L/COM was not appropriate, USAID should have taken action to have AID/W amend the L/COM. L/COM's are, after all, legal documents and the provisions and requirements contained therein should be appropriate to the activity being financed and should be strictly adhered to.

Some of the other areas where the payment requests did not conform to the specific L/COM requirements were: the L/COM number was not shown on the documents, the contract number was not shown on the documents, the documents were not always dated, and the contractor's certification was not always complete. In addition, an outdated AID Form 1440-3, Contractor's Certificate, was used to support the payments. The January 1, 1969 version of the form was used whereas the L/COM specifically required the subcontractor to use the June 1977 version of the form.

These exceptions indicate a certain casualness in USAID's procedures for review and approval for disbursement of significant sums of money. We see no reason why AID's payment procedures should be no more nor no less formal and restrictive than the procedures utilized by a commercial bank under Letter of Credit payments. In the event of a dispute with a contractor, it would be unfortunate if AID's position was weakened, in a legal sense, because of a technicality in the payment documentation.

Recommendation No. 13

USAID issue appropriate instructions to ensure that personnel reviewing and approving payment requests understand that the payment request documentation should conform to the specific requirements of the Letter of Commitment.

Contract Payments to de Laureal

As part of the comprehensive audit of the Grain Silos Project, we reviewed the contract payments made to de Laureal Engineering, Inc., from the funds provided by AID Loan 263-K-028. The purposes of the audit were to examine contract payments and to establish final yearly overhead rates. Our audit period was from inception of the contract, February 1977, through June 1979. Payments to de Laureal for services during this period totaled, \$4,169,692.

The results of this segment of the Grain Silos Project audit were published in a separate audit report, (No. 6-263-90-5 dated April 28, 1980). Following is a summary of the audit results.

Overhead Costs - One purpose of the audit was to establish final yearly overhead rates (as required by paragraph 8 of the contract) for 1977 and 1978. The audit resulted in several adjustments to the overhead cost pools proposed by de Laureal. The most significant adjustment was our disallowance of \$112,800 in commission payments and \$7,393 expense reimbursement to de Laureal's Egyptian agent. The commission payments were part of a \$180,000 contract with the agent for services he performed in assisting de Laureal obtain the contract. The balance of the contracted amount was paid subsequent to 1978. We excluded the commission and related expenses from the overhead pool for the following several reasons.

(a) The services of the agent were performed prior to the signing of the GASC/de Laureal contract. The costs, therefore, were incurred prior to the date de Laureal was authorized to incur costs and are not reimbursable under the contract.

(b) The agent's agreement with de Laureal shows that the agent's services were solely for the purpose of assisting de Laureal to obtain the contract with GASC. The cost of the agent's services, therefore, directly benefit the contract and, so, are direct costs and not properly classifiable as overhead (indirect) costs.

(c) The GASC/de Laureal contract stipulates that all costs incurred in Egypt are direct costs. The agent's services were performed in Egypt; therefore, according to the contract, are direct costs and are not eligible to be included in the overhead cost pool.

(d) The GASC/de Laureal contract prohibits the use of AID funds to pay local costs. The agent is an Egyptian national and his services were performed in Egypt. The costs, therefore, are local costs and cannot be reimbursed with AID funds. The contract stipulates that local costs will be funded by the ARE.

The record shows that during contract negotiations both AID and GASC informed de Laureal that agent fees will not be allowable as direct costs. A de Laureal representative told us that the USAID advised him that the agent's fees could be included in the overhead cost pools, but this could not be documented or substantiated.

Based on the above and on other adjustments to the proposed overhead pool, we established final overhead rates of 126.36 percent for 1977 and 75.20 percent for 1978. We recommended that payments to de Laureal be adjusted to reflect the final overhead rates for the two years and that de Laureal be advised to use the final 1978 rate as the provisional overhead rate for billings from July 1, 1979, forward.

Direct Costs - We reviewed the direct costs claimed by and paid to de Laureal for services performed during the audit period and determined that costs of \$102,624 were not eligible for payment. A significant part of this disallowance was \$67,207 in subcontracting costs. Although the subcontract was on a cost-plus-a-fixed-fee basis, the subcontractor billed de Laureal for some salaries at fixed rates which were in excess of the salaries paid. The subcontractor contended that he agreed to do the job at fixed rates. We recommended that the payments to de Laureal be adjusted to recover the disallowed costs.

Accounting Records - Our review was somewhat hampered because de Laoreal's accounting records were not entirely adequate. For example, there were two general ledgers for 1978, neither of which was complete or accurate because ending and beginning balances had not been carried forward properly. In lieu thereof, de Laoreal used workpapers for control purposes which is not a reliable method of accounting. We recommended that de Laoreal be required to maintain a complete accounting system to record all AID-funded transactions for the project.

Grain Silos Project

EXHIBIT A

AID LOAN 263-K-028

Sub-Obligations, Disbursements and Amounts Audited
As of December 31, 1979

<u>L/Com</u>	<u>Company</u>	<u>Sub-Obligated</u>	<u>Disbursed</u>	<u>Audited</u>
2801	de Laureal Engineering Inc.	\$ 6,260	\$ 4,545	\$ 4,170
2802	Raymond International	3,544	3,077	3,077
2803	U.S. Steel	1,740	1,740	<u>1/</u>
2804	Transoceanic Shipping	2,188	-0-	<u>1/</u>
2805	Viela Industries	190	10	<u>1/</u>
2806	Fuller Company	4,854	466	<u>1/</u>
2807	CSI Scale Intl.	462	43	<u>1/</u>
2808	Cardinal Scale Mfg.	811	75	<u>1/</u>
2809	Abbott Power Corp.	1,008	410	<u>1/</u>
2810	Midwest Conveyor	3,429	-0-	<u>1/</u>
2811	Stephens Adanson	2,608	246	<u>1/</u>
2812	George A. Rolfes	179	-0-	<u>1/</u>
2813	CEA Carter	73	-0-	
2814	Huss & Schliener	120	-0-	
2815	CEA - Carter	124	-0-	
2816	CEA - Carter	37	-0-	
2817	Triple/s Dynamics	66	-0-	
2818	Triple/s Dynamics	74	-0-	
2819	American Egyptian Group	112	-0-	
	Totals	\$ 27,879	\$ 10,612	\$ 7,247
Loan Amount	\$ 44,275			
Sub-Obligated	<u>27,879</u>			
Balance	\$ <u>16,396</u>			

2/ The IFB procedures, bids and award of contracts were reviewed by the engineer loaned to us by the Office of Engineering, Bureau of Development Support AID/W.

Grain Silos Project
AID LOAN 263-K-028

EXHIBIT B

CWDD Suggestions for Repairing the Workhouse Pit
From a Letter, dated 1/10/80, to AAG/E

In response to your letter of 20 December 1979 regarding the referenced subject, we offer the following:

As Dr. Issa S. Oweis discussed with you and (your staff) it is his opinion that the patching work proposed for the workhouse may not result in an effectively waterproofed slab and walls as a) the slab was not waterproofed to start with. It has leaked in at least 13 places by de Laureau count; b) the walls have leaked in two places. This prompts doubt as to the effectiveness of the waterproofing at the time of construction; and c) the slab-wall junctions have leaked in several places.

Based on the above, you may wish to consider the following guidelines for alternative methods of repair:

Alternative A

1. Remove existing slab.
2. Prepare exposed base and place a bed of clean aggregate with particle sizes between 1 1/2 inch and No. 4 sieve.
3. Pour a 6 inch, plain concrete sub-slab.
4. Install cement plaster at least 1 inch thick and applied in 3 coats. The plaster should consist of one part Portland cement, two parts sand, and no more than two parts water. The sand should not contain particles smaller than No. 200 sieve size, should be salt-free and should be graded between No. 100 and No. 8 sieve. The cement paste coating should extend under the new slab (Step 5), up around pile caps and up along the walls (or wall collar).
5. Install new slab structurally connected to pile caps, columns, walls and pilaster. To accomplish this it may be necessary to build a wall collar structurally connected to the existing wall.
6. Repair waterproofing outside the walls. This can be accomplished by exposing the walls (using existing sheet piles for support), removing existing waterproofing and replacing it with a cement plaster coating of at least 3/4 inch thickness in two coats.

Alternative B

EXHIBIT B

Patch the existing slab and use it as a subbase (Step 3 above) and implement Steps 4 through 6 above. This alternative would require reconsideration of final design grade for the floor slab.

Details for implementing either of the above schemes should be worked out by the designer. It should be noted that cement plaster waterproofing is suggested because it is easier to inspect for imperfections and can be easily repaired if necessary. Thus the suggestion is Egyptian-oriented. The waterproofing system specified and used to date on the project is more vulnerable to damage, and it could be harder to repair damaged areas, as such areas can be difficult to locate.

We trust that this letter satisfies your request. Please contact us for any questions.

Very truly yours,

CONVERSE WARD DAVIS DIXON

rain Silos Project

EXHIBIT C

ID LOAN 263-K-028

Estimated Project Costs 1/

		<u>Original</u>	<u>Cost</u>	<u>Cost to</u>	<u>Total</u>
		<u>Budget</u>	<u>Incurred</u>	<u>Complete</u>	<u>Final cost</u>
Engineering	LE	650,500	778,343	100,243	878,586
(de Laureat)	\$	5,832,100	7,404,806	2,649,050	10,053,856
Construction	LE	23,259,682	7,356,306	5,428,445	12,784,751
	\$	707,977	5,292,028	544,307	5,826,335
Equipment	LE	5,048,425	345,258	5,037,925	5,383,183
	\$	19,221,955	14,723,305	2,320,089	17,043,394
Technical					
Services	LE	-0-	-0-	-0-	-0-
Equipment	\$	1,033,748	836,502	186,555	1,073,057
Spare	LE	-0-	-0-	-0-	-0-
parts	\$	1,844,522	-0-	1,844,522	1,844,522
Shipping	LE	466,576	-0-	466,576	466,576
	\$	<u>5,316,326</u>	<u>2,135,611</u>	<u>-0-</u>	<u>2,135,611</u>
Totals	LE	29,425,133	8,479,907	11,033,139	19,513,096
	\$	<u>34,456,623</u>	<u>30,432,252</u>	<u>7,544,523</u>	<u>30,026,775</u>

1/ This data was taken from de Laureat
February 1930 monthly report.

APPENDIX A

ACRONYMS, ABBREVIATIONS, DEFINITIONS

AAG/E	-- Area Auditor General Office in Cairo, Egypt
AAG/W	-- Area Auditor General Office in Washington
AA/NE	-- Assistant Administrator, Bureau for Near East, AID/W
AA/SER	-- Assistant Administrator, Bureau for Program & Management Services, AID/W
AID/W	-- Agency for International Development, Washington, D.C.
A&E	-- Architectural and Engineering
APA	-- Alexandria Port Authority
ARE	-- The Arab Republic of Egypt
B&F	-- Embassy Budget and Fiscal Officer
CWDD	-- Converse Ward Davis Dixon, a geotechnical Consulting Firm. with offices in Caldwell, N.J.
de Laureal	-- de Laureal Engineering, Inc., The A&E firm for the Grain Silos Project, U.S. office in New Orleans, La.
DS/ENGR	-- Office of Engineering, Bureau for Development Support, AID/W
GASC	-- General Authority for Supply Commodities, Division of the ARE Ministry of Supply responsible for the Grain Silos Project
IIDPS	-- Industrial and Infrastructure Development and Support, the division of USAID/E responsible for the Grain Silos Project
KCI	-- Kidde Consultants Inc. Corporate parent of de Laureal
L/COM	-- AID Direct Letter of Commitment
MISR	-- MISR Concrete Development Company, the prime contractor for the Phase I and II construction
Phase I	-- The first construction phase, involving the earthwork, pilings, and foundation
Phase II	-- The second construction phase, involving the silos and workhouse superstructures
RAF	-- Record of Audit Finding
Raymond	-- Raymond Engineering of Delaware, Inc.
USAID or USAID/E	-- U.S. Agency for International Development, Cairo, Egypt

LIST OF REPORT RECOMMENDATIONS

Recommendation No. 1

USAID, in coordination with GASC, require de Laoreal to (a) perform the necessary computations to determine whether the filter, as constructed, will function effectively; and (b) if the computations show that the filter will not function effectively, have the defective material replaced with material which meets contract specifications.

Recommendation No. 2

USAID, in coordination with GASC, consider CWDD suggestions for the repair of the workhouse pit (attached as EXHIBIT B to this report), keeping in mind the need for long-term utility of the structure and the fact that the pit floor is not waterproofed.

Recommendation No. 3

USAID, in coordination with GASC, (a) require de Laoreal to provide design computations to show the lateral and axial capacity of the piles and, (b) review the computations to determine that the piles, as installed, will adequately support the structures.

Recommendation No. 4

USAID (a) request guidance from AA/SER to clarify the AID Handbook requirements on notifying U.S. business of the availability of AID-financed work, based on that guidance, (b) issue appropriate instructions to USAID operating divisions.

Recommendation No. 5

If the advertising rule was applicable, the USAID request AA/NE for a waiver of the rule for the Phase I construction contract.

Recommendation No. 6

USAID (a) obtain guidance from AA/SER as to the applicability of source and origin regulations, and, (b) issue instructions to ensure that USAID personnel understand and properly apply source and origin regulations.

Recommendation No. 7

USAID (a) review the subcontractor's non-U.S. source and origin procurements, (b) determine the full extent of the subcontractor's non-U.S. source and origin procurements, and, based on that determination, (c) assure that AID funds are not used to pay for non-U.S. commodities and services, as stipulated in terms of the subcontract.

Recommendation No. 8

USAID (a) review all approved payments and related documents processed in approving all payments under this subcontract to determine whether Forms AID 1440-3 certifications are reconcilable with the results of the review of non-U.S. source and origin procurements (see Recommendation No. 7), and (b) based on that determination, ensure the proper application of all pertinent Form AID 1440-3 clauses and requirements constituting the Contractor's Certificate and Agreement with AID.

Recommendation No. 9

AA/NE through the USAID, review the financing of the project and either (a) confirm that the total loan funds are needed for the project; or (b) take action to deobligate the unneeded amount of the loan.

Recommendation No. 10

USAID take action to ensure that the contract employees are fully apprised of their responsibilities to purchase Egyptian pounds from the Embassy cashier and of the consequences for noncompliance.

Recommendation No. 11

USAID (a) consult with Embassy officials as to the actions that should be taken when contract employees do not comply with currency exchange requirements; and (b) based on these determinations, take action in the case of de Laureal employees.

Recommendation No. 12

USAID establish a management plan for the Grain Silos project which will require active monitoring of all important facets of project implementation.

Recommendation No. 13

USAID issue appropriate instructions to ensure that personnel reviewing and approving payment requests understand that the payment request documentation should conform to the specific requirements of the Letter of Commitment.

APPENDIX C

LIST OF REPORT RECIPIENTS

USAID/Egypt

Director	5
Inspections and Investigations Staff (AG/IIS/Cairo)	1

AID/Washington

Deputy Administrator	1
Assistant Administrator/Near East	5
Office of Middle East Affairs (NE/ME) (Egypt Desk)	1
Bureau for Near East (Audit Liaison Officer)	1
Bureau for Near East (Office of Project Development)	1
Office of Legislative Affairs (LEG)	1
Office of the General Counsel (GC)	1
Office of the Financial Management (FM)	1
Bureau for Development Support (DS/DIU)	4
Bureau for Development Support (DS/ENGR)	1
Bureau for Program and Policy Coordination (FPC/E)	1
Auditor General	1
Auditor General (AG/PPP)	1
Auditor General (AG/EMS/C&R)	12
Auditor General (AG/IIS)	1
AAG/Washington	1
AAG/East Africa	1
AAG/East Asia	1
AAG/Near East	1
AAG/Near East, New Delhi Sub. Office	1
AAG/Latin America	1
AAG/Latin America, La Paz Sub. Office	1