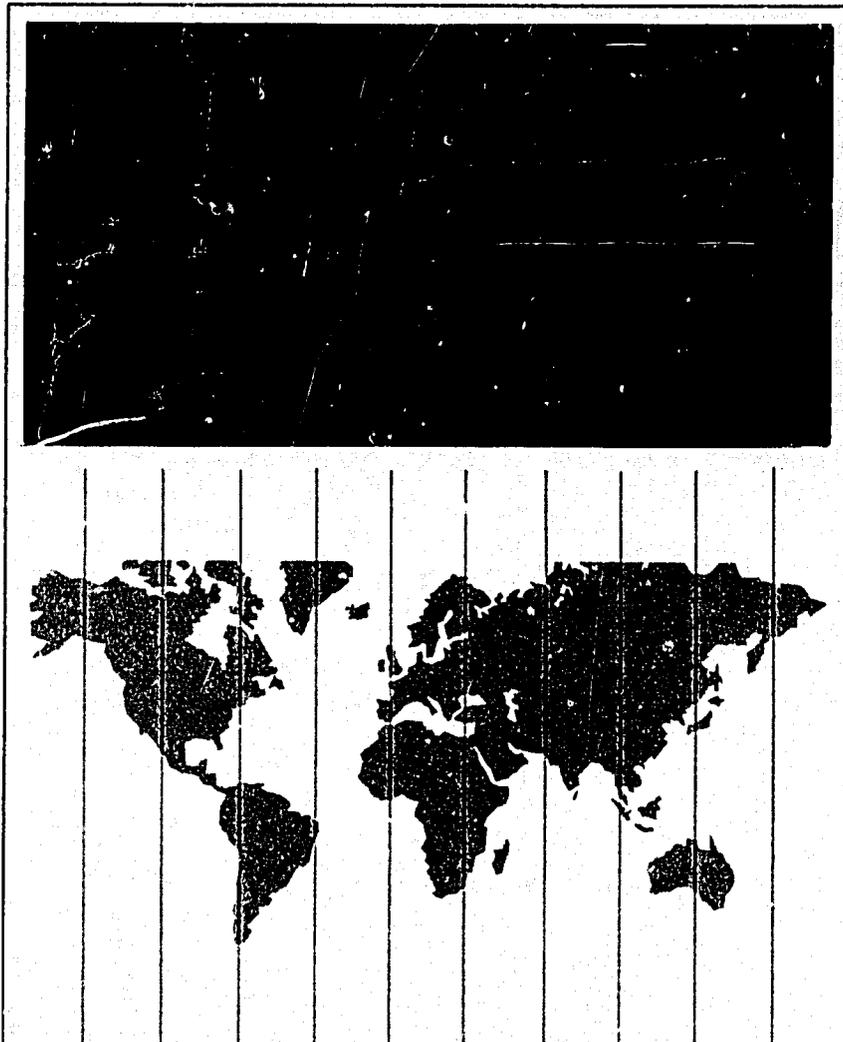


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UNITED STATES
AGENCY FOR INTERNATIONAL DEVELOPMENT

THE
INSPECTOR
GENERAL



Regional Inspector General for Audit
KARACHI

THE EUPHRATES BASIN IRRIGATION MAINTENANCE
PROJECT

LOAN NO. 276-K-011

USAID/SYRIA

AUDIT REPORT NO. 5-276-82-5

FEBRUARY 25, 1982

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AUDIT REPORT
ON
THE EUPHRATES BASIN IRRIGATION MAINTENANCE PROJECT
LOAN NO. 276-K-011
USAID/SYRIA

EXECUTIVE SUMMARY

The Euphrates Basin Irrigation Maintenance Project initially provided \$17.6 million to assist the Syrian Arab Republic Government (SARG) in their efforts to maintain a vast irrigation infrastructure for a dam built on the Euphrates River. The project objectives were to provide equipment and vehicles for the maintenance work, repair and maintenance facilities for the equipment, and technical assistance for design and construction of a maintenance shop and development of a training program for maintenance personnel.

Our audit was undertaken to determine whether the project was planned and implemented effectively and in accordance with Agency policies and regulations and to identify problems requiring management's attention. This was our second audit of the project and covered the period from April 1979 through December 1981. Our examination was conducted in accordance with generally accepted auditing standards and included such tests as we considered necessary under the circumstances.

Findings, Conclusions and Recommendations

The scope and impact of this project was greatly reduced in July 1981 when \$10.5 million of the original project funding was deobligated as a result of procurement disagreements. The principal component of the project was the procurement of equipment for maintaining the irrigation infrastructure in the Euphrates Basin. International Harvester (IH) submitted the only bid on the heavy trucks included in the first equipment procurement for the project. SARG agencies rejected the IH bid for the following stated reasons: (a) it violated their policy against accepting a single bid, especially for large amounts, (b) previous poor experience with IH and (c) the high bid prices. USAID/Syria officials believed that the bid was responsive and that the SARG's reasons were not sufficient to justify rejecting the bid. Because the trucks and other heavy equipment on which IH bid were considered essential to the project, the USAID/Syria Director advised SARG officials that if they did not provide this equipment from other sources, no further procurement would be allowed under the project. After the SARG failed to provide the equipment covered by the IH bid

USAID/Syria in effect abandoned the project objectives and since that time implementation has been limited to completing the procurement covered by the first invitations for bid sent out under the project. The cut-back in procurement and related reductions in project activities resulted in USAID/Syria deobligating \$10.5 million of project funds.

Irrigation Works Maintenance Equipment

- Abandoning the project's objectives and the reduced equipment procurement has resulted in a low utilization rate for the equipment that has been procured. We recommended that the USAID/Syria Representative determine whether this equipment can and will be used on the project and to transfer to other AID projects in Syria any equipment found to be in excess to project needs (see pp. 5 and 6).
- We found 24 pieces of high-value equipment that arrived at the project site damaged or missing parts that had delayed putting the equipment into operation. We recommended that the USAID/Syria Representative follow-up to ensure that necessary action is taken to locate or replace the missing parts and to repair the damaged equipment (see pp. 6 and 7).

Technical Assistance

- An international contractor was engaged to provide the technical assistance required for the project. Their consultants prepared the maintenance plan and arranged procurement as required, but the cancellation of a major portion of the project limited their activities, particularly the planned training. Despite this reduction in the contractor's scope of activities, both USAID/Syria and SARG officials were dissatisfied with their performance primarily because they failed to keep planned staffing levels at the project site (see pp. 7 and 8).

Shop Building and Equipment

- Components for a prefabricated repair shop building and two satellite buildings have been in Syria since September 1, 1980, but had not been erected at the time of our audit in February 1982. Despite many problems and delays, arrangements were in process to have the buildings erected, but further extension of the project terminal disbursement date will probably be required before the buildings are completely assembled (see pp. 8 and 9).

BACKGROUND

In 1973 the SARG completed building a dam (60 meters high and 4,500 meters long) on the Euphrates River at Tabqua in northern Syria. Lake Assad was created by the dam and reached its design capacity in May 1976. Using the water storage and regulation provided by the dam, the SARG is developing irrigation works in the Euphrates Basin where 640,000 hectares (ha) are considered suitable for irrigation. Prior to this, only about 200,000 ha of the area had been irrigated from natural river flows.

The General Administration for the Development of the Euphrates Basin (GADEB) was formed in 1968 as the executing agency of the Ministry of the Euphrates Dam (MED). GADEB is responsible for the integrated development of the basin, including the irrigation and drainage works. The GADEB has given first priority to development of 95,000 ha in the Balikh region which begins about 20 kms downstream from the dam. This area has reasonably good soils and can be irrigated by gravity flow from the reservoir or by low lift pumps. The World Bank and Rumania are providing most of the funds for the irrigation projects in the area. The infrastructure to serve this 95,000 ha area includes 800 kms of main supply canals, 900 kms of secondary canals, 500 kms of surface drains, 800 kms of roads and ten major pumping stations.

This AID project was developed from a World Bank appraisal of the project area which reported insufficient maintenance and support facilities and called for upgrading maintenance equipment along with the facilities, spare parts, and training required to service the maintenance equipment. The loan agreement was signed on July 22, 1976, and authorized \$17.6 million for the project. Initial project objectives were to provide financing for:

1. Necessary equipment and vehicles to maintain the irrigation and drainage works, pump stations, and roads in the 95,000 ha project area,
2. Procurement of equipment and construction of repair and maintenance shop facilities for the equipment and vehicles, and
3. Contractor assistance to design construction and operation of the maintenance shop and for other necessary technical training of GADEB personnel.

Initial cost estimates for the project allocated funding to the following areas:

<u>Estimate For</u>	<u>Funding Resource (\$ 000)</u>		
	<u>AID</u>	<u>SARG</u>	<u>Total</u>
Maintenance Equipment	\$10,774	\$ 12	\$10,786
Shop Tools and Buildings	1,706	589	2,295
Consulting Services	2,282	319	2,601
Participant Training	133	-	133
Contingencies and Escalation	<u>2,705</u>	<u>468</u>	<u>3,173</u>
Total	<u>\$17,600</u>	<u>\$1,388</u>	<u>\$18,988</u>

The purpose of our audit of the Euphrates Basin Irrigation Maintenance Project was to determine whether project activities were planned and implemented effectively and in accordance with Agency policies and regulations, and to identify problem areas requiring management attention. This project was last audited in a Review of the Syria AID Program, Audit Report 5-276-79-14 dated May 29, 1979. That review covered project activities through March 31, 1979, and included no recommendation concerning the project, although it was noted in the report that parts of the project were 12 to 15 months behind schedule. Our audit field work was conducted in January and February 1982 and covered the period from April 1, 1979, through December 31, 1981. Our examination was conducted in accordance with generally accepted auditing standards and included such tests as we considered necessary under the circumstances. A draft copy of this report was reviewed with USAID/Syria officials and they were in basic agreement with our conclusions and recommendations.

AUDIT FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

A. PROJECT IMPLEMENTATION

The Euphrates Basin Irrigation Maintenance Project was one of several activities funded by AID in 1976 when U.S. assistance to Syria was resumed to signal support for Syrian efforts to find a peaceful solution to problems in the Middle East. By 1979, as noted in our previous audit report, Syria's position had changed to open opposition to the U.S. supported Egyptian-Israeli peace treaty. This opposition resulted in the elimination of a planned \$45 million program proposed for 1980 in Syria. Since then no new AID funding has been committed for Syria and USAID/Syria has directed their activities primarily at completing implementation of existing projects. Although it is difficult to say how the political atmosphere has affected project implementation, the reader should remember that the period covered by this audit was a time of very difficult relations between the Syrian and U.S. governments.

This Project is now planned to terminate on June 30, 1982. At that time the project objectives will only be partially met because of procurement disagreements between GADEB and USAID/Syria that resulted in cancelling much of the planned procurement and deobligating over half the project funds. Some equipment was procured, but major equipment components including a large fleet of heavy trucks and plant equipment for aggregate, cement and asphalt were cancelled. A prefabricated maintenance shop building and two satellite buildings were procured and at the time of the audit arrangements were being made for their erection even though the shop tools and equipment planned for the buildings will not be procured. In addition, planned staff for the maintenance shops has not been hired nor has the planned training taken place.

As of December 31, 1981, only \$7.1 million of project funding was obligated. The balance of \$10.5 million was deobligated on July 1, 1981. The status of project expenditures at year-end was:

	<u>Total</u> <u>Obligated</u>	<u>Accrued</u> <u>Expenditures</u>	<u>Pipeline</u>
Technical Assistance	\$2.3	\$1.3	\$1.0
Shop Building	.7	.6	.1
Equipment Parts	<u>4.1</u>	<u>3.0</u>	<u>1.1</u>
Total	<u>\$7.1</u>	<u>\$4.9</u>	<u>\$2.2</u> 1/

1/ The pipeline of \$2.2 million represents residual funds in the Letters of Commitment for technical assistance and completing the shop buildings, commodity procurement and purchase of spare parts that are under contract and have arrived or are due to arrive in the near future.

Project implementation was disrupted by the controversy which arose over the procurement of 28 heavy duty dump trucks. These particular trucks were part of the first equipment procurement which, in addition to more than 100 trucks, included many different kinds of earth handling equipment and a wide variety of support equipment. The invitation for bids (IFB) were prepared by the project's technical assistance consultants, Louis Berger International, Inc. (LBII), and approved by officials of both GADEB and USAID/Syria. The bids were opened on October 18, 1979, and given to a committee composed of GADEB officials and members of the LBII team for review. In the initial review of the bids, the committee noted that only one bid from IH had been received for the heavy trucks and that the prices for the dump trucks were high. Nevertheless, the committee reported to the GADEB Director General on February 6, 1980, and the IH bid for 73 of the trucks was among those recommended to be accepted. On receiving notice of the committee's recommendations, and after deleting certain other bids which had not been responsive to the IFB, USAID/Syria approved the procurement by issuing an implementation letter.

On April 5, 1980, shortly after issuance of the USAID implementation letter, the MED advised USAID/Syria that they were rejecting the IH bid because: (a) it was the only one received, (b) in earlier dealings with IH, other SARG organizations had had poor service for both parts and maintenance, and (c) they believed the IH prices were too high. USAID/Syria determined that these were not sufficient reasons for rejecting what USAID considered to be a responsive bid. They said that on other occasions the SARG had accepted bids when only one was received. They also believed the effectiveness of the local IH representative was not important because under the project GADEB planned to develop the capacity to handle their own maintenance and would also procure an inventory of spare parts. Regarding the price, USAID/Syria stated that the prices were considered reasonable in light of the special features of the trucks and that if the trucks were rebid the prices would probably be even higher.

When the MED refused to change its position the USAID/Syria Director advised the Minister that if the IH bids for trucks and other heavy equipment were rejected then AID financing would not be available for the \$5.4 million portion of the project on which IH had bid. Further, because this equipment was essential to meeting the objectives of the project, if the MED did not provide the equipment from other sources of funding by September 30, 1980, no further AID procurement beyond that authorized in the earlier implementation letter would be made under the project. AID would then ask for consultations as called for under the loan agreement when events have occurred that make it improbable that the purposes of the loan will be attained.

The USAID/Syria Director considered terminating the total project, but believed AID should honor the earlier implementation letter which authorized certain awards for other responsive bids and some items that were to be rebid. He did not want to be in the position of reneging on the earlier commitments because he felt this would weaken USAID's position that AID and the suppliers had done everything possible to accommodate the MED's requirements and concerns. Further, although USAID/Syria had requested that the MED delay notifying suppliers until the issues on all

awards had been settled, 20 suppliers had been notified of their bid acceptance. The Director believed that these suppliers would suffer and have justifiable cause for complaint if the project were cancelled after having gone so far with the procurement actions. He was also concerned about the effect that cancellation of the entire project would have on U.S./Syrian relations. Although the September 30 deadline was extended to further consider whether the IH bid was responsive to the IFB; the MED did not accept the bid nor did they make other arrangements for getting the trucks and other heavy equipment for the project.

On November 13, 1980, USAID/Syria requested consultations with the MED to reach an understanding on the future handling of the project. The MED did not respond to the request for consultations and on February 19, 1981, by implementation letter, USAID/Syria advised MED that no new invitations for bids would be issued. As of July 1, 1981, all project funds for which Letters of Commitment had not been issued, less \$700,000 for procuring spare parts for the equipment already procured, was deobligated. In total, \$10.5 million was deobligated including all funds intended for the purchase of shop equipment.

In a June 1981 memo to files, the former USAID Director observed that "the effect of these decisions was to abandon quietly the project objectives and convert to what was essentially an equipment drop". No formal actions were taken to reflect these changes in the project, although a February 1981 implementation letter referred to a need "to arrange for an orderly conclusion of activities under the loan".

Since that time, USAID/Syria's implementation of the project has mostly been limited to completing the procurement for which Letters of Commitment had been issued, along with procuring spare parts for equipment and erecting the prefabricated main repair shop and satellite shop buildings. The LBII contract was extended with reduced staff principally to complete the equipment and spare parts procurement and is now to be renewed to provide supervision for completion of the shop buildings.

Irrigation Works Maintenance Equipment

Only a small part of the maintenance equipment originally planned for the project has been procured. IFB's for the first three categories of equipment (heavy machinery, trucks, and support equipment) went out at the same time. The bid review committee initially recommended accepting bids from 21 companies for equipment from the first three categories valued at \$11.4 million. Bids valued at \$5.4 million from IH for trucks and heavy equipment were rejected by MED. Three other bids valued at \$1.6 million, including a bid for 68 pick-up trucks, were considered non-responsive by AID and were to have been rebid. Although new IFB's were prepared by LBII they were never distributed. Finally, five bids valued at \$1.0 million were withdrawn by the suppliers because of GADEB's delays in accepting the offers.

From a proposed procurement of \$11.4 million, GADEB actually procured equipment valued at only \$3.4 million. Even if all of the funds planned

for equipment had been used, the funds would have provided less equipment than was originally planned for the project because of the implementation delays and rapidly rising costs. After the first bids were opened and the prices found to be higher than anticipated, the LBII project director advised GADEB that \$4 million of additional funds would be needed to procure all the equipment planned for the project. In response to GADEB's inquiry, USAID/Syria advised them that no additional funds would be available for the project.

The principal maintenance equipment components which were not procured were the trucks and the production plants for aggregate, asphalt, and concrete. In addition to the LH trucks, 68 pick-up trucks were not procured because that bid was not responsive. The heavy equipment tractors were not procured because of delays in accepting the offer.

In our review of project equipment, we found that utilization was low. This seems to be attributable to the abandonment of project objectives and to a failure to train equipment operators and to procure all planned equipment. For example, four of eight trailers procured to move equipment have not been used since their arrival on October 19, 1981. The tractors for these trailers were never procured, and although GADEB has other tractors that are being used, the shortage of tractors and the low utilization rate for the other equipment will result in less than planned utilization of the trailers.

Because the project was not implemented as planned, it is possible that certain pieces of equipment that were procured cannot be used on the project. We believe that USAID/Syria should review the project funded equipment and determine whether all AID financed equipment on hand can and will be used on the project. Any equipment found to be excess to current project needs should be transferred to other AID funded projects in Syria. AID's current Representative feels that any such equipment could be used on other capital development projects that are now being implemented in Syria.

Recommendation No. 1

The USAID/Syria Representative should determine whether the equipment procured for the project from AID financing can and will be used on the project within a reasonable time. Any equipment found to be excess to project needs should be transferred to other AID funded projects in Syria.

We performed end use checks on 38 of the 57 major pieces of equipment procured for the project. We were not able to visit all of the construction sites where the other 19 pieces of equipment were being used because of poor road conditions but we did observe several of the units in use. We believe that some of these pieces of equipment require specific USAID attention to ensure that they are properly used for project purposes:

Insley Backhoe - 4 - \$647,603. This equipment arrived at the project site on November 11, 1981, and had not been assembled for operation at the time of our review. The LBII project director pointed out damage due to faulty handling at the port to at least one of the units.

Superior Buckeye Ditcher - 1 - \$126,259. This piece of equipment arrived at the project site on October 25, 1981, in damaged condition. The supplier's agent was supposed to assess the damage but, at the time of our review, no action had been taken to place the equipment into operation.

Wacker Vibro Plates - 12 - \$23,504. This equipment arrived at the project site in two shipments in July and September 1981. GADEB has been waiting for the supplier's representative to ready the machines for operation. Thus far, the equipment has not been used and three pallets of spare parts are missing.

Clark Articulated Tractor Dozer - 3 - \$446,831. This equipment arrived at the project site in March 1981 but was missing parts required to assemble the machines for operation. The missing parts were fabricated locally to put one of the machines into operation, but the other two have not been utilized. The GADEB project manager said that the missing parts had been shipped by the supplier.

Champion Motor Graders - 4 - \$281,095. This equipment arrived at the project site in October 1981 but was missing 4 boxes of spare parts. The graders were put into operation but, at the time of our review, one was not in use because of a worn scraper blade. Replacement scraper blades are included in the four missing parts boxes.

USAID/Syria should follow-up with GADEB to make certain that the necessary action is taken to locate or replace the missing parts for the above equipment and to repair the equipment that was in a damaged condition at the time of arrival at the project site. We believe a very close follow-up is necessary (considering the two tractor dozers that have stood unused for over 10 months) to make certain that this AID funded equipment is available to the project with all necessary parts and in good operating condition.

Recommendation No. 2

The USAID/Syria Representative should follow-up with GADEB to ensure that action is taken to locate or replace the missing equipment parts and to repair all damaged equipment. Follow-up should continue until all AID financed equipment is properly utilized for acceptable project purposes.

Technical Assistance

LBII has provided the engineering consulting services called for in their contract for identifying the irrigation maintenance and repair shop equipment, for preparing the IFB's to procure that equipment, and for designing the irrigation works maintenance system and the repair shop facilities. On the other hand, almost none of the staff training called for in the contract was accomplished and, at the time of the audit, LBII's supervisory arrangements for erection of the repair shop buildings was just being negotiated.

LBII's field staff, with support from their main office, did produce the plans and studies needed to identify the equipment required for the project. They also prepared the IFB's for procuring the equipment, but most of that work proved to be futile because little of the equipment was procured. The equipment maintenance training which was to have been the project's principal training effort, was never started. When the shop equipment for the project was eliminated in 1980, GADEB apparently dropped their plan to recruit trainees. The initial project plan called for the consultants to work with GADEB staff in the new shop buildings for at least a year but the shop buildings still remain to be erected and the last LBII advisor assigned to the project is expected to leave as soon as the building is completed.

Both USAID/Syria and SARG officials have expressed dissatisfaction with LBII's performance, primarily because of their failure to keep the planned staffing level at the project site in Raqqa. LBII had problems recruiting qualified personnel who were acceptable to GADEB for the project. GADEB delays in making decisions also contributed to LBII's problems, in one case resulting in having a prospect take another job due to the delay and in another sending a man to the project believing he had been approved only later to learn that he had been rejected. Raqqa is a remote rural town and out of 16 persons LBII sent for the project, four stayed less than 6 months and two of them were at the site only a month or less.

Shop Building and Equipment

A prefabricated main repair shop building and two satellite buildings were procured from project funds, but since none of the equipment for the shop has been procured, the buildings will probably never be used as intended. Arrangements for erecting the buildings have lagged and, at the time of the audit, it was still uncertain when the buildings would be erected. The building components were unloaded at the port on September 1, 1980, and delivered to the proposed construction site on January 6, 1981. The components have been stored in the open since arrival in Syria. Most of them show some deterioration from weather and handling. Some of the wooden crates used in packing have broken open, and we noted ventilator fans, roll-up doors and electrical controls that are exposed to the elements. Many parts are lying loose on the ground and about two thirds of a crate of bolts are missing. Most of the main structural members appeared to be in good shape but a few had been bent and a number of the bolt flanges were damaged. The LBII Project Director told us that the components had not been checked in completely because they had not received a copy of the ship's manifest. The contractor's staff did examine all the components on arrival at the construction site and they believe that five packages of the total shipment are missing. Replacement of the missing or damaged parts will probably further delay completion the building.

GADEB has delayed engaging a construction contractor because the building supplier and LBII were late in furnishing the bills of quantities for the building in a form needed to negotiate a local building erection contract. USAID/Syria officials brought representatives from the building supplier and LBII together in September 1981 in Damascus to resolve this problem. Although commitments were made for immediate action, GADEB did not receive the needed bills of quantities until January 1982 and only then began

negotiations with a construction contractor. The building supplier is required to provide an engineer to oversee the construction work and has requested that the LBII project director provide support services for their engineer in place of the civil engineer called for in their contract. At the time of our audit, the LBII contract had not been renewed and AID had placed a limit of May 31, 1982, for expiration of the LBII contract extension. With work on the building construction not yet started, and considering present adverse winter weather conditions and the above indicated damages, erection of the building may not be completed by June 30, 1982, the Terminal Disbursement Date (TDD) for the project. In this event, USAID/Syria officials plan to request an extension of the TDD to provide for final payment to the U.S. firm for construction of the building. Although progress is slow, it appears that the necessary actions are being taken to complete the building.

LIST OF REPORT RECIPIENTS

USAID/Syria

AID Representative 5

AID/W

Deputy Administrator (DA/AID) 1

Bureau For Near East

Assistant Administrator (AA/NE) 2

Office of Jordan/Lebanon/Syria Affairs (NE/JLS) 1

Audit Liaison Officer 1

Bureau For Science and Technology

Office of Development Information and Utilization (S&T/DIU) 4

Bureau For Management

Office of Financial Management (M/FM) 1

Bureau For External Relations

Office of Legislative Affairs (EXRL/LEG) 1

Office of the General Counsel 1

Office of the Inspector General:

Inspector General (IG) 1

Assistant Inspector General for Investigations and Inspections
(AIG/II) 1

Communications and Records Office (IG/EMS/C&R) 12

Policy, Plans and Programs (IG/PPP) 1

Regional Inspector General for Audit:

RIG/A/W 1

RIG/A/Nairobi 1

RIG/A/Manila 1

RIG/A/Cairo 1

RIG/A/Panama 1

OTHER

Regional Inspector General for Investigations and Inspections
(RIG/II/Karachi) 1

New Delhi Residency 1