PDBBP361

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT DATA SHEET

1. TRANSACTION CODE: C (A = Add, C = Change, D = Delete) — Amendment Number: 2 — DOCUMENT CODE: 3

2. COUNTRY/ENTITY: SOMALIA

3. PROJECT NUMBER: 649-0114

4. BUREAU/OFFICE: AFR

5. PROJECT TITLE (maximum 40 characters): KISMAYO PORT REHABILITATION

6. PROJECT ASSISTANCE COMPLETION DATE (PACD): MM 03 DD 31 YY 92

7. ESTIMATED DATE OF OBLIGATION (Under "B." below, enter 1, 2, 3, or 4): A. Initial FY 83 B. Quarter 4 C. Final FY 85

8. COSTS ($000 OR EQUIVALENT $1 =)

A. FUNDING SOURCE	FIRST FY B. FX	FIRST FY C. L/C	FIRST FY D. Total	LIFE OF PROJECT E. FX	LIFE OF PROJECT F. L/C	LIFE OF PROJECT G. Total
AID Appropriated Total	5,000		5,000	36,000		36,000
(Grant)	(5,000)	( )	(5,000)	(36,000)	( )	(36,000)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.		3,400	3,400		4,400	4,400
Host Country						
Other Donor(s)						
TOTALS	5,000	3,400	8,400	36,000	4,400	40,400

9. SCHEDULE OF AID FUNDING ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	C. PRIMARY TECH. CODE 2. Loan	D. OBLIGATIONS TO DATE 1. Grant	D. OBLIGATIONS TO DATE 2. Loan	E. AMOUNT APPROVED THIS ACTION 1. Grant	E. AMOUNT APPROVED THIS ACTION 2. Loan	F. LIFE OF PROJECT 1. Grant	F. LIFE OF PROJECT 2. Loan
(1) ESF	991	890		36,000		See block 16		36,000	
(2)									
(3)									
(4)									
TOTALS				36,000				36,000	

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 823

11. SECONDARY PURPOSE CODE: 739

12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code							
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To improve the economic and social well-being of the people in the Southern region of Somalia by assuring the continued availability of an essential component of the area's trade-enabling infrastructure (Kismayo Port).

14. SCHEDULED EVALUATIONS: Interim MM YY MM YY — Final MM 07 YY 88

15. SOURCE/ORIGIN OF GOODS AND SERVICES: [X] 000 [X] 941 [X] Local [ ] Other (Specify)

16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a ___ page PP Amendment)

It is proposed to amend the project to utilize $4.6 million in uncommarked funds to rehabilitate the Kismayo Water Supply System, an essential ancillary facility to the Port.

I concur in the methods of implementation and the financial arrangements under this project. Also in accordance with 87 State 099662, the local currency accounting system at the Ministry of Finance, Domestic Development Division is adequate. See section V.C for details.

Michael R. Bradley, Controller, USAID/Somalia

17. APPROVED BY — Signature: [signature] — Title: DIRECTOR, USAID/SOMALIA — Date Signed MM 05 DD 15 YY 88

18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY

AID 1330-4 (8-79)

KISMAYO PORT REHABILITATION PROJECT (649-0114) PP SUPPLEMENT

TABLE OF CONTENTS

II. Project Background

A. Kismayo Port Rehabilitation

AID's involvement with the Kismayo port began with the original construction during the 1960's. An AID Grant in 1962 financed the Phase I construction of a new deep water port. An AID Loan in 1963 financed the Phase II construction, including a water system, an expanded power plant, warehouses, POL handling facilities, port handling equipment, and a communications system to service both the port and the City of Kismayo. Phase I was completed in 1967, and Phase II in 1970. The port facilities deteriorated rapidly thereafter, due primarily to the high chloride content of the construction materials. Late in 1978 the GSDR requested AID assistance to rehabilitate the port. AID agreed, and the Kismayo Port Rehabilitation project, first authorized August 12, 1982, reached a maximum authorized total of $42 million in June, 1985. The initial obligation was made on September 23, 1982. $6.0 million in Project funds were deobligated on October 30, 1985, leaving a total current obligation of $36.0 million. The PACD, as amended, is March 31, 1992.

The purpose and goal of the ongoing Project are to improve the economic and social well-being of the people in the southern region of Somalia, and to improve Somalia's balance of payments situation. The Project finances design and construction services for the complete rehabilitation of the existing port. The purpose, goal and objectives remain valid and unchanged by this PP Supplement.

The Project primarily involves the demolition, reconstruction, and extension of the original pier and its four berths. Berths 1 and 2 were completed in June 1987 and turned over to the Somali Port Authority for operation. Work on Berths 3 and 4 was completed in early June 1988.

The Project is also financing the provision or rehabilitation of essential ancillary facilities, i.e., those facilities outside of the rehabilitation area of the pier but essential for proper functioning of the port. These facilities included dredging of the access channel, repairs and improvements to existing navigation aids, provision of yard lighting and an electrical power distribution system, and installation of new sanitary facilities. This work is scheduled for completion by September, 1988.

The project design identified other "desirable" items for repair or improvement, but did not include funds for them. In 1986 the Project was amended through a memo to the files approved by the USAID/Somalia Director on November 3, 1986, to include these items in the design and construction contracts: repair of the scale house, banana warehouse, maintenance shed, longshoremen's building, access road lighting, transit sheds 1 and 2, and the causeway and access road; replacement of the administration building; and construction of an extension to Berth 1. These too are also scheduled for completion by September, 1988.

The original cost estimates for the rehabilitation work were higher than current contract commitments. A.I.D. direct contracts were awarded for design and construction inspection services to Parsons Brinckerhoff International (PBI) and for construction services to the U.S. Navy's Naval Facilities Engineering Command (NAVFAC). A NAVFAC subcontract for construction was awarded to the G.A. Fuller Company (GAFCO) on September 9, 1985. Cumulative commitments for the project, consisting of $ 25,996,766 for Base Construction, $ 2,681,881 for A&E Design, and $ 2,128,876 for Construction Services, total approximately $ 30.9 million. With all approved work underway and due to be completed soon, most of the balance of $ 5.1 million in obligated funds is expected to be available for reprogramming or deobligation. Of this $5.1 million, $500,000 must be reserved for possible contractor claims. This leaves a balance of $4.6 million available for financing the activities of this PP supplement.

B. Rationale for PP Supplement

The technical analysis for the Project identified and considered most but not all pier, ancillary and desirable items that required rehabilitation. One major oversight was the water supply system. Utility work as part of the pier rehabilitation plan included a new potable water distribution system to supply ship service boxes and other port facilities. The design of the pier water system assumed that potable water would be supplied to the port by the City of Kismayo. This assumption was incorrect.

The Kismayo Water Supply System (KWSS) and its operating entity, the Kismayo Water Agency (KWA), are unable to supply potable water. The KWSS was designed and constructed by the 1960's A.I.D. project to pump water from the Jubba river, treat it to make it safe for human consumption, and pump it to the port for distribution to ships and port facilities. However the quantities of suspended solids in the Jubba River water exceeded the design capacity of the treatment plant, and the water system had immediate operational problems. The KWA lacked adequate spare parts, tools, service equipment and training to provide the required servicing and maintenance, which led to system failures. KWA's lack of foreign exchange for the purchase of chemicals forced a portion of the treatment process to be discontinued. As a result, all water treatment processes failed. Untreated water has been pumped directly from the river to the city and port for the past fifteen years.

As work on the port rehabilitation progressed, the deteriorated condition of the KWSS was brought to the attention of the highest levels of the GSDR, which in turn requested A.I.D. assistance to rehabilitate the system (ANNEX A). A team from the Water and Sanitation for Health project (WASH) was fielded early in 1987 to advise USAID/Somalia how to correct design and operating deficiencies of the water treatment and transmission facilities. The WASH investigations considered new construction, but concluded that the existing treatment concept was appropriate and that the major structures were in good condition and could be rehabilitated. The WASH report, dated May 1987, recommended steps to upgrade treatment processes, improve and simplify operations, and correct design deficiencies. The estimated cost of the proposed physical rehabilitation was $ 7.6 million, based on a construction plan that assumed completion in 1988.

In August 1987, USAID/Somalia requested AID/W consideration of a proposal to finance the rehabilitation of the KWSS from unutilized funds in the port project. The request pointed out the critical need for potable water to service the port. Ships complain about water quality and availability. If the situation remains unresolved, shipping lines may avoid the port or charge higher demurrage fees. The port would be less attractive and competitive, and this would negatively affect the intended benefits from the Project. In addition to these economic considerations, it is unlikely that the environmental consequences of the untreated water supply could have been ignored if the water quality problem had been recognized during the PP design. In October, 1987 AID/W concurred in the Mission's proposal.

AID/W deferred one key procedural issue to the field: whether the KWSS rehabilitation work should be developed as an amendment or as a new and separate project. AID/W questioned whether the KWSS could be defined as an ancillary facility of the port, given the distance (32 Km. - map over) of the water treatment plant from the port, and the large benefits from the KWSS rehabilitation work that would accrue to the City of Kismayo. However based on the port's critical need for potable water, the historical and physical relationship of the KWSS construction to the original port project, the Project's erroneous assumptions, and the plan to rehabilitate only the treatment facility and pipeline to the port, the REDSO/RLA recommended, in a memo to the USAID/Somalia Director dated January 31, 1988 (ANNEX C), that the KWSS rehabilitation be developed as an Amendment to the Project.

III. Project Description

A total of $ 4.6 million in A.I.D. funds will be provided for the foreign exchange costs of Architectural and Engineering Services (A&E), construction, procurement of a store of spare parts and supplies to rehabilitate the physical plant of the KWSS, improve KWA's management of the system, and facilitate Mission monitoring of the work. The A.I.D. Project will focus on the water treatment facility and transmission line to the port. Improvements to the city distribution system, long-term solutions to recurrent cost issues, and additional institutional strengthening of the KWA will be the subject of a separate World Bank infrastructure program. Together the two programs address the issues and concerns raised by the WASH report, AID/W, and the PP Supplement analyses.

A. KWSS Rehabilitation

Physical Rehabilitation - a comprehensive program to simplify, replace, repair, improve or reconstruct each component of the KWSS will be added to the port rehabilitation project (see ANNEX B, flow chart of the water treatment process). A new intake pump station, presedimentation basins, and chemical feed facilities will be constructed. Pretreatment units, sedimentation basins, sludge handling facilities and filters will be rehabilitated and modified. High lift pumping facilities will be replaced, and the main transmission line to the port will be repaired. Buildings and

utility services at the water treatment site will be renovated and diesel generators replaced. The estimated cost of the physical rehabilitation work, including inflation and contingencies, is $ 3,900,000 in foreign exchange (A.I.D. contribution) and the equivalent of up to $ 1,000,000 in local currency (GSDR contribution). The exact local currency contribution will be based on the A&E firm's design estimates.

Management Assistance - to improve the KWA's operation and maintenance of the water system the Project will provide the KWA with the following management assistance:

A two to five year inventory of water treatment chemicals, spare parts, tools, lubricants, seals, bearings and service equipment;

One month start-up and training assistance plus two follow-up inspection/training visits at six month intervals;

An operations and maintenance manual which describes functions and design data, process considerations, mode of operation, equipment controls and safety considerations for each treatment process; and

A Management Study of the water treatment facility which will estimate financial revenues and requirements, recommend sources of funding for recurrent costs, assess the organization and management capabilities of the KWA, recommend operation and maintenance standards, and determine draining requirements.

The estimated costs of the management assistance are $300,000 for the KWA, $ 100,000 for independent audits, and $ 300,000 for contingencies, for a total of $ 700,000.

B. World Bank Program

The proposed World Bank Infrastructure Rehabilitation project for Somalia includes a Kismayo City infrastructure rehabilitation component which complements the KWSS rehabilitation plan. The Kismayo component of the Bank project is expected to include preparation of a structure plan and 5-year development program for the City, rehabilitation and extension of the City water distribution system, improvement to sanitation services, and improvement to market facilities. The World Bank has just begun the contracting process for consultant services to analyze the City water demand, assess the possibility of utilizing ground water to augment the current Jubba river source, review the condition and future expansion requirements of the transmission main, and carry out an institutional assessment of the KWA. The KWA institutional assessment will review the condition and suitability of assets and equipment, available human resources and training needs, operation and maintenance practices, management and financial information systems, and fiscal base. A.I.D. and the World Bank

have consulted in Washington, D.C. and Somalia during the planning for KWSS rehabilitation. Relations between the Mission and World Bank office in Somalia are excellent, and coordination will continue during implementation of the projects to ensure that all institutional and financial concerns are addressed, and that the World Bank study does not duplicate work done in the A.I.D.-funded KWA management study.

C. Issues

USAID Strategy - AID/W asked the Mission to consider whether the excess funds in the Project could better be used to supplement the foreign exchange auction or other Mission priorities. The foreign exchange auction has been suspended by the GSDR, and the Mission has reemphasized the economic and political benefits of rehabilitating the KWSS. AID/W concurred with the Mission's proposal to utilize the funds for KWSS rehabilitation.

Project Approval - AID/W deferred to the field a decision on whether the KWSS project should be developed as an Amendment to the Project or as a new activity. The REDSO/RLA and Mission have agreed to development of a Project Amendment. AID/W also asked the Mission to consider Brooke Amendment restrictions as they may be applicable to the reprogramming of project funds. Somalia is not under Brooke restrictions at this time. In any event, the Brooke Amendment prohibits obligation of funds, and the funds to be used here have already been obligated.

A&E Design - AID/W and the WASH report recommended that the design of the KWSS rehabilitation consider future expansion requirements, reliability of the source throughout the year, and balancing for the system during peak demand and repair downtime periods. These concerns will be incorporated into the SOW for A&E services, and are also part of the planned World Bank study.

Operation and Maintenance - AID/W and the WASH report recommended that a system of user fees, e.g., water charges to be collected from ships, be established to cover recurrent costs of operating and maintaining the KWSS. The need to determine existing and future demand for water as it relates to recurrent costs was pointed out. A study of KWA organization and training requirements was also recommended. To the extent that these issues are relevant to operation of the portions of the KWSS that will be rehabilitated by the A.I.D. project, they will be addressed in the AID-financed Management Study. Concerns related to the longer-term World Bank program for Kismayo City (e.g., a user fee system) will be addressed in the Bank program.

Contracting Mode - AID/W questioned if A.I.D. direct contracting was appropriate for the KWSS rehabilitation and requested REDSO/ESA comments. The Mission's experience and the PP Supplement analysis supports A.I.D. direct contracting, and AID/W has accepted this recommendation. The Contracting Plan (page 11) describes the roles of Mission and REDSO contracting offices. The WASH report suggested options of splitting the design and construction contracts, or including both in a turnkey operation in the interest of shortening the project. Quality control and assurance risks are the key factor in a REDSO recommendation and PP Supplement decision to split the contracts.

IV. Implementation and Monitoring Arrangements

A. Contracting Plan

Contracts will be let for A&E design and supervision services, and construction services. A.I.D. will contract directly for these services because the KWA and implementing ministries do not have contracting capabilities for the scale of work proposed (all main contracts for the port rehabilitation and other A.I.D. projects in Somalia are administered directly by A.I.D.). The U.S., Somalia and Geographic Code 941 countries will continue to be eligible source/origin and nationalities for services and commodities.

A&E Services - An A&E firm will be contracted to perform a Management Study, prepare the final design and construction Invitation for Bids (IFB), supervise the construction, and provide training to the KWA. The design will consider appropriate water standards and level of services, the adequacy and reliability of the raw water source throughout the year, and system balancing requirements for peak demand and repair downtime periods. Design services will include preparation of a list of basic materials and equipment, cost estimates, construction implementation schedules, and the technical sections of the IFB package. The A&E firm will also review and evaluate contractor responses to the IFB.

Construction Services - A construction firm will be contracted to supply and import all necessary equipment, commodities and spare parts, rehabilitate the KWSS, test and ensure that the system is operational, and train KWA personnel in operation and maintenance requirements.

B. A.I.D. Management

Through implementation of the port rehabilitation project and planning for livestock quarantine station and Shebelli irrigation construction, USAID/Somalia and REDSO/ESA have considerable experience with managing and monitoring A.I.D. direct construction activities in Somalia. The USAID/Somalia Engineering Division of the Project Development and Services Office will have primary A.I.D. project management responsibility, with the USAID Contracts Officer and Controller's Office, and the REDSO Engineering, Legal and Contracts offices in supporting roles.

USAID/S Engineering - The Mission PDS/Engineering Division will prepare scopes of work and recommend contract approval for the A&E services; review and approve the design; review and concur in the IFB package and recommendation for construction contract award; monitor the A&E and construction contractors; and approve contractor payment vouchers. The Engineering Division is headed by a direct hire A.I.D. engineer and has four local engineers. It currently manages a $ 60 million construction portfolio.

USAID/S Contracts - The Mission Contracts Officer's contracting authority is expected to be sufficient for the A&E contract, but may not be sufficient for the construction contract. If not, the Mission will determine in consultation with REDSO/ESA whether to request an ad hoc delegation of authority or to utilize REDSO Contract Officer Services for the construction contract.

USAID/S Controller - The Mission Controller's Office will be responsible for processing contractor payment vouchers. The office is headed by a direct hire Controller and has a direct hire B&A Officer, a direct hire Financial Analyst, and 18 local employees. The office currently handles payments for 24 contracts, PASA's and PVO grants totalling approximately $ 89.0 million.
REDSO/ESA Engineering - As with the port, livestock, and Shebelli water projects, the REDSO engineering office will be available to assist the Mission as necessary.

REDSO/ESA Legal - The REDSO legal office will clear the Project Grant Amendment for the PP Supplement, and all solicitation and contract documents.

REDSO/ESA Contracts - The REDSO Contracts Officer will be available as necessary.

C. GSDR Role

The Ministry of Foreign Affairs (MFA) , Ministry of Public Works and Housing (MPWH), Ministry of Finance and Revenues (MOFR), and Ministry of Minerals and Water Resources (MMWR) share GSDR responsibility for the Project. The MFA is responsible for official GSDR requests for assistance and is the signatory, with the concurrence of administering Ministries, for all Project Agreements and Amendments. The MOFR will be responsible for allocating local currency to the Project. The MPWH will have overall administrative responsibility for the actual KWSS rehabilitation. Day to day operation and maintenance of the system is the responsibility of the KWA, a semi autonomous division of the MMWR. The cooperation of the KWA and all three Ministries in the import of equipment and commodities, operating and maintenance budget support, and in training programs will be essential to the Project.

D. Implementation Schedule

The implementation schedule calls for a PACD extension to March 31, 1992.

Approve PP Supplement	December 1988
Amend Project Agreement	December 1988
Complete SOW and advertise for A&E services	December 1988
Award contract for A&E services	March 1989
Complete A&E design and issue IFB	October 1989
Award construction contract	February 1990
Complete construction	January 1991
1st inspection/training follow-up visit	July 1991
2nd inspection/training follow-up visit	January 1992

E. Evaluation and Audits

Funds will be reserved for an independent audit of the Project but not for evaluations. There are no requirements for evaluation information in addition to that already planned for in the Project or to be supplied by the A&E contractor. A project evaluation for the port rehabilitation work is scheduled for July 1988. Subsequent progress reports and inspection/training visit reports prepared by the A&E contractor will be sufficient for KWSS evaluation purposes.

F. Conditions and Covenants

It will be necessary to have access to the GSDR's local currency contribution to the physical rehabilitation component before the construction contract is signed. Therefore, Article 4, Section 4.1 of the Project Grant Agreement will be amended to include the following Conditions Precedent:

Conditions Precedent to Disbursement for KWSS Construction Services

Prior to disbursement of funds for training, management assistance, and construction services, the GSDR shall furnish to AID in form and substance satisfactory to AID:

(a) Kismayo Water Authority must demonstrate that it has clear title to the land required for the construction of the presedimentation basins.

(b) A list containing the names of all counterparts. This list shall include mechanics, electricians, plumbers, operators, and senior management personnel.

(c) A letter from the Ministry of Finance stating that sufficient foreign exchange will be available to the Kismayo Water Authority for the importation of spare parts and treatment chemicals.

(d) Evidence that the equivalent of up to U.S. dollars 1,000,000, as determined by the A&E firm's cost estimate, has been deposited in the USAID Project Trust Fund for funding the local currency costs of the physical rehabilitation work.

To emphasize concerns for proper operation and maintenance of the KWSS and facilitate the physical rehabilitation program, the Special Covenants, Article (5) of the Project Grant Agreement will be amended to add the following:

Section 5.9. KWSS Operation and Maintenance The Grantee agrees to supplement annually the revenues collected by the Kismayo Water Agency with local currency and foreign exchange as required to properly operate and maintain the Kismayo Water Supply System.

Section 5.10. Land and Storage The Grantee agrees to provide, free of charge, land near the KWSS water treatment facility as determined by the Construction Contractor and Engineer to be necessary for construction of the presedimentation basins and the Contractor's camp. The Grantee also agrees to provide, free of charge, office space and storage facilities for equipment and commodities imported for the Project.

Section 5.11 Import of Equipment and Commodities The Grantee agrees to allow the Contractor to import in a timely manner, and free of duty and taxes, all equipment and commodities as the Contractor may determine to be necessary for the Project.

V. Cost Estimate and Financial Plan

The cost estimates for the KWSS rehabilitation work are based on the WASH report dated May 1987, with corrections for inflation and charges for additional A&E services (e.g. the Management Study and KWA training). Because of the volatility of construction costs in Somalia and fluctuations in the exchange rate, contingencies are set at approximately 20 percent for foreign exchange costs and 25 percent for local currency costs.

A. KWSS Rehabilitation Costs

Budget ($ 000)

A.I.D. Project Components

Inputs	Physical Rehabilitation	Management Assistance	TOTALS	GSDR
Construction Services			2,600	800
(Rehabilitation)	2,500			
(Spare parts)		100		
A&E Services			900	
(design/supervision)	700			
(management study)		100		
(TA & training)		100		
Audit		100	100	
Contingency	700	300	1,000	200
TOTALS	3,900	700	4,600	1,000

B. Project Budget Revision

The addition of the KWSS rehabilitation to the Project will change the A.I.D. and GSDR contributions in the Project Financial Plan as amended in PIL 12 dated November 26, 1985:

Project Financial Plan
($ millions)
A.I.D. Total Obligation

	PIL 12	Change	New Total	GSDR
Port Rehabilitation				
Base Construction	28.0	- 1.8	26.2	2.9
A&E Design	2.8	- 0.1	2.7	
Construction Supervision	2.2	0.0	2.2	0.5
Contingency	3.0	- 2.7	0.3	
KWSS Rehabilitation				
Construction	0.0	+ 2.6	2.6	0.8
Engineering/Management	0.0	+ 1.0	1.0	
Contingency	0.0	+ 1.0	1.0	0.2
TOTAL	36.0	0.0	36.0	4.4

The GSDR contribution has increased by $0.8 million for the KWSS construction and $0.2 million for contingencies.

11

C. Disbursement Procedures

A.I.D. direct contracting and direct reimbursement will be used.

1. A.I.D. U.S. Dollar Payments

Dollar payments under the A/E and construction contracts will be made under A.I.D. Direct Letters of Commitment. Project commodities (e.g., construction materials) will be procured by the Construction Contractor following A.I.D. procurement procedures.

2. GSDR Local Currency Disbursements

The A.I.D. direct contract for construction services will include the equivalent of up to US $ 1,000,000 in local currency to be provided by the GSDR through the DDD. The exact amount of local currency contribution will be based on the A&E firm's engineering cost estimates. To assure the availability of the local currency required for the construction contract the GSDR local currency will be deposited in advance into a the USAID Project Trust Fund for direct disbursement by A.I.D. to the Construction Contractor.

3. Accountability

To ensure acceptable fiscal standards and practices, $ 100,000 has been budgeted for independent audits and financial reviews.

4. Method of Implementation and Financing

In accordance with the requirements of the Sixteen Payment Verification Policy Statements the following table illustrates the methods of implementation and financing to be used in this project paper amendment.

Element/Activity	Method of Implementation	Method of Financing	Approximate Cost ($000)
KWSS Rehabilitation			
Construction	AID Direct Contract	Direct Payment	$2,600
Engineering/Management			
A&E Services	AID Direct Contract	Direct Payment	1,200
Audit	AID Direct Contract	Direct Payment	100
Contingency	N/A	N/A	1,000
			$4,600

VI. Project Analyses

A. Technical Analysis

The KWSS has seriously deteriorated since it was put into operation in 1970. The system consists of a water treatment plant adjacent to the Jubba River, 32 km of pipeline to the port, a spur line and storage reservoir for the city, and distribution systems for the city and port. Water is pumped from the

Jubba River through a low lift pumping station to the treatment plant. The original intake structure was damaged by river bottom sediments and abandoned. The new intake is partially clogged. The water treatment processes initially included chemical treatment, mechanical rapid mix and flocculation, sedimentation, and rapid sand filtration. The capacity of these systems was insufficient for the heavy silt load of the water, and all are now inoperable. The water treatment system is bypassed and river water is pumped directly to the port and city of Kismayo. The original electric pumps were replaced by diesel units in 1979 after the on-site generators failed. At least two major leaks occur in the transmission line to the port (overall losses are estimated at 40%). Although almost every piece of the system has deteriorated, the basic treatment concept is appropriate for the Jubba River water and much of the physical plant is still usable. The following physical rehabilitation program for the KWSS is proposed:

River Intake and Low-lift Pumping Facilities

- A new pump station consisting of two diesel-driven pumps will be constructed. The station will be located between the existing pump station and the intake structure, above the river flood level.

Presedimentation Basins, Pretreatment, Sedimentation and Chemical Feed Facilities

- Two new parallel presedimentation basins will be constructed, each approximately 45 m. long, 13 m. wide and 4 m. deep. Basins will have weirs at each end to control flow and water level. Silt removal will be manual.
- The existing pretreatment units will be rehabilitated and their operation and maintenance simplified and improved. Existing flash mixers and flocculators will be removed and replaced with baffle walls to provide for static flocculation; a partial flume located between the presedimentation basins and the pretreatment units will act as a static mixer.
- The existing sedimentation basins will be rehabilitated and their design improved by installing manual sludge draw-off pipes and a new wall with ports at the head-end to prevent short-circuiting.
- New chemical feed facilities, including a new building, will be constructed. All existing equipment will be replaced.

Filtration and Sludge Handling

- The existing filters will be rehabilitated and modified to improve their operation and maintenance.
- The entire facility will be rehabilitated; sludge pumps and motors will be replaced and all influent and discharge lines cleared.

High-lift Pumping Facilities

- New turbine pumps and diesel drives will be provided to replace the existing ones.

Transmission Line

- The preliminary survey performed during the feasibility study located two major leaks, but indicated that the physical condition of the line is adequate and that only minor repairs are necessary. However, to ensure the adequacy of the line throughout the life of the installation, a detailed survey and leakage quantification will be performed during the design phase and corrective measures will be included in the construction phase.

Miscellaneous

- Rehabilitation of the control building;
- Installation of new subsurface sanitary waste disposal system for the treatment facility;
- Replacement of the elevated tank walkway;
- Rehabilitation and replacement, where necessary, of all valves and controls;
- Replacement of all electric wiring and equipment;
- Installation of new laboratory equipment;
- Replacement of the diesel generators;
- Supply of spare parts, tools, lubricants, service equipment, etc., to ensure proper operation and maintenance.
- Start-up, operation and maintenance training for KWSS personnel, including operation and maintenance manuals;
- All other miscellaneous items necessary for the complete integration of the KWSS in the Port Facilities.

A final and a detailed list of the miscellaneous items will be prepared during the design phase.

B. Administrative Analysis

The Ministry of Public Works and Housing is the executing entity for the Kismayo Port Project and consequently for the KWSS. The semi-autonomous Kismayo Water Agency (KWA) is responsible for day to day management of the KWSS. The KWA, like other semi-autonomous water agencies for Mogadishu and Hargeisa, is responsible to the Ministry of Minerals and Water Resources. Each agency is responsible for its own administration, operation and maintenance.

The KWA employs an administrative staff of 16 under the direction of a Director General and a Director of Administration. In addition, the KWA employs a technical staff of six "Water Field Operators" for the maintenance and repair of the transmission line from the pumping and treatment station to the port. Within the port premises the transmission line is maintained by port personnel. The existing water treatment plant is operated and maintained by a staff of 15 under the supervision of an operation manager.

The original design of the KWSS required a high and inappropriate level of management resources and recurrent costs for its operation and maintenance. The treatment processes included far too many mechanical, chemical and electrical components. The KWA has less than half the 120 staff members it

needs to provide optimum operation and maintenance service. KWA's accounting systems do not accurately reflect operating and depreciation costs. Only 400 of 3200 water connections are metered. Water tariffs have not changed for two years and do not reflect recurrent costs of an appropriate level of operation and maintenance service. KWA's budget is funded by user fee revenues with occasional supplements from the MOFR for development of new infrastructure. The KWA must apply to the Ministry of Water and Mineral Resources for foreign exchange requirements, but the Ministry has been unable to provide adequate foreign exchange for the purchase of chemicals and spare parts.

The Project will assist the KWA to improve the operation and maintenance of the water system by providing the following resources:

- o A two to five year inventory of water treatment chemicals, spare parts, tools, lubricants, seals, bearings and service equipment;
- o One month start-up an training assistance plus two follow-up inspection/training visits at six month intervals;
- o An operations and maintenance manual describing functions and design data, process considerations, mode of operation, equipment controls and safety considerations for each treatment process;
- o A Management Study to estimate financial revenues and requirements, recommend sources of funding for recurrent costs, assess the organization and management capabilities of the KWA, recommend operation and maintenance standards and determine training requirements.

C. Financial Analysis

The estimated cost of implementing the rehabilitation of the KWSS is based on data available from the WASH Feasibility Study, complemented with data generated by the Mission to account for specific implementation problems and conditions prevalent in Somalia, and adjusted for inflation. The estimate is based upon construction beginning in February 1990, performed by a U.S. contractor, using primarily U.S. equipment and materials. The Grantee counterpart contribution will be the Shilling equivalent of up to $1 million at the time of deposit into the USAID Project Trust Fund. The exact contribution will be based on the A&E firm's engineering design cost estimates.

Estimated Construction Cost

	A.I.D. FX	GSDR LC
o River Intake and Low-lift Pumping	300,000	100,000
o Presedimentation, Pretreatment, Sedimentation and Chemical Feed	700,000	300,000
o Filtration and Sludge Handling	200,000	50,000
o High-lift Pumping	300,000	50,000
o Transmission Line	100,000	100,000
o Spare Parts	100,000	-
o Miscellaneous Items	1,000,000	200,000
Subtotal	2,600,000	800,000

Estimated Engineering and Supervision Cost	A.I.D. FX	GSDR LC
o Design (includes labor, travel per diem and all direct costs @ approx. 15% of the construction cost)	400,000	
o Services during construction (including bid evaluation assistance, resident engineer during the one year construction period, and home office support)	300,000	
o Management Study	100,000	
o Start-up and on site training (approx. 4 person months including home office support/travel per diem)	100,000	
Subtotal	900,000	
Audits	100,000	
Contingency	1,000,000	200,000
TOTAL	2,000,000	200,000

D. Environmental Analysis

The Initial Environmental Examination (ANNEX D) discusses the environmental consequences of the KWSS rehabilitation and recommends a Negative Determination based on a conclusion that the repair and improvements to existing water treatment facilities will have no adverse impacts on the environment.

E. 611 (a) Determination

It is the opinion of the USAID/Somalia Engineer, based on the WASH Report, the PP Supplement analyses, and the November 23, 1988 report of the REDSO/ESA engineer that the KWSS rehabilitation is technically feasible and can be completed with the available project funds. The technical, administrative, financial and environmental analyses are considered comprehensive and sufficient to satisfy the requirements for adequate planning and reasonably firm cost estimates of Section 611 (a) of the Foreign Assistance Act of 1961, as amended.

ANNEX D - IEE

Initial Environmental Examination

Country:	Somalia
Project Title and Number:	Kismayo Water Supply System (KWSS) Component of the Kismayo Port Project (649-0114)
Funding:	US $ 4.6 million
Life of Project:	Three years (Kismayo Port Project PACD will be extended to September 30, 1991 to rehabilitate the KWSS)
IIE Prepared by:	Dan Vincent, USAID/Somalia, PDS/ENG
Environmental Action Recommended:	Negative Determination
Action Recommended by:	Lois Richards, Director, USAID/Somalia

Bureau Environmental Advisor:

AFR/TR/ANR

Bessie L. Boyd, AFR/TR/PRO

Approved: X

Disapproved: _____

Date: June 10, 1988

GC/AFR Concurrence:

Date: 10/24/88

Discussion:

The Kismayo Port Project will be amended to utilize obligated but unearmarked funds to rehabilitate the KWSS. The rehabilitation program will repair physical water treatment and supply facilities and improve system management. The project will rehabilitate and/or replace existing facilities with equivalent or better designed components for improved performance and simplified operation and maintenance. Two small presedimentation basins will be constructed within the boundaries of the current treatment facility. However, no major new structures will be added to the system.

The following physical rehabilitation program for the KWSS is proposed:

River Intake and Low-lift Pumping Facilities

- o A new pump station consisting of two diesel-driven pumps will be constructed. The station will be located between the existing pump station and the intake structure, above the river flood level.

Presedimentation Basins, Pretreatment, Sedimentation and Chemical Feed Facilities

- o Two new parallel presedimentation basins will be constructed, each approximately 45 m. long, 13 m. wide and 4 m. deep. Basins will have weirs at each end to control flow and water level. Silt removal will be manual.

- o The existing pretreatment units will be rehabilitated and their operation and maintenance simplified and improved. Existing flash mixers and flocculators will be removed and replaced with baffle walls to provide for static flocculation; a partial flume located between the presedimentation basins and the pretreatment units will act as a static mixer.

- o The existing sedimentation basins will be rehabilitated and their design improved by installing manual sludge draw-off pipes and a new wall with ports at the head-end to prevent short-circuiting.

- o New Chemical Feed Facilities, including a new building, will be constructed. All existing equipment will be replaced.

Filtration and Sludge Handling

- o The existing filters will be rehabilitated and modified to improve their operation and maintenance.

- The entire facility will be rehabilitated; sludge pumps and motors will be replaced and all influent and discharge lines cleared.

High-lift Pumping Facilities

- New turbine pumps and diesel drives will be provided to replace the existing ones.

Transmission Line

- The preliminary survey performed during the feasibility study located two major leakages, but indicated that the physical condition of the line is adequate and that only minor repairs are necessary. However, to ensure the adequacy of the line throughout the life of the installation, a detailed survey and leakage quantification will be performed during the design phase and corrective measures will be included in the construction phase.

Miscellaneous

- Rehabilitation of the control building;
- Installation of new subsurface sanitary waste disposal system for the treatment facility;
- Replacement of the elevated tank walkway;
- Rehabilitation and replacement, where necessary, of all valves and controls;
- Replacement of all electric wiring and equipment;
- Installation of new laboratory equipment;
- Replacement of the diesel generators;
- Supply of spare parts, tools, lubricants, service equipment, etc., to ensure proper operation and maintenance.
- Start-up, operation and maintenance training for KWSS personnel, including operation and maintenance manuals;
- All other miscellaneous items necessary for the complete integration of the KWSS in the Port Facilities.

The project will not change the physical environment outside of the existing water treatment facility and will improve the quality of water supplied to the City and port of Kismayo. There will be no adverse impacts on the environment and so, in accordance with A.I.D. Environmental Procedures, a Negative Environmental Determination is recommended.

Annex E
Section 611(e)

SECTION 611(e) Certification

The Kismayo Port Rehabilitation Project is being amended to provide $4.6 million in obligated but uncommitted funds over a three year period to rehabilitate the Kismayo Water Supply System (KWSS). The KWSS design will be modified to better suit the quality of the source of supply at the Jubba river and to simplify the operations and maintenance requirements of the system. The Kismayo Water Agency (KWA) will receive management support through the provision of spare parts and equipment, training, an operations and maintenance manual and follow-up inspection/training visits. The project will also work to improve KWA financial planning and revenue collection.

With the design modifications and provision of management support under the project, I certify that the GSDR has both the financial and human resources capacity to effectively maintain and utilize the project.

Dale B. Pfeiffer
Acting Director

Date: June 29, 1988

PRIORITY UNCLASSIFIED STATE 224082

~~ACTION: AID~~ ~~INFO:~~ AMB DCM POL/ECON

ACTION COPY
ACTION TAKEN
Signature Date

PDS

RECEIVED
JUL 13 1988
LOT 523 645
13 JUL 88 0637
CN: 35716
CHRG: AID
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UNCLAS STATE 224082

AIDAC FOR USAID DIRECTOR

E.O. 12356: N/A
TAGS:
SUBJECT: KISMAYO PORT PROJECT (649-0114) KWSS
AMENDMENT: FAA SECTION 611(E) CERTIFICATION

PDS/ENG

REF: (A) MOGADISHU 07796, (B) STATE 205257

1. AA/AFR HAS RECEIVED AND TAKEN INTO CONSIDERATION SUBJECT 611(E) CERTIFICATION AS TRANSMITTED BY REFTEL.

2. MISSION MAY PROCEED WITH THE APPROVAL OF THE PP SUPPLEMENT. WHITEHEAD
BT
#4082

NNNN

ROUTING OFFICES

OFFICE	INFO	ACTION
DIR	✓	
D/D	✓	
PROG		
ARD		
PDS	✓	
PDS/ENG	✓	✓
PDS/CMO		
PPSD		
CONT		
MGT		
MGT/CO		
MGT/DPM		
MGT/PER		
FSU		

UNCLASSIFIED STATE 224082

action due: 7/20/88