DD-AA6-[illegible]-120

2 of 2

655 0040054201

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS PART I

1. TRANSACTION CODE: [A] A ADD, C CHANGE, D DELETE

PAF

2 DOCUMENT CODE: 5

3. COUNTRY ENTITY: Cape Verde Islands

4. DOCUMENT REVISION NUMBER: [-]

5. PROJECT NUMBER (7 digits): [655-0004]

6. BUREAU/OFFICE: A SYMBOL: AFR; B CODE: [6]

7. PROJECT TITLE (Maximum 30 characters): [Potable Water Supply - Mindelo]

8. PROJECT APPROVAL DECISION — ACTION TAKEN: [ ] A APPROVED, D DISAPPROVED

9. EST. PERIOD OF IMPLEMENTATION: YRS [7|7] QTRS [1]

10. APPROVED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C GRANT	PRIMARY TECH. CODE D LOAN	E. 1ST FY 77 F GRANT	E. 1ST FY 77 G LOAN	H. 2ND FY ___ I GRANT	H. 2ND FY ___ J LOAN	K. 3RD FY ___ L GRANT	K. 3RD FY ___ M LOAN
(1) PH	501	545	-	600	-	-	-	-	-
(2)									
(3)									
(4)									
TOTALS				600	-	-	-	-	-

A. APPROPRIATION	N. 4TH FY ___ O. GRANT	N. 4TH FY ___ P. LOAN	Q. 5TH FY ___ R GRANT	Q. 5TH FY ___ S LOAN	LIFE OF PROJECT T GRANT	LIFE OF PROJECT U. LOAN
(1)						
(2)						
(3)						
(4)						
TOTALS						

11. PROJECT FUNDING AUTHORIZED — A GRANT — B LOAN

(ENTER APPROPRIATE CODE(S): 1 - LIFE OF PROJECT; 2 - INCREMENTAL LIFE OF PROJECT)

C. PROJECT FUNDING AUTHORIZED THRU FY [7|8]

12. INITIAL PROJECT FUNDING ALLOTMENT REQUESTED ($000)

A. APPROPRIATION	B. ALLOTMENT REQUEST NO. ___ C GRANT	B. ALLOTMENT REQUEST NO. ___ D. LOAN
(1) PH	600	-
(2)		
(3)		
(4)		
TOTALS	600	-

13. FUNDS RESERVED FOR ALLOTMENT

TYPED NAME (Chief, SER/FM/FSD)

SIGNATURE

DATE

14. SOURCE/ORIGIN OF GOODS AND SERVICES: [ ] 000 [ ] 941 [ ] LOCAL [X] OTHER 935

15. FOR AMENDMENTS, NATURE OF CHANGE PROPOSED

FOR PPC/PIAS USE ONLY	16. AUTHORIZING OFFICE SYMBOL	17. ACTION DATE MM DD YY	18. ACTION REFERENCE (Optional)	ACTION REFERENCE DATE MM DD YY

AID 1330-6 (7-76)

UNCLASSIFIED

PROJECT PAPER

POTABLE WATER SUPPLY

MINDELO, CAPE VERDE ISLANDS

Agency for International Development
Washington, D.C. 20523

November 10, 1976

Government of Cape Verde Representatives

Jose Brito, Director, Office of International Cooperation

Sr. Santos, Manager, Mindelo (JAIDA) Desalination Plant

Project Committee, A.I.D.

John Cooperman, Office of Engineering

Mable S. Meares, Acting Portuguese Speaking Africa Desk Officer

Ted Lee, Office of Development Resources

Edward Dragon, Office of General Counsel

E. Dennis Conroy, Office of Regional Affairs

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AGENCY FOR INTERNATIONAL DEVELOPMENT

A. PROJECT PAPER FACESHEET

1. TRANSACTION CODE: [-] A ADD, C CHANGE, D DELETE — PP

2. DOCUMENT CODE: 3

3. COUNTRY ENTITY: Cape Verde Islands

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 655-0004

6. BUREAU OFFICE: A. SYMBOL: AFR; B. CODE: 6

7. PROJECT TITLE (Maximum 40 characters): Potable Water Supply - Mindelo

8. ESTIMATED FY OF PROJECT COMPLETION: FY 77

9. ESTIMATED DATE OF OBLIGATION: A. INITIAL FY 77; B. QUARTER; C. FINAL FY 77 (Enter 1, 2, 3 or 4)

10. ESTIMATED COSTS $000 OR EQUIVALENT $1 -

A. FUNDING SOURCE	FIRST FY 1977 B. FX	C. L.C	D. TOTAL	LIFE OF PROJECT E. FX	F. L.C	G. TOTAL
AID APPROPRIATED TOTAL						
(GRANT)	600	-	600	600	-	600
(LOAN)						
OTHER U.S. 1.						
OTHER U.S. 2.						
HOST COUNTRY						
OTHER DONOR(S)	-	-				
TOTALS	600	-	600	600	-	600

11. PROPOSED BUDGET APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. GRANT	D. LOAN	E. 1ST FY 77 F. GRANT	G. LOAN	H. 2ND FY ___ I. GRANT	J. LOAN	K. 3RD FY ___ L. GRANT	M. LOAN
(1) PH	501	545	-	600	-	-	-	600	-
(2)									
(3)									
(4)									
TOTALS				600	-	-	-	600	-

A. APPROPRIATION	N. 4TH FY ___ O. GRANT	P. LOAN	Q. 5TH FY ___ R. GRANT	S. LOAN	LIFE OF PROJECT T. GRANT	U. LOAN
(1)						
(2)						
(3)						
(4)						
TOTALS						

12. IN-DEPTH EVALUATION SCHEDULED: MM 11, YY 77

13. DATA CHANGE INDICATOR. WERE CHANGES MADE IN THE PID FACESHEET DATA, BLOCKS 12, 13, 14, OR 15 OR IN PRP FACESHEET DATA, BLOCK 12? IF YES, ATTACH CHANGED PID FACESHEET.

NO (1 = NO, 2 = YES) PID

14. ORIGINATING OFFICE CLEARANCE

SIGNATURE: E. Dennis Conroy

TITLE: Director, AFR/RA
Bureau for Africa

DATE SIGNED: MM DD YY

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

AID 1330-4 (3-76)

B. Recommendations.

-- grant under Health and Population funds Section 104 -- $600,000

-- Waiver to permit Code 935 procurement of non-U.S. manufactured spare parts for present plant (see Annex) --($100,000)

C. Summary Description.

The project proposed is the renovation of a non-functioning desalination plant serving the city of Mindelo on the island of Sao Vincente in Cape Verde Islands. In addition to providing stand-by equipment and spare parts for the present plant, the project will train Cape Verdians in new techniques of plant operations and maintenance.

D. Summary Findings.

Renovation of the desalination plant will produce a more efficient and effective desalination unit. The plant can operate on a sound financial basis after being renovated if the Cape Verdian government will permit the management of the plant to increase water charges. This undertaking will be included in the Grant Agreement which will be signed with the Government of Cape Verde.

E. Project Issues.

None.

Part II. Project Background and Detailed Description.

A. Background.

The Cape Verde Islands became independent on July 12, 1975 following over 400 years of Portuguese rule. The economic outlook upon independence was bleak: the country had experienced eight years of drought which forced it to rely on imports for most of its food; water resources were extremely limited due to the nature of the island's geology; the economy, never strong, had been hit by the increase in oil prices and there was chronic unemployment. Cape Verde was and still is dependent on foreign assistance for virtually all of their foreign exchange, all investment, and a portion of their recurrent budget. Imports in 1974 were $42 million and exports only $2 million; in 1975 there was a balance of trade deficit of $31.38 million following export earnings of $1.92 million.

The Government of Cape Verde has identified agricultural and water resources development as their number one priority. Various donors have been asked for assistance and the United States, which is recognized as a world leader in desalination technology, has been asked to provide the foreign exchange to renovate the desalination plant at Mindelo, the largest city and main commercial center on the islands.

B. Detailed Description.

The 2,200 metric ton per day desalination plant at Mindelo on Sao Vicente Island supplies fresh water for the city but has not been operating at its yearly rated capacity for the lack of stand-by items such as a boiler and pumps and for the lack of spare parts to maintain and repair the rotating equipment. Until September 1976, the plant's average daily production of fresh water was 943 mt., or about 43% of its rated capacity. (Appendix 1). However, the plant is now totally inoperable. If stand-bys were available for the more vulnerable pieces of equipment and new instruments which will help control corrosion were installed, the plant could produce water at its original rated capacity (80%) for an extended period of time. The aim of this project is to assist the GOCV in this effort.

The renovation of the Mindelo Desalination Plant will help to:

a. Increase and improve fresh water supply.
b. Minimize dependence on water imports.
c. Reduce risks of sickness.
d. Improve the management and operation.

If Cape Verde is ever to achieve significant progress towards development, a sufficient daily supply of fresh water is essential.

The goal of this project is to provide the populace of Sao Vicente Island, primarily the city of Mindelo, with a sufficient daily supply of fresh water, and correspondingly reduce the risk of sickness resulting from drinking pulluted water.

The purpose of this project is to renovate the existing desalination plant, to introduce sound management and technical operating practices, and to put the plant on a proper financial basis. The project will (1) procure stand-by equipment, spare parts and instruments; (2) provide short-term technical assistance; and (3) provide training for the staff who will be operating and maintaining the plant.

At the end of a one year period a completely renovated and functioning desalination plant will have the capacity to supply the 45,000 inhabitants of Mindelo on Sao Vicente Island with 1,500 metric tons (mt) per/day of fresh water. Other outputs envisioned are: a cadre of trained staff in new techniques of plant maintenance and operations; stand-by equipment, spare parts and instruments; sound financing for plant operations.

One of the main deficiencies of the Mindelo plant is the lack of some vital instruments and the poor location of the sensing elements. Without instruments to control temperature and record productivity of both the sea and boiler water, corrosion and scaling quickly reduce the capacity and the efficiency of the plant. An engineer experienced in the operation of desalination plants will be provided by the project on a TDY basis. The person will assist the plant personnel both in installing and rearranging instruments and training in instrument maintenance.

When the renovation of the plant is completed an experienced expatriate operator will instruct the local operators in the latest techniques of desalination plant operations. Much of the new techniques has been developed in the last decade by the Office of Saline Water (OSW), but the information is not widely disseminated.

SER/ENGR has developed the above technical assistance and training program with the assistance of OSW. OSW has also provided the names of firms with whom it has contracted for similar training programs in the past.

In addition to the training at the plant, it is proposed that the General Manager, Sr. Santos, be invited to visit some of the desalination plants in the States to observe their operation. If an English speaking operator is available, it is proposed that he be sent to a U.S. instrument school for training. All of the major U.S. instrument manufacturers have such training schools.

A.I.D. will provide $600,000 of which $50,000 will be technical assistance, training in U.S. for one general manager and on-site training; $450,000 for equipment procured in the United States, and $100,000 for procurement from foreign sources. (See Appendix 2 for detailed breakdown of items.) The host country will provide plant personnel, project manager, chemicals, operational budget, and required supportive

services. These inputs represent approximately 25% of the total cost of this project.

Part III. Project Analysis.

A. Technical Analysis.

The plant was originally installed by Babcock-Wilcox (Madrid) in 1[illegible] The cost of the facility which includes offices, a maintenance shop and a chemical laboratory was 43,000,000 escudos (US $1,720,000 at 1975 exchange rate). The plant is located on the eastern side of the port area of Mindelo, on the Northeast coast of Sao Vicente Island. It produces water by the multi flash processes using imported fuel oil as the source of energy.

The plant consists of two independent trains each with its own boiler, turbo-generator for power, and a 43 stage 1,100 mt/day distillation unit.

Since the plant only directly services 3,000 of the 6,000 dwellings on its distribution network, the current demand of water from the plant is about 1,500 mt per day. As the present brackish wells dry up and the water from the other islands becomes more difficult to procure, the authorities are preparing for an anticipated demand of 4,000 mt per day within the next five years. As a first step in preparing for the larger demand, the city authorities are building two reservoirs with its own funds, each with a capacity to store 400,000 gallons of water. The Cape Verde Authorities are preparing to request financial assistance for a second desalination unit with a capacity of 2,000 mt/day from some lending agency and has requested assistance from the Dutch Government for the services of a technical team to develop a more comprehensive water distribution and sewage system. The team has recently prepared a first phase interim report. The Cape Verde authorities are reportedly negotiating for a loan of $5 million for Phase I of the water and sewage distribution system with the African Development Bank.

To meet the anticipated demand of 4,000 mt per day in five years as well as meet its present demand for water, the Mindelo Desalination Plant must be renovated.

B. Economic Analysis.

Alternatives to renovating the Mindelo Plant would be constructing a new plant or importing water from other islands. Preliminary cost estimates for the construction of a new plant is approximately $3.0 million. The cost of importing water

from other islands is not known but must be carried by sailing dhows and is not a reliable source for a city of 45,000 people. Although the renovation might also appear to be weak (see Appendix 3) from a financial point of view, the socio-economic benefits to be gained far outweight its cost.

The primary socio-economic benefits to be derived from the renovation of the Mindelo plant are:

-- quality water;
-- reduced risk of illness;
-- steady employment for the plant's workers;
-- reduced fuel oil consumption;
-- reduced transportation cost; and
-- reduced water prices in the long run.

The secondary benefits that may arise from this project are the incentives it should give merchants and industries to invest. Mindelo's good harbor, dry climate and location on the sea route from Africa to North and Central America has traditionally been a ship stopover for fuel and provisions. The Cape Verde Government plans to develop Sao Vicente with heavy industries. The present plans are to install a ship building facility, encourage the growth of the fishing industry, expand its ship servicing facilities, and install a refinery.

The absence of an adequate supply of fresh water is not only a serious health hazard to the growing population but it is also an impediment to the expansion of the island's industry and the total economic development of the country.

C. Financial Analysis.

The financial situation of the Mindelo desalination plant has been deteriorating progressively because of cost increases for fuel, salaries, services, maintenance, spare parts, chemicals, and other primary or manufactured materials. In spite of these increases JAIDA continues to sell water to the public for $0.83 a cubic meter, a price which was established more than three years ago. The cost of production today is $2.06 per cubic meter.

The management of the Mindelo plant has petitioned the Ministry of Agriculture and Water either for a rate adjustment or for higher subsidies. In order to reduce the present deficit, and as a first step toward the resolution of the deteriorating financial situation, JAIDA proposes an increase

in the price of water, based upon the following levels of usage:

up to 5 cubic meters	$1.17 per cm.
from 6 to 10 cubic meters	$1.50 per cm.
more than 10 cubic meters	$2.17 per cm.

The management has also proposed that JAIDA be exempted from all customs duties on imports.

The cash flow table, Appendix 3, shows the present operating receipts and expenditures and the anticipated receipts and expenditures when the new rates become effective in 1977. The management is depreciating the plant in seven years from 1972. The plant pays no taxes, and the government pays for the imported fuel oil and the local currency short-falls.

When the plant is renovated to produce at its rated capacity and efficiency, along with the proposed increase in the price of water, it should show a small profit by 1978 as indicated in the cash flow table.

D. Environmental Assessment.

Negative Determination:

The project renovates an existing plant which produces fresh water from the sea. The raw materials for the plant are sea water and fuel oil for the boilers. The only discharge is a somewhat more salt concentrated sea water back into the sea and the combustion gases from the oil fired boilers. By renovating the boilers there will be less particulate and noxious gases produced by the boilers. There are no hazardous materials used in the distilation process for fresh water. A small amount of sulfuric acid is used to slightly acidify the water but this is neutralized by caustic soda before it is discharged into the sea. This acid-base treatment simply add traces of sulphate and sodium ions to the large amount naturally present in sea water.

The following impact and identification form indicates there is a positive environmental impact.

IMPACT IDENTIFICATION AND EVALUATION FORM

Impact Areas and Sub-areas 1/	Impact Identification and Evaluation 2/
A. LAND USE	
1. Changing the character of the land through:	
a. Increasing the population	N
b. Extracting natural resources	N
c. Land clearing	N
d. Changing soil character	N
2. Altering natural defenses	N
3. Foreclosing important uses	N
4. Jeopardizing man or his works	N
5. Other factors	
_____	N
_____	
B. WATER QUALITY	
1. Physical state of water	N
2. Chemical and biological states	N
3. Ecological balance	N
4. Other factors	
_____	N
_____	

1/ See Explanatory Notes for this form.

2/ Use the following symbols: N - No environmental impact
L - Little environmental impact
M - Moderate environmental impact
H - High environmental impact
U - Unknown environmental impact

IMPACT IDENTIFICATION AND EVALUATION FORM

C. ATMOSPHERIC

1. Air additives ———— N
2. Air pollution ———— M*
3. Noise pollution ———— N
4. Other factors

———— N
————

D. NATURAL RESOURCES

1. Diversion, altered use of water ———— N
2. Irreversible, inefficient commitments ———— N
3. Other factors

N
————

E. CULTURAL

1. Altering physical symbols ———— N
2. Dilution of cultural traditions ———— N
3. Other factors

N
————

F. SOCIOECONOMIC

1. Changes in economic/employment patterns ———— N
2. Changes in population ———— N
3. Changes in cultural patterns ———— N
4. Other factors

N
————

IMPACT IDENTIFICATION AND EVALUATION FORM 3

G. HEALTH

1. Changing a natural environment ——— N
2. Eliminating an ecosystem element ——— N
3. Other factors

Provides fresh water in place of ——— H
brackish water for the city. ———

H. GENERAL

1. International impacts ——— N
2. Controversial impacts ——— N
3. Larger program impacts ——— N
4. Other factors

——— H
———

I. OTHER POSSIBLE IMPACTS (not listed above)

——— N
———
———

*A positive effect since this project reduces the effluent of particulate matter and noxious gases from the boilers.

Part IV. Implementation Arrangements.

There are two parts to the implementation of the project. The first is the procurement of the spare parts and stand-by equipment. This will be done by a purchasing agency such as the Afro-American Purchasing Center who will also arrange for the export, packing and shipping. Since the plant is located in a part of the world where it is difficult to communicate and ship, it is important that the correct spare parts be procured. For this reason the contract with any purchasing agent will include the following:

> "Specifications and awards must be approved by the Office of Engineering, AID/W, Washington, D.C. 20523".

The second part concerns the arrangements for the technical assistance and training program. For the technical assistance, the procedure used by the Office of Saline Water will be followed. The office has a list of small firms which specializes in showing operators the latest techniques in operating desalination plants. These techniques were developed from studies financed by OSW. A firm will be selected to provide an engineer whose specialty is equipment and instruments to assist in the renovation and a second engineer or operator to assist in the operation of the renovated plant. It is estimated that each engineer will be at the plant for a period not to exceed three months.

To acquaint him with the operations of similar plants in the U.S., General Manager Santos will be invited to visit the plants sponsored by OSW. SER/IT through a PIO/P will make the necessary arrangements for Sr. Santos visit and for the training of an English speaking operator in instrument maintenance. All instrument companies have training courses and will train participants for a normal fee.

APPENDIX 1

Desalination Plant Mindelo

Production Record for 1975-76

	WATER	FUEL OIL
January 1975	34,158 metric tons	456,000 metric tons
February	20,608	320,000
March	29,420	468,000
April	30,364	452,000
May	39,126	553,000
June	31,336	434,000
July	27,769	472,000
August	23,898	369,196
September	32,542	428,189
October	23,098	391,434
November	28,609	422,560
December	23,578	429,359
January 1976	22,501	361,530
February	21,622	381,537
March	26,141	415,916
April	24,963	419,474
May	24,391	390,113

. Average for 1975 - 943 metric tons per day.

APPENDIX 2

Detailed Breakdown of Items

ITEM	FOREIGN EXCHANGE
New Boiler - 13.5 tons/hr. steam 21 Kg/Cm^2 at 400°C	$150,000
Spare Parts for present boilers	80,000
Brine Recycle turbo pump - new	20,000
Spare Parts for present brine turbo pump	12,000
Condensate pump and motor	4,000
Boiler feed water pump & motor	5,000
Boiler deaerated feed water pump & motor	5,000
Water distillate pump & motor	8,000
Brine blow-down pump & motor	5,000
Raw sea water pump & motor	8,000
Spare parts for present raw sea water pump	2,000
Turbine for turbo-alternator	12,000
Spare parts for present turbo alternator	6,000
Alternator-Kw 100; KVA-125	8,000
Laboratory equipment -	20,000
Steel steam valves	50,000
Brass steam valves	25,000
Steel Check valves	6,000
6 Fisher level control type 2502-249	5,000
2 " Butterfly valves type 9500	3,500
2 " 7611 valves - 8"	4,500
2 " Pressure transmitter	1,500
2 Woodward USG Regulators	2,500
2 Leeds & Northrup P_n meters & probes	700
2 " " " Monitors	800
1 " " " Recorder (two points)	1,500
6 " " " Conductivity meters	1,500
6 " " " " probes	1,000
2 Honeywell flow transmitter	2,000
2 " temp. "	2,000
2 " Diff. "	2,000
2 M. Roy Metering pumps with motors	1,500
Misc. & spare electric motors & electric measuring equipment.	10,000
Hardware, pipe and spray nozzles for decarbonator	20,000
Sea Freight	25,000
Sub Total	511,000
2 Desalination Engineers for 3 months each	35,000
2 Participants fr. Cape Verde for 1 mo. ea.	15,000
Sub Total	50,000
Procurement Services (7% of $550,000)	38,500
Grand Total	$599,500

APPENDIX 2

Foreign Source Procurement

Spare parts and tubes for boilers	$79,000
Spare parts for brine turbo-pumps	$10,000
Spare parts for the raw sea water pump	$ 2,000
Spare parts for the turbo-alternator	$ 5,000

ROUGHLY $96,000

Desalination Plant Mindelo

Cash Flow in Thousands of Eccudos

	1975(1)	1976	1977(2)	1978(4)	1979	1980
SALES						
WATER	6935	7000	13500	21,000	21,000	
DISTRIBUTION SERVICES	127	250	250	-	-	
MISC.	73	50	15000(3)	25	25	
TOTAL	7035	7300	28,750	21,025	21,025	
COST						
PLANT LABOR	1653	1750	1653	1653	1653	
DIST. LABOR	249	300	250	- (5)	-	
SALE & ADM.	1752	1850	1753	1440	1440	
POWER	116	116	116	116	120	
FUEL	10140	10140	10140	11150	11150	
CHEMICALS	1140	1140	1250	2000	2000	
MAIN. PARTS	276	500	15000	250	250	
MISC.	100	100	100	100	100	
DEP.	2676	2676	2676	2676	2676	
SUBTOTAL	18102	18572	32938	19385	19389	
INTEREST	-	-	-	-	-	
PRINCIPLE	-	-	-	-	-	
INSURANCE (automobile only)	14	15	15	15	15	
TOTAL	18116	18587	32953	19400	19404	
GROSS INCOME(LOSS)	(11081)	(11287)	(4203)	1625	1621	
TAXES	-	-	-	-	-	
NET INCOME(LOSS)	(11081)	(11287)	(4203)	1625	1621	

(1) actual (2) new rates in effect (3) $500,000 grant (4) after renovation 70% more water for same fuel consumption

ANNEX A

AID 1020-28 (1-72)

PROJECT DESIGN SUMMARY
LOGICAL FRAMEWORK

Life of Project: From FY 1977 to FY 1977
Total U. S. Funding $600,000
Date Prepared: 9/227

Project Title & Number: Renovation of Desalination Plant - 655-0004

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program or Sector Goal: The broader objective to which this project contributes: To provide the populace of Mindelo with a sufficient daily supply of potable fresh water, and correspondingly reduce the risk of illness resulting from drinking brackish and polluted water.	Measures of Goal Achievement: Measures of goal achievement can be obtained by comparing the amount of fresh water on the island and sickness in the base year with the supply in succeeding time period.	Goal achievement is verified when the Desalination Plant in Mindelo is capable of meeting the 1,500 mt. per day requirement.	Assumptions for achieving goal targets: 1. GOCV price policies will be conducive to fresh water production and affordable to the urban poor.
Project Purpose: To renovate an existing desalination plant, and to introduce sound management and technical operating practices and proper financial procedures.	Conditions that will indicate purpose has been achieved: End of project status. The existing desalination plant is with fully trained staff equipped and operating.	Report from A.I.D. Office.	Assumptions for achieving purpose: 1. GOCV delegate sufficient authority and provide support in planning and implementing this project.
Outputs: 1. A completely renovated and functioning desalination plant. 2. A properly trained staff in new techniques of plant management maintenance and operation. 3. Inventory of shelf items. 4. Sound financing of plant.	Magnitude of Outputs: 1. One renovated plant producing at maximum capacity (80%) 2. One trained General Manager. Two Plant Engineers. 3. Available stand-by equipment.	1. Periodic assessment of plant operations. 2. Review of water production and personnel records. 3. Routine inventory check. 4. Major reduction water imports.	Assumptions for achieving outputs: 1. Personnel to operate and maintain plant are available for training. 2. Spare parts can be procured.
Inputs: U.S. - (1) $50,000 for technical assistance and training in U.S. for one General Manager and two Plant Operators in country; (2) $450,000 for equipment procurement in U.S.; (3) $100,000 for procurement from foreign sources. Host Country - Plant personnel, Project Manager, chemicals, operating budget and supporting services.	Implementation Target (Type and Quantity) (See document)	----	Assumptions for providing inputs: 1. Funding is available on a timely basis.

ANNEX B

Procurement Source Waiver

Problem: Request for procurement source waiver from Geographic Code 000 (U.S. only) to Geographic Code 935 (Special Free World).

A. Cooperating Country: Cape Verde

B. Authorizing Document: Project Paper

C. Project: Renovation of Desalination Plant

D. Nature of Funding: Project Grant

E. Description of Goods: Non-U.S. manufactured spare parts for: boilers ($79,000), brine turbo-pumps ($10,000) raw sea water pump ($2,000) and the turbo-alternator ($5,000).

F. Approximate Total Value: $96,000

G. Probable Source: France or Spain

Discussion: A waiver of procurement source and origin requirements in Handbook 15 for grant funded commodities is recommended to Code 935 for the above equipment. The spare parts will be used in the renovation and maintenance of the desalination plant at Mindelo on Sao Vicente Island.

The plant has two complete evaporating lines each with its own boiler, turbine generator, pumps, etc. When a boiler or one of the rotating pieces of equipment is down for repair the line stops producing water until a spare part is imported from a European supplier. If spare parts were available the plant could continue producing water while the repairs are made.

Since this project proposes to renovate an existing plant the spare parts will have to be procured from the original suppliers of the equipment. The new stand-bys to be provided under the project such as a boiler, turbo-generator and instruments can be procured in the U.S. but the spare parts for the existing plant will have to be procured from European suppliers.

Primary Justification: A.I.D. Handbook 15 establishes as a criterion for the waiver of A.I.D.'s source requirements the non-availability of an essential commodity from eligible sources. The subject equipment essential to this A.I.D.-financed project, is not available from the authorized source and non-A.I.D. foreign exchange is not available for the purpose.

AGENCY FOR INTERNATIONAL DEVELOPMENT
WASHINGTON, D. C. 20523

BIBLIOGRAPHIC INPUT SHEET

FOR AID USE ONLY

1. SUBJECT CLASSIFICATION
   A. PRIMARY
   B. SECONDARY

2. TITLE AND SUBTITLE
Cape Verde Islands - Potable Water Supply - Mindelo; Project Paper

3. AUTHOR(S)
AID/AFR/USAID/Cape Verde

4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
1976	23p.	ARC

7. REFERENCE ORGANIZATION NAME AND ADDRESS

8. SUPPLEMENTARY NOTES *(Sponsoring Organization, Publishers, Availability)*

9. ABSTRACT

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
PD	
12. DESCRIPTORS	13. PROJECT NUMBER 655-0204
	14. CONTRACT NUMBER
	15. TYPE OF DOCUMENT

AID 590-1 (4-74)

Recommendation: For reasons stated above it is recommended that you conclude that procurement from the sources requested above is necessary to the attainment of U.S. foreign policy objectives and the objectives of the Foreign Assistance Program.

APPROVED: _____

DISAPPROVED: _____

DATE: _____