

A

PROJECT COMPLETION REPORT

PROG

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Prepared by the Agency for International Development, an Agency of the Government of the United States of America.

CONT

MW

Project No.: 512-11-521-062.1
512-52-062 (previously)

Agreement No.: CWS-1 (previously)

Project Title: Urban Water and Sewer Systems Improvement

Community Water Supply Systems Development (previously)

Date of Original Agreement	Project Completion Date
June 30, 1961	September 18, 1974

For the Director of USAID

William K. Blahut
Deputy Director

✓October 29, 1974

Project Completion ReportI. SUMMARY OF PROJECT FINANCINGProject No. 512-11-521-062.1A. A.I.D. Financing

	<u>Dollars</u>	<u>U.S. Owned Cruzeiros</u> <u>Cr\$</u>
Direct Hire/PASA Services	1,202,000	-
Contract Services	444,000	-
Commodities	562,000	-
Participant Training	392,000	-
Other Costs	168,000	3,201,000
TOTAL	<u>3,168,000</u>	<u>3,201,000</u>

B. Government of Brazil Financing

	<u>USAID/GOE Trust Fund</u> <u>Cr\$</u>
Direct Hire/PASA Services	1,041,700
Contract Services	-
Commodities	-
Participant Training	191,518
Other Costs	136,868
TOTAL	<u>1,370,086</u>

C. Cooperating Agency Financing

	<u>Cr\$</u>
Technical and Other Services	243,000
Commodities	-
Participants	370,000
Other Costs	-
TOTAL	<u>613,000</u> <u>1/</u>

D. Financing by Other Parties to
Project Agreement

	<u>Cr\$</u>
Technical and Other Services	1,792,800
Commodities	-
Participants	-
Other Costs	-

1/- As of March 31, 1969

AID 1010-11 (1-70) PRO AG INFORMATION SHEET ANNEX	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062.1	PAGE <u>3</u> OF <u>6</u> PAGES
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II. BACKGROUND

To obtain a better understanding of this project it is necessary to provide general background information as this project merely continued U.S. technical assistance and training to GOB. From 1942 thru June of 1960 the United States cooperated with Brazil in the development of a public health institution now known as the Foundation SESP.

This Foundation was established in June 1960 as a semi-autonomous agency within the organizational structure of the Ministry of Health. This cooperation included a program for the development of community water supply systems.

From 1942 until June 1960, the following was accomplished in the water supply development and related fields:

1. 118 sanitary engineers and related personnel were sent to the U.S. and/or third countries for training.
2. Sanitary engineering developed as a professional speciality.
3. Sanitary engineering training facilities were developed in São Paulo, Belo Horizonte, Porto Alegre, Recife, Curitiba, Salvador, Rio de Janeiro, Goiânia and Belém.
4. Water supply systems were constructed in 1,196 municipalities.
5. Ground water studies were made by USOM technicians and the feasibility of using ground water was accepted by many Brazilian engineers, public administrators, and other professional groups.
6. Twenty nine (29) well drillers completed formal training, and in-service training.
7. A national water planning task force was appointed to study the Community Water Supply requirements of Brazil, and to make recommendations relative to meeting these requirements. The task force recommended, that immediate assistance be given to specified communities in the Northeast and other vital areas.

For the Cooperating Government or Agency

For the Agency for International Development

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AID 1330-1A (D-7C) PRO AG CONTINUATION SHEET ANNEX	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512911-521-062.1	PAGE <u>1</u> OF <u>6</u> PAGES
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The problem that this Project was designed to meet was twofold:

- 1) There was a recognized lack of knowledge and experience in the efficient administration of water supply systems in the smaller population centers of Brazil.
- 2) There was no organization or group charged with the responsibility of coordinating the planning of community water supply systems on the national level with management and operation on the local level.

The objectives of the Project Agreement were:

- A) To train personnel in the efficient management, operation and maintenance of water supply systems in small and medium size communities.
- B) To develop, with the Foundation SESP Division of Sanitary Engineering, a Community Water Supply Administration and Financial Planning Section.

III. OBJECTIVES ACHIEVED

The plan for this Project envisioned cooperation with Foundation SESP in improving administration and management practices. As time went on it soon became evident the Foundation SESP was not receiving adequate financial support from GOB and so the Mission turned towards other agencies in implementing the program, such as state and city water departments, IBAM and various universities.

The project was implemented through 35 sub-projects within the jurisdiction of the Rio office and several through the Recife office. All of these sub-projects have been carefully reported upon and are attached as Annex "A". The project received its sixth and final audit in August 1969, in which the auditors conclude, that, "In our opinion, progress has been achieved in meeting the project objectives This report contains no recommendations."

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AID 1950-1A (3-72) PRO AG CONTINUATION SHEET ANNEX	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062 1	PAGE <u>5</u> OF <u>6</u> PAGES
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In obtaining a better picture of how the water supply program in Brazil has developed against the background given previously it is necessary to describe certain parallel developments which took place, in bringing the country-wide program to its present level of progress. The Foundation SESP was in 1960, the leading national force in basic sanitation. There were little or no local administrative agencies worthy of the name except in the major cities and in the state of Rio Grande do Sul and even these were weak. From 1960 on the Foundation deteriorated rapidly and stronger national and state agencies developed to take over the program.

It was fully realized as early as 1962 that a new financial base for construction of water supplies would have to be developed if any worthwhile progress was to be made towards Brazil's attaining the goal of the Charter of Punta Del Este, ie. 70% of the urban population with potable water by 1970. Up to this point all water supplies were constructed by federal or state grants which were so inadequate that water service was not even keeping up with population increase. The Mission at this point suggested a system of loan financing similar to U.S. practice but with public funds substituted for private loan capital.

Under the guidance of the technical assistance and training supplied with this project, a loan system was established originally administered by the Department of Sanitary Works of the Ministry of Interior, which had established itself as the strongest national agency in the field. USAID made a loan (512-G-042) to GOB which was used along with GOB funds to establish a revolving fund for construction. The story from that point on is one of great success, with the National Housing Bank assuming responsibility for all GOB funds and for administration of loans to cities and states in 1967. USAID in turn made two additional loans totalling over \$40 million and IBD and IBRD also made sizeable contributions which has carried Brazil along quite successfully to its goal of 80% urban population with potable water and 50% with adequate sewerage by 1980. The former is very likely to be met and the latter is quite possible.

The institutionalization then which has been developed largely through the basic efforts of the agencies who implemented this project, now finds the National Housing Bank

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TITLE: _____		TITLE: _____	

AID 1286-1A
G-7C
PRO AG
COORDINATION
SHEET
ANNEX

PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062.1	PAGE <u>5</u> OF <u>6</u> PAGES
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AN AGENCY OF THE GOVERNMENT OF Brazil		

with a sound financial program for construction and a supporting program in training. Through policies laid down by the Bank strong state basic sanitation companies have been developed in most states who are charged with construction, operation and maintenance of the systems and guarantee of loan amortization by the various state banks.

The current situation, a direct result of this Project, is best emphasized through a statement made by a U.S. Public Health Service team, in its study, "Evaluation of Community Water Supply Programs and Capabilities in Brazil". The report states as follows:

"The team was especially impressed with the progressive attitude which prevailed among the Brazilian personnel associated with that country's water supply programs. This attitude existed at all levels from the central government down through the regions, the states and the municipalities. Likewise, a great deal of credit must go to the U.S. Mission in Brazil for the progress in institution building which was observed under development in the host country."

IV. INVENTORY OF AID FURNISHED COMMODITIES

See sub-project reports (Annex "A") and final audit report (Annex "B") attached.

For the Cooperating Government or Agency	For the Agency for International Development
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AND LEGAL OFFICE PERAS CONTINUATION SHEET ANNEX A	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062.1	PAGE 1 OF 3 PAGES
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Summary of USAID/Rio Sub-Agreements

Annex A

	<u>Date Signed</u>	<u>Amount</u>
1. Community Water Supply Development Research Agreement with Univ. of São Paulo	June 30, 1969	\$ 20,000
2. Guanabara Water Supply and Sewerage Improvement Project	Feb. 27, 1962	Cr\$ 848.650
3. Santa Catarina State Water Development Program	May 30, 1962	\$ 124,700
4. FSESP Agreement to establish 3 training centers.	May 30, 1962	\$ 36,250
5. Community Water Supply Administration Consultants	April 22, 1962	\$ 17,800
6. IBAM Agreement for 15 City Survey	April 30, 1963	\$ 11,640
7. National Loan Fund Advisors	April 30, 1963	\$ 135,000
8. Guanabara Training Equipment	May 22, 1963	\$ 25,000
9. Construction Equipment-Goiás	May 28, 1963	\$ 70,403
10. Construction Equipment-Paraná	May 28, 1963	\$ 132,865
11. Construction Equipment-Pará	May 28, 1963	\$ 103,832
12. FSESP Training-Pará & Amazonas	May 30, 1963	Cr\$ 12.200
13. IBAM - Mayors Seminars	May 4, 1964	Cr\$ 30.000
14. IBAM-FSESP-Financial Plng.	May 4, 1964	Cr\$ 50.000
15. FSESP Training-Central Brazil	May 8, 1964	Cr\$ 60.000
16. FSESP Training-South Brazil	May 8, 1964	Cr\$ 50.000

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AID 1738-1A 0-70 PRO AG CONTINUATION SHEET ANNEX <u>A</u>	PROJECT AGREEMENT BETWEEN AID AID	1. Project/Activity No. 512-11-521-062y1	PAGE <u>2</u> OF <u>3</u> PAGES
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	<u>Date Signed</u>	<u>Amount</u>
17. Paraná Fordillas	May 11, 1964	\$ 2,500
18. São Paulo Water and Sewerage Study-Hazen & Sawyer	May 11, 1964	\$ 245,000 Cr\$ 30,000
19. Pará Fordillas	May 6, 1964	\$ 3,000 Cr\$ 4,000
20. Guanabara(SURSAN Water)	Feb. 24, 1965	Cr\$ 50,000 (cancelled)
21. Guanabara(Pitometer Study)	Feb. 24, 1965	\$ 45,000
22. IBAM-Cadastral & Administra- tive Reorganization	May 14, 1965	Cr\$ 170,000
23. IBAM-FSESP Fordillas	May 31, 1965	\$ 40,000
24. IBAM-FSESP Admin. & Mgmt Seminars	March 29, 1966	Cr\$ 120,000
25. SANEPAR-Tech.Assist. & Trng.	July 26, 1966	Cr\$ 20,000
26. CEDAG-Mgmt. & Training	Dec. 13, 1966	Cr\$ 50,000
27. University of São Paulo - Water Correspondence Course	Jan. 25, 1967	Cr\$ 75,000
28. DEMAÉ-B.Horizonte Trng.	Feb. 14, 1967	Cr\$ 30,000
29. IBAM-Financial Mgmt. Accounting	Feb. 29, 1968	Cr\$ 220,000
30. IBAM-State Loan Fund Seminar	May 15, 1968	Cr\$ 30,000
31. Sewer Corresp.Course-Univ.S.P.	June 4, 1969	Cr\$ 124,920
32. Participant Training	Feb. 11, 1969	\$ 75,000 Cr\$ 26,000
33. IBAM Administrative Centers	Oct. 20, 1969	Cr\$ 300,000 Cr\$ 500,000

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AID 1020-1A 0-70 PRO AG CONTRIBUTION SHEET ANNEX A	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062.1	PAGES <u>3</u> OF <u>3</u> PAGES
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	AN AGENCY OF THE GOVERNMENT OF Brazil	2. Project/Activity Title Urban Water and Sewer Systems Improvement	

34. Univ. São Paulo Book Publication	April 27, 1970	Cr\$90.000
35. SUCESA - Training	May 13, 1970	Cr\$60.000

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	AN AGENCY OF THE GOVERNMENT OF Brazil	3. Project/Activity Title Urban Water and Sewer Systems Improvement	

	<u>Date Signed</u>	<u>Amount</u>
17. Paran Fordillas	May 11, 1964	\$ 2,500
18. So Paulo Water and Sewerage Study-Hazen & Sawyer	May 11, 1964	\$ 245,000 Cr\$ 30,000
19. Par Fordillas	May 6, 1964	\$ 3,000 Cr\$ 4,000
20. Guanabara(SURSAN Water)	Feb. 24, 1965	Cr\$ 50,000 (cancelled)
21. Guanabara(Pitometer Study)	Feb. 24, 1965	\$ 45,000
22. IBAM-Cadastral & Administra- tive Reorganization	May 14, 1965	Cr\$ 170,000
23. IBAM-FSESP Fordillas	May 31, 1965	\$ 40,000
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25. SANEPAR-Tech.Assist. & Trng.	July 26, 1966	Cr\$ 20,000
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28. DEMA-E-B.Horizonte Trng.	Feb. 14, 1967	Cr\$ 30,000
29. IBAM-Financial Mgmt., Accounting	Feb. 29, 1968	Cr\$ 220,000
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31. Sewer Corresp.Course-Univ.S.P.	June 4, 1969	Cr\$ 124,920
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AID 1950-1A 0-70 PRO AG CONTINUATION SHEET ANNEX A	PROJECT AGREEMENT BETWEEN AID AND	1. Project/Activity No. 512-11-521-062.1	PAGE <u>2</u> OF <u>3</u> PAGES
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	AN AGENCY OF THE GOVERNMENT OF Brazil	5. Project/Activity Title Urban Water and Sewer Systems Improvement	

34. Univ. São Paulo Book Publication	April 27, 1970	Cr\$90.000 Cr\$80.000
35. SUCESA - Training	May 13, 1970	Cr\$70.000

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of five reservoirs with total storage of 13.77 million gallons, and the installation of 20 kilometers of 12-24 inch diameter water pipelines. Under the sewerage project, 40 kilometers of collector and interceptor sewers were constructed.

4. During the calendar year 1962, SURSAN contributed as its share of the program, NCR\$4,553,597. This was short of what had been expected for that year, but during the first 5 months of 1963, it contributed NCR\$347,000 to recover the shortage and fulfill its obligation.
5. All consultant's reports are available in the official file and in the ENRW library.
6. A sixth and final Audit Report No 4/70, dated 26 August 1969, was completed. This audit contained no recommendations.
7. All funds have been spent, and ENRW considers this sub-project successfully concluded and the project is closed.

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PROJECT No.: 512-W-52-AJ (Formerly 512-52-057)

AGREEMENT No.: H&S-2 (for 1960 funds)

PROJECT TITLE: Community Water Supply Development (Research)

DATE OF ORIGINAL AGREEMENT: June 30, 1960

DATE OF COMPLETION: June 15, 1964 (REVISION 1)

FUNDING - TOTAL \$20,000

The agreement was to document Brazilian experience with well drilling equipment, well screens, and pumps to serve as basis for giving direction to the development of economic/equipment for developing Brazil's ground water resources.

Two publications resulted from the studies. One is a report, "INVESTIGAÇÃO SOBRE RECUSAS E TÉCNICAS DISPONÍVEIS NO BRASIL PARA CONSTRUÇÃO E APARELHAMENTO DE POÇOS DESTINADOS A ABASTECIMENTO DE ÁGUA"; and the other is a book entitled: "POÇOS PROFUNDOS - Manual Técnico"; the latter being an excellent and valuable addition to Brazilian technical literature. The Army technical manual, "WELLS" was also translated into Portuguese.

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PROJECT No.: 512-P-52-AC (Later became 512-11-520-062)

AGREEMENT No.: WS-1-1962

PROJECT TITLE: National Water Supply and Sewage

DATE OF ORIGINAL AGREEMENT: May 30, 1962

DATE OF COMPLETION: See Revision Completion Dates

REVISION No. 1 - (For FY 62 funds) (WS-3 Santa Catarina)

Date of Revision: May 30, 1962
 Date of Completion: June 30, 1963
 Funding: \$124,700

3

(6)

This agreement was to complement an agreement between the State of Santa Catarina and FSESP to develop a state-wide water program, including the improvement of old or provision of new supplies in 37 cities. The funding of \$124,700 was to provide equipment to support the FSESP-Santa Catarina effort.

The state did contribute for more than the agreed upon Cr\$40,000,000 for the state water program, and the planned construction programs were accomplished.

The equipment furnished under this agreement was all delivered and inspections have verified that its use has been in compliance with the FSESP and state water program.

REVISION No. 2 - (For FY 62 funds) Training Centers 1962

Date of Revision: May 30, 1962
 Date of Completion: June 30, 1964
 Funding - Total \$36,250

4

4

(4)

This revision to the agreement was to assist in the establishment of three training center in Brazil for organizing the training of water and sewerage works personnel under FSESP direction. Each of these training centers were placed in operation under Revision 6 of the 1963 agreement funding dated May 30, 1963 and ProAgs Nos. 512-11-520-062 dated May 8 and May 4, 1964. The centers were respectively in BELEM, BELO HORIZONTE, and CURITIBA.

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PROJECT No.: 512-E-52-AC

AGREEMENT No.: Consultants

PROJECT TITLE: National Water Supply & Sewage

DATE OF ORIGINAL AGREEMENT: April 22, 1963

DATE OF COMPLETION: December 31, 1965 (by Revision 8)

FUNDING: \$ 17,800

This agreement was to make available the services of 3 short-term consultants qualified in water and sewerage practices to assist in the development of a national training action plan in community water supply administration, of a time table for action and to outline major phases of the plan.

Prof. Paul E. Morgan worked during June & July 1963, confining his activities to Rio, Mr. George Barnes confined his work to São Paulo, and Mr. James C. Brown worked with ESAS2 on a national plan.

These reports were all concluded in 1963.

Revision 1 (for FY 63 funds) IBM (10 cities)

Date of Revision: April 30, 1963

Date of Completion: Dec. 31, 1963 (extended to June 30, 1964)

Funding: \$ 11,848

The revision was to survey 5 cities of approximately 25,000 to 100,000 and 5 cities of over 100,000 population, to provide data for identifying training requirements for municipal water supply programs, including course contents, schedules and costs, for the purpose of mobilizing necessary forces for insuring acceptance and success of the national water program. Fifteen cities were studied. The results of the study were edited and presented to USAID and GOB agencies and served as a basis for subsequent training programs in water supply administration given in training centers in Belo Horizonte, Curitiba, Joinville and Recife.

Revision 2 (for FY 63 funds) WS-1-1963

Date of Revision: April 30, 1963

Date of Completion: Dec. 31, 1965

Funding: \$ 135,000

This revision covered cost of financing contract services of 3 full time

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advisors assigned on a cooperative basis to GOB water and sewerage agencies to strengthen and develop the financial aspects of the program - particularly the developing national loan fund. Training of local personnel was part of their duties also.

The following technicians served in this capacity.

<u>Name</u>	<u>Area</u>	<u>Dates</u>
W. E. Hyde	São Paulo - Mato Grosso	August 19, 1965 - June 1, 1967
F. A. Rynders	São Paulo	January 11, 1965 - Dec. 27, 1965
A. E. Williamson	South Brazil	July 24, 1964 - July 29, 1966

7)	<u>Revision 3</u> (for FY 63 Funds)	Goiás	\$ 70,403	9
10)	<u>Revision 4</u> (for FY 63 Funds)	Paraná	\$ 132,865	10
11)	<u>Revision 5</u> (for FY 63 Funds)	Pará	\$ 103,832	11
	Date of Revisions	-	May 28, 1963	
	Date of Completions	-	December 31, 1965	

In all of these revisions, the funds provided were for the purchase of equipment to be used in the construction of proposed water supply systems. In each of these states there were FSESP-STATE Agreements for expanding the water system, principally of the larger cities.

FSESP and Goiás had developed a plan for water and sewerage improvements in 8 cities, benefiting 600,000. FSESP and PARANÁ had statewide plan for water and sewer improvements in 60 cities benefiting 2,000,000. Similar plans in Pará were to benefit 25 cities with total population over 100,000.

The equipment was purchased through FSESP, and site ^{visits} ~~works~~ by USAID engineers verified that the equipment was well maintained and utilized. An audit of the projects was made, and the small deficiencies corrected.

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Revision 6 - (For FY 63 Funds) Training Para' and Amazonas

Date of Revision: May 30, 1963
 Date of Completion: December 31, 1965
 Funding: NCr\$ 12,200.00

12

10

12

This revision was to accelerate and intensify for a two year period the training and development of 96 water works employees charged with the management of water works utilities in Para' and Amazonas.

Seventy personnel were trained in a series of one week courses for plumbers, administrators, and operators. Trainees have been given and have satisfactorily assumed more responsibilities as a result of these courses.

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PROJECT No.: 512-11-520-062 for FY 64

AGREEMENT No.: IBAM (Mayors Seminar)

PROJECT TITLE: National Water Supply & Sewage

DATE OF ORIGINAL AGREEMENT: May 4, 1964

DATE OF COMPLETION: December 31, 1965

FUNDING: NCr\$ 30,000

13

The agreement was for IBAM, and FSESP to conduct a series of 10 seminars at strategic locations throughout Brazil to orient municipal leaders on the National Water Loan program, stressing the point of municipal acceptance of responsibilities for financing construction and operation, and training.

The 10 seminars were attended by 384 mayors and municipal officials representing 196 medium size cities from 8 states in attendance. The seminars were well planned, well attended, and the ideas presented were overwhelmingly accepted by the municipal officials.

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PROJECT No.: 512-P-52-AB

AGREEMENT No.: IL 480-1-1963

PROJECT TITLE: Guanabara Water Supply and Sewerage Improvement

DATE OF ORIGINAL AGREEMENT: May 22, 1963

8) DATE OF REVISION: May 30, 1963 Revision 1

DATE OF COMPLETION: Dec. 31, 1965

8) FUNDING: \$ 25,000

This agreement was to provide funds for purchasing equipment necessary for training personnel and for standardizing the methods of maintaining and operating the water distribution system.

The equipment has been purchased and installed and the training mission accomplished.

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PROJECT No.: 512-11-520-062 for FY 64

AGREEMENT No.:

PROJECT TITLE: National Water Supply & Sewerage

DATE OF ORIGINAL AGREEMENT: May 4, 1964

DATE OF COMPLETION: See Revision Completion Dates

14
13

FUNDING

REVISION No. 2 (For FY 64 Funds) FINANCIAL PLANNING

Date of Revision: May 4, 1964

Date of Completion: December 31, 1965

Funding: NCR\$ 50,000

14

After previous IDA studies had shown that the water supply and sewerage disposal situation was one of the critical municipal problems, it was recommended that the total needs should be determined by developing preliminary engineering studies of 20 typical, medium sized cities throughout Brazil, including feasibility studies and financial reports.

By careful planning, the Special Public Health Foundation (FSESP) was able to complete 35 such studies. Valuable experience was gained by FSESP engineers and by private consulting engineers contracted to help. Facts and data developed in this study were invaluable in developing a loan fund plan and in implementing the National Loan Fund now in operation in Brazil.

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PROJECT No. 512-11-520-062

AGREEMENT No.:

PROJECT TITLES: National Water Supply & Sewage
 1. Reg.Trng. - Central Brazil
 2. Reg.Trng. - South Brazil

DATE OF ORIGINAL AGREEMENT: May 8, 1964

DATES OF REVISION: Jan. 24, 1966 for Central and South and June 19, 1966 for Central only

DATES OF COMPLETION: December 31, 1967 for Central - 15
 December 31, 1966 for South - 16

FUNDING: NCR\$ 60,000 - Central
 NCR\$ 50,000 - South

FSESP (Brazilian Special Health Service), engaged in managing and operation over 80 water systems, had worked closely with the water departments of the States of Minas Gerais (Central Brazil) and Paraná and Santa Catarina (South Brazil). Their observations indicated the necessity for training personnel of communities in these regions to adequately operate local water utilities. FSESP proposed to train 250 water works personnel in South Brazil and 400 in Central Brazil within two years.

As a result of this program 112 personnel in the south and 315 in Central Brazil received training. Two teaching manuals were produced which are being used in continuing training programs. While neither goal was reached during the period of the projects, training programs were established and continuing through the efforts of the local agencies in the states noted.

ALLEGEDLY

DEPARTMENT OF STATE

512-11-520-062

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FROM - RIO DE JANEIRO

SUBJECT - PROJECT CLOSING

REFERENCE -

Project No.: 512-11-520-062
 Project Title: National Water Supply and Sewerage (Paraná Fordilhas)
 Date of Original Agreement: March 2, 1964
 Date of Revision: May 11, 1964
 Date of Completion: December 31, 1965
 Funding: UNR - 22501
 Local (State of Paraná) - RCr\$16 491

This agreement was for the provision of water to about 1200 people in low income areas of Curitiba, Paraná by use of Fordilhas (automatic closing faucets). There was no previous experience with this type of installation in the south of Brazil. By this installation it was planned to determine the acceptability of the units with the users, their durability, and hydraulic factors in system design.

The faucets were purchased and are now installed. The Water Department of Paraná, operators of the Curitiba system, provided local funding and installation. Reports have been completed by the Department showing locations of installations and details of local costs and will continue to observe the effectiveness of the equipment in use. they

The objective of the agreement has been fulfilled and all money has been accounted for, and the project is now closed.

BELTON

PAGE	PAGES
1	OF 1

DRAFTED BY AEM:ap	OFFICE ENRRO W.R.Stone, Chief	PHONE NO. 453	DATE 5/10/68	APPROVED BY: M. M. VCGEL, Chief, ENRO
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CONTINUATION

POST Rio de Janeiro, Brazil TOAID A-1119	NO. A-1119	CLASSIFICATION UNCLASSIFIED	PAGE 4	PAGES OF 8
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PROJECT No.: 512-11-520-062 (for FY 64)

AGREEMENT No.: São Paulo Water & Sewerage (Hazen & Sawyer)^{y/}

PROJECT TITLE: National Water Supply and Sewerage

DATE OF ORIGINAL AGREEMENT: May 11, 1964

18) DATE OF COMPLETION: Sept. 30 1967 (by Revision 5-C dated June 30, 1967)

14) FUNDING: -
 \$200,000 (EIO/T 40233)
 NCr \$30,000 (EL 400 Cruzeiro)
 \$ 45,000 (EIO/T 50230)

The object of the project was to provide the services of a consultant experienced and qualified to develop comprehensive solution for the sewerage problem to Metropolitan Area of São Paulo to the year 2000.

On August 24, 1967, the completed report was submitted to the Governor of São Paulo by representatives of Hazen and Sawyer, consultant, and USAID/S. The report is in English and Portuguese. It provides a solution to probably the largest unresolved metropolitan sewerage problem in the world today. It indicates that the State of São Paulo must provide a billion U.S. dollars by the year 2000 to implement the program.

AIRGRAM

DEPARTMENT OF STATE

AIRGRAM

CONTINUATION

POST Rio de Janeiro, Brazil TCAID A-1139	NO. A-1139	CLASSIFICATION UNCLASSIFIED	PAGE 5	PAGES OF 8
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PROJECT No.: 512-11-520-062
 AGREEMENT No.: Para Fordillas
 PROJECT TITLE: National Water Supply & Sewerage
 DATE OF ORIGINAL AGREEMENT: May 26, 1964
 DATE OF COMPLETION: December 31, 1965
 FUNDING: \$ 3,000
 RCr\$ 4,000

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19

This agreement was to provide for the installation of special "FORDILLA" type faucet in the yards of a number of homes in low income areas of 3 small cities in the State of Para, and to determine the consumption, acceptance and utility of this method of extending water services to areas not economically serviceable by conventional methods.

The results of this study, based on 30 to 60 installations in each city, indicate the fordilla is practical in cutting waste to a minimum, that fordilla is rugged and durable, that the faucet provided ample water under design situation, and there was good acceptance by the people served. The average cost of the systems was \$5.00 per home connection.

CONTINUATION

POST Rio de Janeiro, Brazil TC/ID A- 1119	NO. 1119	CLASSIFICATION UNCLASSIFIED	PAGE 6 OF 8
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PROJECT No.: 512-11-520-062
 AGREEMENT NO.: Guanabara (SURSAN WATER)
 PROJECT TITLE: National Water Supply & Sewerage
 DATE OF ORIGINAL AGREEMENT: February 24, 1965
 DATE OF COMPLETION: July 31, 1966
 FUNDING: NCr\$ 50,000 20

20

(10)

This project covered water supply training with SURSAN, the Guanabara Water and Sewerage Authority. Before the project could be implemented the water supply function was removed from SURSAN and placed in a separate new agency CEDAG.

Cr\$ 18 million were disbursed to SURSAN but were refunded to USAID with interest. No funds were expended. A new project has been signed for this training between CEDAG - CONTAP - USAID.

CONTINUATION

POS	NO.	CLASSIFICATION	PAGE	PAGES
Rio de Janeiro, Brazil	TCMD A-0131	UNCLASSIFIED	7	OF 8

PROJECT No.: 512-11-520-062 (formerly 512-P-52-A13)

AGREEMENT No.: Guanabara Water (Pitometer Study)

PROJECT TITLE: National Water Supply & Sewerage (formerly -"Guanabara Water Supply & Sewage Improvement)

DATE OF ORIGINAL AGREEMENT: February 24, 1965

21 DATE OF COMPLETION: December 31, 1966

53 FUNDING: - \$ 45,000 21

This project was to provide for flow studies to be made for determining pipe line characteristics in certain sections of Rio's water distribution system, and simultaneously to train local engineers in these methods. A U.S. engineering firm, expert in net work analysis was contracted for the study and training program.

Pitometer Associates completed the contract assignment with CEDAG, the Guanabara State Water Company. The final report from the contractor has been received. A number of engineers in CEDAG were trained to follow up on distribution system analysis.

THE FILES

October 1, 1974

Alfred E. Williamson, ENRO/EPA

IBAM-FNEESP Tech. Assistance & Cadastral Survey

22

NOTE:

As no copy of the final report on this sub-project is available, the following is taken from a report made in connection with a project review meeting held July 22, 1969. This report was prepared by E. A. Jeffery, Project Manager, at that time.

Date signed:	- May 14, 1965 (Rev. 3, July 12, 1966)
Funds	- RCR\$ 170,000 (IL 420)
Funds disbursed	- RCR\$ 170,000
Closing date	- June 1970

Of the RCR\$170,000, RCR\$50,000 were to be used by IBAM to provide technical assistance in the administration and management of selected municipal water services. This assistance was provided through a grant system. The remaining RCR\$120,000 was to be used to set up a rotating loan fund, administered by IBAM, to be loaned to selected cities to update their tax maps and tax rolls.

Preliminary studies, prior to signing technical assistance agreements were made in 10 cities; Sorocaba, Limeira, Ponta Grossa, Joinville, Piraí, Albeirô Preto, São de Pora, Cantagan, Loureira, and Recanatavo. Technical assistance agreements were actually signed with Americana, Limeira, Joinville, Itajubá and Petrópolis. The RCR\$50,000 have been spent and accounted for.

In the Cadastral Survey program, loans were made to five cities; Campo Limpo, Ourinhos, Anápolis, Joinville, and Blumenau. Of these, Joinville and Blumenau are the only two that remain with loan repayments due. The last repayment is due on June 25, 1970. This loan fund suffered devaluation from inflation to the extent that the fund is no longer sufficient to maintain itself. IBAM elected therefore, to return the money to COCAP since the agreement terms were not fulfilled. That is, the rotating fund was not created.

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USAID/P.

As a result of the failure of FOMSP to act on this matter, the project under a number of USAID/P contracts that action be taken to prevent the sale of other health facilities. All countries available have been listed and passed to USAID/Programs & Operations and USAID/Management for use in local programs.

While the object of this agreement was not fully fulfilled, all money and property is now accounted for and the project is closed.

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CONTINUATION

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PROJECT No.: 512-11-520-062
 AGREEMENT No.: IBAM/PSESP (6 seminars)
 PROJECT TITLE: National Water Supply and Sewerage
 DATE OF ORIGINAL AGREEMENT: March 29, 1966
 DATE OF COMPLETION: June 30, 1967
 FUNDING: NCr\$ 120,000

24

24) This agreement was to develop and present an administrative training program in Brazil for 132 professional - level personnel engaged in water supply management and administration of approximately 100 Brazilian municipalities, and to prepare and publish a reference manual on water works administration for medium size cities.

On April 3, 1967, IBAM/PSESP presented the last of the 6 proposed seminars, and had trained a total of 133 participants from 39 municipalities in 16 states.

The manual was published in July 1967, the first in Brazil on water supply administration.

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ENRO/EPA File

UNITED STATES GOVERNMENT

Memorandum

UNCLASSIFIED

TO : Mr. Wyman R. Stone, Chief - ENRO

DATE: January 31, 1972

FROM : Alfred E. Williamson, ENRO/EPA *AW*

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SUBJECT: SANEPAR (Paraná) Training Project

With a course in Operation and Maintenance of Water Systems given in December at Curitiba this project was brought to a successful conclusion. 37 trainees enrolled in the short course. 32 students attended all classes.

Previous to the December short course eleven trainees were given individual instruction in water treatment plant operation.

The total project cost was Cr\$20,000, itemized as follows:

Travel and per diem.....	Cr\$3920
Printing and Binding (manual).....	5000
Contractual Services (CETESB-S.Paulo)	10500
Student Materials	488
Miscellaneous	<u>92</u>
	20000

This sub-project can now be closed.

Project - like this



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PAGE 1 OF 1

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FROM - RIO DE JANEIRO

SUBJECT - SUB-PROJECT CLOSURE.

REFERENCE - Project no 512-11-521-062.1

SUB- Project Title: CEDAG

Date of Original Agreement: Dec. 13, 1966

Date of Completion: Feb. 2, 1970

Funding: NR\$50,000 (CONTR)

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1. This agreement was made with CEDAG for the purpose of accelerating and intensifying the training and development during a two year period of 300 or more water works employees in charge of management, maintenance, and operation, and by assisting in the purchase of training supplies, the preparation of materials, and the payment of training facility preparation costs.
2. Through this ProAg, training courses were given for water plant and lift station operators, electrical technicians, construction foremen, and plumbers. One course was also given on public relations. A total of 201 persons were trained.
3. Concurrent with the training activities sponsored under this ProAg, CEDAG sponsored on its own the training of at least 167 plumbers, draftsmen, and survey technicians, in similar type programs. It is estimated that prior to this, from January 1961 to July 1965, CEDAG had trained about 170 technicians and engineering assistants.
4. This training agreement assisted substantially in intensifying and improving the CEDAG training program exactly at the time that CEDAG had recently been created as an independent water company from the old water department in SURSAM, the Guanabara Department of Sanitation and Urbanization. The results are judged satisfactory, and the project has come to a successful conclusion.

PAGE 1 OF 2 PAGES

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5. Only CONTAP funds were used in this agreement, and the financial accounting is made through CONTAP.
6. From the technical support standpoint, this project is closed.

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UNIVERSITY OF PENNSYLVANIA
 ENGINEERING DEPARTMENT

512-41-520-062.1

TO: AID/W TOALD A 885

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FROM: RAO D. JANLERO

SUBJECT: PROJECT CLOSURE FASA LA(HA)

REFERENCE - Project No. 512-41-520-062.1
 Project Title: University of São Paulo Water supply
 Engineering Co-operation Course
 Date of Origin Agreement: January 25, 1967
 Date of Completion: August 25, 1969
 Funding: NCR\$75,000

9/5/69

27

1. This Project was to assist the University of São Paulo develop the first international level correspondence course in Sanitary Engineering in Latin America. The correspondence course was entitled, "Water Supply Engineering", and was added along the line of the University of Pennsylvania course on the same subject.
2. The first course was initiated in August 1967 and terminated in June, 1968. There were 500 requests for registration, 214 registrations, and 131 certificates issued, for a completion rate of 61%. The graduates represented 14 States, the Federal District and Portugal. The tuition fee was NCR\$55.00 (about \$10.00).
3. The second course started in August 1968 and terminated in June 1969. The students matriculated numbered 100, and of these, 100 completed the course for a completion rate of 100%. For this course, the University charged a tuition fee of NCR\$90.00 (about \$27.00). Those that received certificates represented 13 states, the Federal District and Portugal.

DATE	BY	REASON	DATE	BY
LA Jeffrey/LNRW	LNRW	453	9.3.69	W. R. Stone, Chief
PRPC/G. DANIELL	G. DANIELL			
CONT/G. P. NEWTON	G. P. NEWTON			

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FINAL REPORT

WATER SUPPLY

27

CORRESPONDENCE COURSE

UNIVERSITY of SÃO PAULO

FACULTY of PUBLIC HEALTH

1967 - 1969

RELATÓRIO FINAL CORRESPONDENTE AO CONVÊNIO ENTRE A AGÊNCIA NORTE AMERICANA PARA O DESENVOLVIMENTO INTERNACIONAL (USAID), CONSELHO DE COOPERAÇÃO TÉCNICA DA ALIANÇA PARA O PROGRESSO (CONTAP) E UNIVERSIDADE DE SÃO PAULO (USP) FIRMADO AOS 25 DE JANEIRO DE 1967.

1. Escopo do Convênio

A finalidade do Convênio foi possibilitar ao Departamento de Saneamento da Faculdade de Higiene e Saúde Pública condições financeiras para planejar, criar, organizar, promover e dirigir um curso livre por correspondência sobre "Técnica de Abastecimento e Tratamento de Água" que satisfizesse as seguintes proposições básicas:

.Ministrar o curso em língua portuguesa visando a melhoria dos níveis de projeto nos setores de abastecimento e tratamento de água de consumo público.

.Formar, em duas etapas, um mínimo de 160 engenheiros selecionados entre os candidatos cujas atividades no campo da Saúde Pública estivessem mais estreitamente vinculados aos temas abordados no curso.

À Universidade de São Paulo, representada pelo Departamento de Saneamento da Faculdade de Higiene e Saúde Pública foram atribuídas as seguintes funções, além de executar e ministrar o curso:

.Indicar um dos Professores do Departamento de Saneamento para exercer as funções de Diretor do curso.

Facilitar a utilização de suas instalações, materiais e equipamentos, dentro do possível, para o bom desenvolvimento dos trabalhos relativos ao curso.

A USAID e o CONTAP se responsabilizaram, além de fornecer toda a ajuda técnica solicitada e de fornecer publicações relativas aos temas abordados no curso pela cobertura financeira de empenhimento cujo orçamento é apresentado em anexo, (Anexo nº 1).

2. Organização do Curso

O Departamento de Saneamento nomeou o Professor José Martiniano de Azevedo Netto para exercer as funções de Diretor do Curso, tendo sido posteriormente indicados o Coordenador, Engº. Ivaldo Hespanhol e os demais funcionários administrativos.

A secretaria do Curso instalou-se nas próprias dependências do Departamento de Saneamento, utilizando-se dos equipamentos e materiais disponíveis.

O Curso foi organizado em 30 (trinta) lições, necessitando das delas serem subdivididas em duas partes, devido ao grande volume de material didático elaborado.

Os alunos recebiam uma lição por semana, devendo resolver os exercícios apresentados e devolvê-los à coordenação do curso dentro de um prazo especificado, para correção e atribuição dos graus correspondentes. Em seguida os exercícios corrigidos eram devolvidos aos alunos.

Havendo falta na remessa dos exercicios resolvidos correspondentes a três lições consecutivas ou cinco alternadas implicava no cancelamento da matrícula correspondente.

Com excessão do Lag^o. Sizenando Ribeiro o curso foi totalmente redigido por docentes do Departamento de Saneamento da Faculdade de Higiene e Saúde Pública da U.S.P. a saber: Prof. José Martiniano de Azevedo Netto, Professor Eduardo Riomey Yassuda, Prof. Walter Engracia de Oliveira, Prof. José Augusto Martins, Dr. José Capochi, Dr. Paulo Soichi Nogami, Eng^o. Armando Fonzari Pereira, Eng^o. Benedicto Eduardo Barbosa Pereira, Eng^o. Claudio Manfrini e Eng^o. Ivanildo Respanhol.

Para a formação de 160 engenheiros foi estabelecido um programa visando a execução de dois cursos consecutivos, cada um com aproximadamente 80 alunos e com a duração aproximada de 10 meses.

3. O Primeiro Curso

As inscrições para o primeiro curso foram abertas aos interessados no mês de junho de 1967, sendo necessário para matrícula a apresentação de certificado de conclusão do curso, "curriculum vitae" e pagamento de uma taxa de NCr\$ 30,00 (trinta cruzeiros - novos).

Um resumo dos principais elementos relativos à realização do primeiro curso são apresentados em seguida:

Início do Curso - 23 agosto de 1967.
Término do Curso - 30 de junho de 1968.
Número de pedidos de inscrição - 600
Número de candidatos inscritos - 214
Número de alunos que concluíram o curso com sucesso - 131
Porcentagem de alunos aprovados - 61%

A distribuição geográfica dos alunos que concluíram o curso é apresentada no quadro abaixo:

1º CURSO

<u>Nº DE ALUNOS</u>	<u>ESTADO</u>
2	Alagoas
4	Amazonas
1	Bahia
2	Ceará
2	Distrito Federal
2	Espírito Santo
1	Goiás
23	Guanabara
1	Mato Grosso
14	Minas Gerais
1	Pará
21	Paraná
9	Pernambuco
2	Piauí
4	Rio de Janeiro
3	Rio Grande do Sul
6	Santa Catarina
32	São Paulo
1	Portugal
131	Formandos

4. O Segundo Curso

As inscrições para o segundo curso foram abertas em 1 de junho de 1968, tendo sido incluídos os candidatos remanescentes do primeiro.

Os principais itens relativo a realização desta segunda etapa são apresentadas abaixo:

Taxa de inscrição	NCr\$ 90,00
Início do Curso	1 de agosto de 1968
Término do Curso	31 de junho de 1969
Número de Candidatos Inscritos	166
Número de candidatos que concluíram o curso com sucesso	100
Porcentagem de aprovados	60 %

Distribuição Geográfica dos alunos aprovados:

<u>Nº DE ALUNOS</u>	<u>ESTADO</u>
2	Alagoas
5	Ceará
1	Distrito Federal
2	Espírito Santo
16	Guanabara
1	Maranhão
1	Mato Grosso
1	Minas Gerais
7	Pará
2	Paraná
9	Pernambuco
1	Paraíba
4	Rio de Janeiro
1	Rio Grande do Norte
12	Rio Grande do Sul
3	Santa Catarina
31	São Paulo
1	Portugal
<hr/> 100	<hr/> Formandos

5. Aspectos Financeiros. Realização do Orçamento. Balanço Final.

Tôdas as etapas previstas para a realização dos cursos acima referidos foram fielmente executadas, sendo o custo total do empreendimento coberto pelos recursos fornecidos pela USAID/CONTAP.

Para comparação do previsto e do realizado são apresentados no Anexo Nº 1 - O plano de trabalho e orçamento e no Anexo nº 2 o Balanço Final das despesas.

Convém salientar que os custos "per capita", apresentados no Anexo nº 2 são na realidade maiores do que os custos efetivos pois parte da verba financiada pela USAID/CONTAP foi destinada à compra de equipamentos e materiais que se encontram disponíveis no Departamento de Saneamento e que possibilitarão no futuro a realização de novos cursos semelhantes sem a necessidade de auxílios externos.

6. Futuros Cursos por Correspondência

O extraordinário acolhimento que tiveram os dois cursos por correspondência realizados é atestado pela receptividade que obtve nos meios profissionais interessados e pela grande quantidade de cartas enviadas por alunos de diversas entidades de todos os estados do Brasil e do exterior, enaltecendo o elevado nível técnico

ANEXO Nº 1

CURSO LIVRE POR CORRESPONDÊNCIA SOBRE "TÉCNICA DE ABASTECIMENTO DE ÁGUA"

Plano de Trabalho - Orçamento

I t e m s	1º Semestre de Operação	2º Semestre	3º Semestre	4º Semestre	5º Semestre	Total sem correção monetária	Soma corr.mc
<u>1. Direção e Coordenação</u>							
1.1. Direção (*)	-	-	-	-	-	-	-
1.2. Coordenação Corr. Monet.	\$ 5.700 000	\$ 5.700 000	\$ 5.700 000	\$ 5.700 000	\$ 5.700 000	\$ 28.500 000	-
	-	-	\$ 1.425 000	\$ 1.425 000	\$ 1.781 000	-	\$4.631
<u>2. Secretária Administrativa</u>							
2.1. Secretária Corr. monet.	\$ 2.100 000	\$ 2.100 000	\$ 2.100 000	\$ 2.100 000	\$ 2.100 000	\$ 10.500 000	-
2.2. Auxiliar (**) Corr. monet.	\$ 800 000	\$ 1.200 000	\$ 1.200 000	\$ 1.200 000	\$ 1.000 000	\$ 5.400 000	\$1.706
	-	-	\$ 300 000	\$ 300 000	\$ 312 500	-	\$ 912.
<u>3. Preparação de Curso</u>							
3.1. Direitos autorais	\$ 9.600 000	-	-	-	-	\$ 9.600 000	-
<u>4. Impressos e materiais</u>							
4.1. Impressos	\$ 1.000 000	\$ 500 000	-	-	-	\$ 1.500 000	-
4.2. Materiais	\$ 600 000	\$ 100 000	\$ 100 000	\$ 100 000	\$ 100 000	\$ 1.000 000	-
<u>5. Publicações</u>							
5.1. Serviços gráficos	\$10.000 000	\$ 3.000 000	\$ 500 000	\$ 500 000	-	\$ 14.000 000	-
<u>6. Comunicações</u>							
6.1. Correios, telégrafos e telefones	\$ 500 000	\$ 500 000	\$ 500 000	\$ 500 000	\$ 500 000	\$ 2.500 000	-
<u>7. Viagens e transportes</u>							
7.1. Viagens e transportes	\$ 800 000	\$ 300 000	\$ 300 000	\$ 300 000	\$ 300 000	\$ 2.000 000	-
<u>8. Eventuais e imprevistos (***)</u>							
Somas, sem corr. monet.	\$31.100 000	\$13.400 000	\$10.400 000	\$10.400 000	\$ 9.700 000	\$ 75.000 000	-
Correção monetária	-	-	\$ 2.250 000	\$ 2.250 000	\$ 2.750 000	-	\$7.250

(*) - A Direção será exercida por um Professor Catedrático pago pela Faculdade.

(**) - A Auxiliar será contratada durante 27 meses.

(***) - A verba para eventuais e imprevistos será equivalente ao valor das módicas taxas a serem aplicadas em materiais destinados aos participantes

ANEXO Nº 2

BALANÇO FINAL DAS DESPESAS

A realização dos cursos, desde o início até o término do programa, (convênio firmado em 25 de fevereiro de 1967) teve o seguinte custo, coberto pelos recursos fornecidos pela USAID/CONTAP:

1. Direção e Coordenação	\$	28.200,00
2. Pessoal Administrativo	\$	17.308,00
3. Preparação do curso e direitos autorais ...	\$	9.300,00
4. Impressos e Materiais	\$	11.762,58
5. Serviços Gráficos	\$	2.705,95
6. Comunicações	\$	5.723,47
		<hr/>
	\$	75.000,00
		<hr/> <hr/>

Esse total, distribuído pelo número de alunos 3 corresponde aos seguintes custos per capita:

Custo médio por aluno inscrito	(380)	NCr\$	198,00
Custo médio por aluno aprovado	(231)	NCr\$	325,00

expôsto nos textos e a oportunidade da iniciativa que trouxe possibilidades de aperfeiçoamento a engenheiros operando em zonas afastadas dos centros de ensino especializado.

Um grande interêsse, não apenas pelos textos das aulas, como também pela estrutura administrativa foi demonstrado por diversos organismos internacionais entre os quais a Organização Pan-Americana da Saúde e algumas Universidades da America Latina.

Tôdas essas manifestações de receptividade que atestam a elevada contribuição à cauda da Engenharia Sanitária no Brasil, possibilitada pelo Convênio CONTAP/USAID/USP, foram coroadas com a aprovação, pelo plenário do Vº Congresso Brasileiro de Engenharia Sanitária, realizado em Recife no mês de julho de 1939, de um voto de louvor à realização do Curso Livre por Correspondência sôbre "Técnica de Abastecimento e Tratamento de Água.

O sucesso alcançado pelos dois primeiros cursos estimulou a realização de novos empreendimentos dentro dos mesmos padrões anteriores.

O Departamento de Saneamento já iniciou em julho do corrente a no um terceiro curso por correspondência, auto-financiado que conta com 172 engenheiros matriculados, provenientes de todos os estados do Brasil e ainda da Bolivia e Paraguai. Foi assinado

também um novo convênio entre o CONTAP, USAID, Banco Nacional da Habitação e Universidade de São Paulo para a realização de um Curso Livre por Correspondência sobre Sistemas de Esgotos Sanitários com início previsto para outubro de 1969.

7. Conclusões

É de suma importância para um país de grande área territorial como o Brasil, a realização de cursos por correspondência. Essa necessidade se agrava, quando se observa que ocorre uma concentração do serviço especializado em engenharia sanitária no sul do país.

Nessas condições a formação de técnicos especializados fica limitada a zonas privilegiadas e a esporádicas concessões de bolsas de estudos.

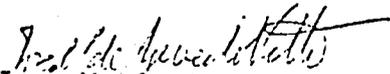
Há portanto uma sensível discordância entre as possibilidades de formação de técnicos especializados em engenharia sanitária e a demanda crescente de profissionais competentes no mesmo setor.

Nos Estados Unidos, país em que a oportunidade de formação técnica é muito maior do que a encontrada em nosso país, dá-se uma grande importância à continuação da educação técnica após a formação universitária através dos cursos curtos, cursos noturnos e cursos por correspondência.

- 9 -

Nos grandes centros especializados, como em São Paulo e Guanabara por exemplo, já se desenvolvem normalmente os cursos curtos específicos em diversas universidades e entidades municipais, estaduais e federais. Os cursos noturnos porém, e os cursos por correspondência de grande importância, não só para a atualização de profissionais liberais mas também de técnicos de nível médio que não podem se afastar de seus postos de trabalho durante a jornada diária, são ainda considerados em nosso país, modalidades de ensino de baixo padrão e de duvidosa capacidade de formação. O Curso Livre por Correspondência sobre Técnica de Abastecimento de Água contribuiu também para eliminar uma parte dessa impressão negativa, além de possibilitar a elevação dos padrões de projetos hidráulicos-sanitários no Brasil.

Em nome da Universidade de São Paulo e de todos os engenheiros e entidades beneficiadas pela assinatura do convênio, apresentamos nossos agradecimentos e congratulações à Agência Norte-Americana para o Desenvolvimento Internacional (USAID) e Conselho de Cooperação Técnica da Aliança para o Progresso (CONTAP) pela feliz e oportuna iniciativa de introduzir no Brasil cursos por correspondência justamente no campo em que nosso País mais necessitava,


Prof. José M. de Azevedo Netto
Diretor do Curso

AIRGRAM

DEPARTMENT OF STATE

UNCLASSIFIED
CLASSIFICATION

Proj. 512-11-521-062.1

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FROM - RIO DE JANEIRO

SUBJECT - SUB-PROJECT CLOSURE

REFERENCE - Project re 512-11-521-062.1
 Sub-Project Title: DEMAE - Belo Horizonte
 Date of Original Agreement: February 14, 1967
 Date of Completion: March 9, 1970
 Funding: NCR:30,000 - CONTAP

28

1. The purpose of this agreement was to develop a technical service and training program within the Municipal Department of Water and Sewerage in Belo Horizonte, Minas Gerais, with the goal of training 100 of more administration, operation, and maintenance personnel of the Department.
2. At the conclusion of this training program, 122 persons had been trained on the subjects of water plant operation, hydrometer repairs, distribution system construction, and electric sub-station operation (in connection with the Rio das Velhas Water treatment plant and pump station).
3. Only CCNTAP funds were used in this ProjAg, and all accounting of funds is the primary responsibility of CCNTAP.
4. From the technical assistance standpoint, this project is closed.

ELBRICK

URS

OTHER AGENCY

PAGE 1	OF	PAGES 1
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AID AND OTHER CLEARANCES

PRPC: G. Daniels: *G. Daniels*
CONT: G.P. Newton: *G.P. Newton*

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FROM . RIO DE JANEIRO

SUBJECT . PROJECT CLOSURE

REFERENCE -

Project No 512-11-521-062.1
Project Title : IBAM Water Loan Fund Seminar
Date of Original Agreement: May 15, 1968
Date of Completion:

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Funding: R\$ 30 000 - CONTAP 30

1. This agreement covered the presentation of a seminar on the history, philosophy, operation and long range plans of the National Water Loan Fund, for the purpose of orienting and updating federal and state participants in this program. It was presented in direct support of the national water program, and the National Water Loan Fund.
2. The seminar was presented in Curitiba, Paraná, during the week of January 27, 1969. It was organized and presented by IBAM, who received tremendous local support from SEMPAR, the Paraná State Loan Agency, and DAE, the State water and sewerage authority.
3. The seminar was attended by representatives from 7 states, (Paraná, Rio Grande do Sul, São Paulo, Santa Catarina, Minas Gerais, Pará, and Pernambuco) 2 Federal Agencies, (FSESP and the Superintendency of the Sanitation Financing System, FISANE) 5 cities, (São Paulo, Curitiba, Itajuba, Joinville, and Metropolitan São Paulo) and 2 regional agencies (San Francisco Valley Authority and the Development Agency for Southern Brazil). In each case, the Director or President or his Assistant was present.
4. These authorities discussed and evaluated the national and state plans

PAGE 1 OF 2 PAGES

DRAFTED BY EAJ:mlp	OFFICE ENRW/ AEW - Chief Craw	PHONE NO. 453	DATE 3/10/68 ⁹	APPROVED BY W.R. Stone, Chief, ENRO
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AID AND OTHER CLEARANCES
PRPC/G. Daniels:
CONT/Asst. Dir. : 2/1/69
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4. for financing water services. In one session the mayors from two cities that had obtained loans from the fund in 1966, explained the procedures they had gone through, and the success of their venture. In other sessions, state and federal representatives explained their programs & problems.
5. During the four days of sessions, there was a surprisingly frank exchange of ideas on the presently established loan program, and while there are many problems to be worked out, FISANE (the loan agency in the National Housing Bank) was lauded for its work and the progress it has made.
6. This was the first meeting of its type in Brazil. The value of such a meeting as a means for clarifying misunderstandings, exchanging ideas, and for recommending modifications and improvements in national water policy became evident to the participants. As a result, it was recommended that meetings of this type be held periodically, possibly on an annual or semi-annual basis.
7. Other recommendations were:
 - a. The immediate installation of the National Sanitation Council (CONSANE) and its Directors, in order that it may establish guidelines for the actions of municipal, state, and federal agencies in the financing of water services.
 - b. That the Superintendency of the Sanitation Financing System (FISANE) prepare technical sanitation standards for consideration by the National Sanitary Engineering Congress to be held in Recife in July 1969.
 - c. That state and federal remuneration to water supply program technical staffs be adequate to secure qualified personnel in the program.
 - d. That there be a definition of the relationships between the federal and state water supply financing agencies, specifically between the National Housing Bank and the state agencies.
 - e. That the Minister of Interior be informed of the reliance placed upon him by the seminar participants, for the positive action to be taken by the Minister and the Ministry toward

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finding a solution for the sanitation problems, especially through the formulation of a national policy, the installation of COSANE, and the inter-governmental coordination necessary for the harmonization of the Federal agencies in this sector.

- 8. A summary of the meeting, containing the papers presented and the essence of the discussion sessions has been published by IBAM. This represents the final report on this Project Agreement, and the agreement is closed, all terms of the agreement having been satisfactorily fulfilled.

BELTON

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CLASSIFICATION

Mr. Jay B. Carter, Chief ENRO

August 14, 1972

A-1

Alfred E. Williamson, Chief ENRO/EPA

31

Sewerage Correspondence Course

I have received the final statement for the SURIM (CONSEP) funded sub-project covering the Sewerage Correspondence Course. This sub-project was signed on 4 June 1969 in the amount of Cr\$124,920 with the Faculty of Hygiene, University of São Paulo and was the second of the correspondence courses to be attempted in the field of basic sanitation, the first being "Water Supply and Treatment".

The results of these courses are summarized as follows:

National Sanitation Program

<u>Course</u>	<u>Matriculated</u>	<u>Approved</u>	<u>%</u>
1	244	191	78%
2	166	100	60%
3	172	81	47%
4	100	100	100%
Total ...	<u>782</u>	<u>472</u>	<u>60%</u>

Sanitary Services

<u>Course</u>	<u>Matriculated</u>	<u>Approved</u>	<u>%</u>
1	170	121	71%
2	157	96	61%
3	205	129	63%
Total ...	<u>532</u>	<u>346</u>	<u>65%</u>

All funds have been expended with the completion of Course no 3 and so this sub-project can now be closed. Correspondence courses in basic sanitation are continuing with over 500 matriculating at present. Administration of these courses has now been transferred to CENAES (Basic Sanitation Technical Center of São Paulo). In addition CENAES is expanding into other areas with correspondence work, such as Hydraulics, Sewage Treatment, etc.

These courses have been notably successful insofar as numbers of satisfactory completions are concerned. For example, Penn State University has indicated to us in correspondence that their average completion rate is only 33% in similar work.

cc: PEPC
CONT
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Mr. George B. Sparrow, Acting Chief EMRO

December 7, 1972

Alfred E. Williamson, Chief EMRO/EPA

IBAM Administrative Centers

A-1

33

This project has been inactive for many months due to the inability of the two counterpart agencies, IBAM and EMRO, to come to an agreement on the scope of work for new sub-projects. As I saw no hope of breaking this impasse, I recommended that the remaining balance, Cr. 100,000 be deobligated and reprogrammed to the AMEM-BIM training effort, on which Mr. Wagner is the advisor. The Program Office has transmitted this request to SDBIN.

During the period when this project was active I feel that a satisfactory contribution to the water supply program was made. The water authorities of the city of Juba de Mora and the State of Pernambuco were reorganized. After these were completed however, BIM and IBAM could not come to an agreement on further authority reorganization.

Due to the information given above, this project can now be considered closed.

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This was the final
project to be closed.
Altogether there were 37
including two inherited
from Pacific and 4/22/73

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UNITED STATES GOVERNMENT

Memorandum UNCLASSIFIED

M. Lucio

TO : Mr. Wyman R. Stone, Chief - ENRO *WRB*

DATE: February 7, 1972

FROM : Alfred E. Williamson, ENRO/EPA *AW*

A-1

SUBJECT: Closing Report-SUCESA Training Sub-Project.

SUCESA is the water and sewer authority of the state of Rio de Janeiro and operates all but a few of the municipal systems throughout the state. On May 13, 1970 a sub-project agreement was signed covering training with the assignment of Cr\$70,000 of SUBIN funds. Of this amount Cr\$22,000 was disbursed by SUBIN of which at the last report dated July 7, 1971, Cr\$ 10,467.50 had been expended on various training courses.

The short courses completed with numbers of participants were:

Water Plant Operation	36
Well Drilling	31
Plastic Pipe Manipulation	21
Design of Sewers	18

33

The SUCESA training program began with a great deal of enthusiasm and interest and was carried on quite successfully until the close of 1970. At that time the director was removed from office and an interim director was appointed, who was replaced with the changing administration in March, 1971. Since that date, despite several attempts to contact the new appointees, I have not been able to generate any new activity, for unfortunately the change over went quite deep, including a most active full-time training director who did a very good job until she was replaced.

As a result of this inactivity I recommended that the sub-project not be renewed upon its expiration December 31, 1971. It was further recommended that the unused funds be turned over to the new ABES program within the Health Sector Loan plan and under Mr. Wagner's direction. PRPC and SUBIN have concurred with this recommendation and ABES has formulated a request to this extent.

The SUCESA sub-project can therefore be closed. While it was very active during its first 6 months of life, the future was dim indeed and I saw no reason to try to resuscitate it at this time, when our whole training trend has taken new direction.

AEW/etk



AGENCY FOR INTERNATIONAL DEVELOPMENT

UNITED STATES A.I.D. MISSION TO BRAZIL

Annex "B"



OFFICE OF THE CONTROLLER



REPORT No.

COPY No.

DATE:

DEPARTMENT OF STATE
AGENCY FOR INTERNATIONAL DEVELOPMENT
AREA AUDIT OFFICE
(Brazil, Uruguay, Argentina, Paraguay)

AW 8/29
EAD 8/29

REPORT ON EXAMINATION
OF
PROJECT No. 512-11-521-062.1
URBAN WATER AND SEWER SYSTEMS IMPROVEMENT - BRAZIL
FOR THE PERIOD
JULY 1, 1965 THROUGH JUNE 30, 1969

OFFICE OF THE CONTROLLER - USAID/BRAZIL

REPORT No. 4/70

COPY No. 17

DATE: AUGUST 26, 1969

AGENCY FOR INTERNATIONAL DEVELOPMENT
UNITED STATES A.I.D. MISSION TO BRAZIL

August 26, 1969

TO The Director of Mission
Minister William A. Ellis

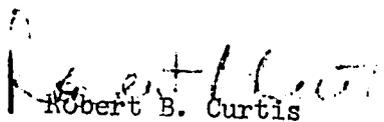
The Office of the Controller, Audit Division, has completed an examination of Project No. 512-11-521-062.1, "Urban Water and Sewer Systems Improvement". This is the sixth and final audit of the project and our report covers the period July 1, 1965 through June 30, 1969. The activity was initiated in 1962 and has been extended through December 31, 1969, with total grant dollar funding aggregating \$3.1 million and local currency grant funding aggregating NCr\$3.4 million.

During the period covered by this examination we found no major exceptions or deficiencies in the management of the project.

All commodities have been distributed to project sites, and our audit field inspections and end-use observations indicate appropriate and effective utilization. This aspect is emphasized since over 30 per cent of the U.S. contribution has been for the purchase of commodities.

Most of the direct hire and/or PASA technicians have departed post, and all contract services have been terminated. Together, these costs represent 52.5 per cent of the total project. We have no adverse comments in either area.

In our opinion, progress has been achieved in meeting the project objectives, and specific accomplishments are reported under Project Progress. This report contains no recommendations.


Robert B. Curtis

Controller

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REPORT ON EXAMINATION

OF

PROJECT No. 512-11-521-062.1

URBAN WATER AND SEWER SYSTEMS IMPROVEMENT - BRAZIL

SECTION I - GENERAL

A. INTRODUCTION AND SCOPE

An audit of Project No. 512-11-521-062.1, "Urban Water and Sewer Systems Improvement", a grant funded project, was made in accordance with USAID/Brazil Controller's Audit Workload and Annual Plan for Fiscal Year 1969.

This is the sixth and final audit of the project and our report presents comprehensive audit coverage of the grant nationwide urban water and sewer system program in Brazil, including Project Nos. 062.2 and 062.3 which were consolidated with Project No. 062.1 beginning July 1, 1967.

The primary purpose of the audit was to provide a summary review and evaluation of the progress and accomplishments of the project, based on goals established in the Country Assistance Program Book (CAP) and the Project Agreements. The thrust of our examination was also directed to determine the extent of compliance with the provisions of selected Project Agreements, and to ascertain the propriety of the project records.

The audit dollar value of the project is \$3,078,000 in technical assistance dollar grants, and Cr\$3,391,670 in P.L. 480, Title I, 104 (e) local currency grant funds (see Exhibits B and C). Our examination included the inspection and review of records and official data from July 1, 1965 through June 30, 1969. Appropriate officials were interviewed at the USAID Missions in Rio de Janeiro and Recife, and field inspections and end-use observations were made at the Fundação Serviço Especial de Saúde Pública (FSESP) in Recife, and at project sites in the State of Paraná.

In addition, a recent study document made by the U.S. Public Health Service of community water supply programs and capabilities in Brazil provided a valuable source of reference in measuring progress under the project (see Section II.A Project Progress).

The examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other procedures and techniques as we considered necessary to comply with AID Manual Order No. 793.1: "Audit of Project Assistance".

B. BACKGROUND INFORMATION

On August 17, 1961, representatives of 20 American Republics signed the Charter of Punta del Este, thereby creating the Alliance for Progress - a plan to bring about social and economic reforms in the hemisphere over a 10 year period. The Charter, among other goals, provides for a program to supply safe drinking water as a public health measure essential to social and economic progress.

An earlier feasibility survey made by the International Cooperation Administration (predecessor to AID) under the World Wide Community Water Supply Development Program reported that major areas of Brazil were not utilizing ground water to their best long range interests. The survey report noted that Brazilian-American cooperative efforts in water supply development began in 1942 and had continued through 1960. During this period, United States assistance was limited to providing technical advice and training to Brazilian engineers and personnel of Fundação Serviço Especial de Saúde Pública, a former U.S.-Brazilian cooperative service (a Servicio) transformed into a special foundation in the Ministry of Health in 1960.

A Nationwide Urban Water and Sewer Systems Improvement Program was inaugurated in Brazil with the execution of a Project Agreement on May 30, 1962 by the Ministry of Health, FSESP, and AID. This agreement established the basis for a framework of eighty-eight (88) project agreements and revisions executed by AID in alliance with other Brazilian federal and regional agencies, state governments, and municipalities throughout the nation. Certain of these agree-

ments established special funds devoted exclusively to carry out specific project objectives within the five geographical sectors of Brazil. (see Exhibits A and B).

At March 31, 1969, expenditures totalled \$3,078,000 of which approximately 38 per cent represents personnel services and 31 per cent represents commodities (see Exhibit C). The estimated final contribution date of the latest Project Agreement is December 31, 1969.

C. SUMMARY OF MAJOR FINDINGS

The objectives of the nationwide project were to provide an institutional base and trained personnel utilizing modern technical methods, coupled with adequate financial assistance, to attain the goal of developing 1,500 self-supporting water supply systems throughout Brazil over a 10 year period ending in 1972. Progress has been achieved in meeting these objectives, and specific accomplishments are reported under Project Progress, page 4.

During the period covered by this examination, there were no major exceptions or deficiencies found in the management of the project.

All commodities have been distributed to project sites, and our audit field inspections and end-use observations indicate appropriate and effective utilization. This aspect is emphasized since over 30 per cent of the U.S. contribution has been for the purchase of commodities (see page 11).

Most of the direct hire and/or PASA technicians have departed post, and all contract services have been terminated. Together, these costs represent 52.5 per cent of the total project. We have no adverse comments in either area.

Before issuance, this report was reviewed with appropriate officials of the USAID Mission in Rio de Janeiro and the Northeast Area Office in Recife, where comments were considered prior to its publication. This report contains no recommendations.

D. FOLLOW-UP ON PRIOR AUDITS

Five (5) prior audits of the project have been made (see Appendix II). These audits were "segment audits" in the sense that the audit review and examinations were addressed to project agreements and implementation within specific geographical sectors of Brazil.

Three of these reports carried a total of twenty (20) recommendations, which were directed towards correcting deficiencies in the following areas:

<u>Area of Audit Findings</u>	<u>No. of Recommendations</u>
1. Funding	10
2. Reports and Records	5
3. Commodities	5
Total	<u>20</u>

All of these recommendations can be considered as satisfied during the period covered by this examination.

SECTION II - FINDINGS AND RECOMMENDATIONS

A. PROJECT PROGRESS

In evaluating the overall progress in Brazil, three broad aspects of the project were noted, reviewed, and selectively inspected during the course of the audit.

1. The Nationwide Framework

At the present time, Brazil is made up of 22 states, 3 federal territories, and 1 federal district (Brasilia). These divisions, in turn, are found in five geographical sectors: the north, the northeast, the east, the south, and the central-west. The project has been designed to address the fundamental problem of providing safe and adequate water, under pressure, to the rapidly expanding urban population in each of these sectors (see Exhibits A and B).

Our particular attention was directed to a recent study "Evaluation of Community Water Supply Programs and Capabilities in Brazil" made by a team of experts from the U.S. Public Health Service (PHS) during the period March 3-March 29, 1968. The PHS study covered the

twelfth and last country (Brazil) evaluated under a worldwide water supply program. The PHS report contained numerous charts and tables delineating project progress in funding and loan activities, management analyses, training programs, and construction.

Since the primary project goal was to provide an institutional base with trained personnel, we consider this factor all important in measuring meaningful project progress. The following statement, based on expert judgment, is quoted from the Public Health Service document:

"The team was especially impressed with the progressive attitude which prevailed among the Brazilian personnel associated with that country's water supply programs. This attitude existed at all levels from the central government down through the regions, the states and the municipalities. Likewise, a great deal of credit must go to the U.S. Mission in Brazil for the progress in institution building which was observed under development in the host country."

2. Cooperating Brazilian Agencies

The principal federal, regional, state, and local agencies dealing with water supply and sewerage disposal are presented in Exhibit A, and are defined in Appendix I. While the municipality has the primary responsibility for providing community water services, few cities have the funds necessary to finance major capital improvements; consequently, these agencies perform the basic roles of construction, operation, maintenance, and management of both small and large community water supply systems.

a. Federal Agencies

At the federal level, FSESP has exercised national leadership by developing design and construction standards that have been adopted throughout the nation. FSESP has 150 professional employees, mostly engineers, and it has either participated in or directly executed the construction of over 150 water supply systems in Brazil. In some 100 systems, autonomous water authorities (SAAE) have been created and are operated under the guidance and supervision of FSESP.

A field inspection was made at the FSESP field headquarters in

Curitiba, State of Parana, over a four day period (June 3-6, 1969), and covered the SAAE in the municipality of Ponta Grossa, administered by FSESP. We were taken on a tour of the entire water system in Ponta Grossa, and were shown methods of operation developed through the activities of the project. In addition, we reviewed the Ponta Grossa SAAE Operating Report for 1968, which disclosed a cumulative profit of NCr\$13,328 for the two year period ending December 31, 1968. Noteworthy in the U.S. Public Health Service Report is a tabulation of 100 FSESP administered water systems with 88 of these systems showing a profit during 1967. The current FSESP program includes the construction and operation of 200 water supply projects, which is being financed by an Inter-American Development Bank Loan of \$12.25 million.

There are three other federal agencies engaged in water supply: (1) DNERu - the construction of rural water supply and irrigation systems; (2) DMOCS - the construction of wells and storage reservoirs in the Northeast; and (3) DNOS - the construction of public works including water supplies, sewerage and drainage, and multi-purpose dams. Many of these activities are in common with FSESP.

b. Regional Agencies

SUDENE has primary responsibility for the development of the Northeast. Within the Northeast, water supply systems existed as follows:

<u>Systems</u>	<u>1960</u>	<u>1966</u>
Under operation	165	391
Under construction	155	206

The Public Health Service Report noted that the above includes systems financed from all sources, not just SUDENE which, on March 29, 1968, had 198 water projects and 10 sewer projects under construction. SUDENE has contracted with FSESP to study water and sewerage in the Northeast in order to establish priority needs.

SUDENE has created and organized two companies: (1) CAENE, the purpose of operating completed systems and the construction of new systems, and (2) CONESP, for the development of well-drilling programs in the region. Other federal, regional, and municipal agencies also implement projects in the Northeast.

c. State and Local Agencies

Brazilian state governments have the authority to establish autonomous water and sewerage agencies and such agencies have been established in many state capitals and municipalities. The agencies are authorized by law to operate for a profit and to establish water rates adequate to cover operating and maintenance costs, plant amortization, and to provide reserve funds for system expansion.

Our audit field inspection included SANEPAR, a "mixed" company in Curitiba that was created in 1963, with approximately 98 per cent of the capital invested by the state. SANEPAR superseded a state department (DAE) for certain water and sewerage responsibilities, including providing technical and capital assistance to various municipalities within the State of Paraná. The DAE now operates and maintains several of the older water works in the state.

We made a field inspection of the Rio Iguaçu Water Plant and end-use observations at SANEPAR and DAE (all in Curitiba) on June 4, 1969, accompanied by Brazilian federal, state, and local officials (see C. 3 Commodities). We observed the successful implementation of modern water supply concepts at the plant site, and also noted the organizational effectiveness clearly in evidence within the various administrative and program offices of SANEPAR. At the same time, we perceived symptoms of passivity within the DAE organization, which is physically located behind SANEPAR Headquarters.

In this respect, the U.S. Public Health Service Study concluded that the multiplicity of agencies involved in municipal water supply programs at the federal, regional, and state level is uneconomical and creates confusion particularly at the municipal level. The document recommended that efforts should be intensified to coordinate the water supply program at all levels - federal, state, and local.

We agree that, wherever possible, consolidation of programs at a given level should be placed in a single agency.

3. The National Water Loan Fund

Traditionally, Brazil's capital funding of water supply projects has been by direct grants to the municipalities from the federal and state governments. On April 26, 1965, a revolving loan fund was established by the Government of Brazil to permit municipalities to obtain long-term loans for water supply construction projects. The initial fund capitalization was provided by USAID/Brazil and DNOS as follows:

<u>Source</u>	<u>Amount</u> <u>(Million NCr\$)</u>
1. USAID/Brazil:	
Program Loan Counterpart Funds	16.00
P.L. 480, Title I Sec. 104 (g) Loans	8.00
Sub-Total	<u>24.00</u>
2. DNOS:	<u>7.27</u>
TOTAL	<u><u>31.27</u></u>

Initially, DNOS was responsible for administering the fund. In April 1967, fund administration was turned over to the National Housing Bank (BNH), through which a new National Revolving Loan Fund (FISANE) was established. The new fund operates mainly through Brazilian State contracts, although loans may be made to municipal governments.

At the time of our examination, a total of NCr\$27.3 million had been committed to 14 sub-loans, and disbursements aggregated NCr\$16.4 million. The fund balance of NCr\$4.0 million is assigned to a water supply contract with the city of Belo Horizonte.

B. FUNDING

1. USAID/Brazil Contribution

The total United States financial contribution to the project was provided from Mission dollar allotments and U.S. owned local currency generated from sales of agricultural commodities. Accordingly, our examination was directed to the accounting records for both sources of funds.

a. Dollar Funds

We examined the USAID/Brazil accounting records and found

that they record a total dollar obligation of \$3,156,000 with total expenditures of \$3,078,000, leaving a balance of \$78,000 as of March 31, 1969. (See Exhibit C).

Several differences were noted between cumulative totals as reported on the Quarterly Project Report U-203 and the project subsidiary accounting records (see Exhibit C). These differences apparently resulted from Agency changes and modifications in project accounting and reporting formats over the nine year period, in addition to the consolidation of the three projects in 1967. These differences have been called to the attention of the USAID Accounts Division for analysis and adjustment.

With the exception of the foregoing, project accounting records were found to present fairly the dollar status of the project.

b. Local Currency Funds

In accordance with the provisions of the project agreements, USAID/Brazil was to make available NCr\$3,391,670 of Public Law 480, Title I, Section 104 (e) grant wheat funds to finance specific project objectives throughout Brazil. (See Exhibit B).

The USAID/Brazil accounting records confirmed that of this amount, NCr\$3,342,638 had been released to the project with recorded disbursements of NCr\$3,194,546, leaving a balance of NCr\$148,092, as of March 31, 1969. We noted that NCr\$1,727,025 or approximately 55 per cent of these disbursements had been examined in prior AID audits (see Appendix II). Based on this factor, we selectively checked disbursements as reported on the USAID/Brazil Quarterly Status Report of Cruzeiro Grant Projects (an internal report) to disbursement documentation on file. There were no audit exceptions taken.

2. Government of Brazil Contribution

a. CONTAP Funds

The Brazilian Council for the Coordination of Technical Assistance under the Alliance for Progress (CONTAP) agreed to make available NCr\$613,000 in project support under seven separate project agreements:

ProAg Dated	FCD	Support	Obligations	Releases	Balance
			(In NCr\$)		
3/29/66	6/30/67	IBAM/FSESP - Training	120,000	120,000	-
7/25/66	12/31/68	SANEPAR - Paraná	88,000	69,500	18,500
12/13/66	12/31/69	CEDAG - Guanabara	50,000	38,000	12,000
1/25/67	6/30/69	Univ. of São Paulo	75,000	75,000	-
2/14/67	12/31/69	DEMAE - Belo Horizonte	30,000	13,000	17,000
2/29/68	12/31/69	IBAM - Acctg. Course	220,000	220,000	-
5/15/68	6/30/69	IBAM - Seminar	30,000	30,000	-
TOTAL			613,000	565,000	47,500

All disbursements under CONTAP agreements are audited by the Central Bank of Brazil, and the examination and/or verification of these amounts was not included in our audit scope. Our review of CONTAP financial reports revealed that project expenditures aggregating NCr\$174,020 had been certified correct by the Central Bank of Brazil.

C. PROJECT IMPLEMENTATION

The Water Supply and Sanitation Division (ENRW), USAID/Brazil and the Northeast Area Mission have the responsibility for the implementation of the project. Implementation includes technical advisory services, providing commodities, establishing physical facilities, and participant training. Each of these elements were reviewed to the extent possible during the course of the examination.

1. Personnel Services

Project records disclosed expenditures of \$1,162,000 for Personnel Services, or 37.8 per cent of the total project cost. These costs were incurred from the inception of the project on June 30, 1960, through March 31, 1969, and represent personnel services and the related expenses of Direct Hire and PASA Technicians assigned to ENRW.

Based on prior audit coverage, we made a limited test check of these expenditures to supporting documentation on file in the Accounts Division, USAID/Brazil. There were no audit exceptions taken.

We reviewed selected reports by the technicians summarizing their efforts and the future technical needs of the various Brazilian agencies. Our comments are included under Section II. A. Project Progress.

2. Contract Services

The USAID/Brazil accounting records disclosed a total contract services expenditures of \$453,249 as of March 31, 1969. (See Exhibit C and Schedule I).

Under authorized PIO/Ts, a total of 17 contracts were executed for the purpose of obtaining expert technical advisory services. At the time of this audit, all 17 contracts had been completed. We determined that prior audit coverage had included expenditures aggregating \$246,449, or approximately 54 per cent of the total. This factor coupled with the age of the terminated contracts directed our attention to the end result, or contract productivity.

Our review of monthly project progress reports prepared by the Project Coordinator indicated that satisfactory performance was obtained from all contractors. There were no adverse criticisms of contract performance contained in the prior AID audit reports.

A further audit comment on contract services is included under 4. Other Costs.

3. Commodities

Our examination of project records disclosed total commodity expenditures of \$948,000, or some 31 per cent of the total U.S. contribution. (See Exhibit C).

The five prior AID audit recommendations in the area, since cleared, were directed to AID marking requirements and to one instance of delayed customs clearance. Source/origin requirements were observed, and we found no evidence of commodities being unduly delayed in customs. During this audit, end-use observations were made in Recife (March 24-28, 1969) and in the State of Paraná (June 3-6, 1969).

Approximately 46 per cent of all project commodities were sent to the Northeast, as follows:

PROJECT COMMODITIES - NORTHEAST		
Type	Particulars	Cost
1. Construction	5 Drilling Rigs and Accessories	\$283,933
2. Maintenance	Shop Equipment and Parts	19,730
3. Operational	Pumps, Water Meters, Faucets	32,990
4. Administration and Training	Office Furniture and Equipment; Sound Equipment and Visual Aids	70,700
5. Laboratory	Water & Sewerage Analysis Equipment	33,600
	- - TOTAL	<u>\$40,953</u>
	- 11 -	

During the audit field inspection, we visited the FSESP Recife Regional Office accompanied by the AID Project Technician. We inspected four types of equipment in the Recife area, namely: maintenance, operational, administrative and training, and laboratory equipment, having an estimated cost of \$80,000. Most of the equipment was marked with AID emblem, where feasible, and all the equipment was being properly utilized. In addition, we observed local supplies and equipment (manufactured in Brazil) having an estimated value of NCr\$10,000, which was part of the host country's contribution to the project.

We found that equipment control is being maintained by FSESP with duplicate information on file in the AID Northeast Area Mission. Consequently, we did not end-use the five (5) Drilling Rigs valued at \$283,933, presently located in the interior.

We checked equipment having an estimated value of \$132,865 allocated to the State of Paraná during that field inspection. Again, there were no audit exceptions taken.

In our opinion, this visual on-site inspection furnished the most reliable evidence of the character and accomplishments of the project (See III. A. Project Progress).

4. Participants

The project records disclosed expenditures of \$347,000 for participant training costs, or 11.3 per cent of the total project as of March 31, 1969. (See Exhibit C).

At the present time, the USAID/Brazil Training Office is conducting a post-training evaluation study for all Mission training activities since 1942. Unconfirmed statistical data indicates that some 197 participants have been sent to the United States for training aggregating 3,313 weeks under the project. During the audit field inspections, we noted that returned participants held key positions in many of the cooperating Brazilian agencies.

5. Other Costs

Project ledgers disclosed expenditures of \$169,000 for other costs, or 5.4 per cent of the total project. An audit analysis of these expenditures indicate that, for the most part, disbursements occurred in not recent prior years. (See Exhibit C).

We found that expenditures totalling \$50,864 for PIO/T 30139 and Contract No. AID/1a-165 are included in other costs, and represent payments to Mr. Charles E. Trygg, the contractor, for services rendered at the Northeast Area Mission from March 8, 1963 through March 8, 1965. Considering the lapsed time period, we did not expand the audit to ascertain the propriety of these payments.

D. GENERAL OBSERVATIONS

The specific commitments to this project on the part of both the Government of the United States and the Government of Brazil are summarized in eighty-eight (88) separate project agreements and revisions covering a nine year period. (See Exhibit B).

Since USAID/Brazil does not maintain a separate numbering system for project agreements, a not inconsiderable amount of time was spent in attempting to identify and review the most significant agreements executed under the project. This same finding was cited in Audit Report No. 36/69 dated April 30, 1969.

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EXHIBIT A

AUDIT OF URBAN WATER AND SEWER SYSTEMS IMPROVEMENT - USAID/BRAZIL
SCOPE OF THE PROJECT IN BRAZIL

	<u>G E O G R A P H I C A L S E C T O R O F B R A Z I L</u>					<u>NATION- WIDE</u>	<u>TOTAL</u>
	<u>NORTH</u>	<u>NORTHEAST</u>	<u>EAST</u>	<u>SOUTH</u>	<u>CENTRAL-WEST</u>		
States, Territories and Federal District	6	7	6	4	3		26
Population (1965 estimate)	3,054,000	17,794,000	28,219,000	29,802,000	3,910,000		82,779,000
Project Agreements (88) - (See Exhibit B)	<u>5</u>	<u>23</u>	<u>12</u>	<u>23</u>	<u>7</u>	<u>18</u>	<u>88</u>

* COOPERATING BRAZILIAN AGENCIES .

FEDERAL

DNOCS

FSESP
DNERu
DNOS

REGIONAL

SUDENE
CAENE
COMESP

STATE AND LOCAL

DAE

DAE
DSE

DAE DAE
SAER SANEPAR
SESAB CORSAN
SURSAN DAES
CEDAG DOS
COMAG
DMAE

DAE

* See Appendix I - These agencies represent the major Brazilian organizations making contributions to the project. There are other state and local agencies contributing to a lesser degree.

EXHIBIT C

AUDIT OF URBAN WATER AND SEWER SYSTEMS IMPROVEMENT - USAID/BRAZIL
 SUMMARY OF OBLIGATIONS AND EXPENDITURES
 AS OF MARCH 31, 1969

<u>Fiscal Year</u>	<u>Obligations</u>	<u>Expenditures</u>	<u>Personnel Services</u>	<u>Contract Services</u>	<u>Commodities</u>	<u>Other Costs</u>	<u>Participants</u>
From 7/1/60 through 6/30/63	\$ 961,000	\$ 399,000	\$ 167,000	\$ 26,000	\$151,000	\$ 29,000	\$ 26,000
1964	930,000	250,000	136,000	14,000	8,000	55,000	37,000
1965	424,000	791,000	192,000	66,000	411,000	51,000	71,000
1966	245,000	810,000	194,000	167,000	347,000	23,000	79,000
1967	241,000	532,000	235,000	187,000	30,000	11,000	69,000
1968	269,000	245,000	211,000	(7,000)	1,000	1,000	39,000
1969	86,000	51,000	27,000	(1,000)	-	(1,000)	26,000
Totals per Project Ledgers...	\$3,156,000	\$3,078,000	\$1,162,000	\$452,000	\$948,000	\$169,000	\$347,000
Totals per Report U-203	3,156,000	3,078,000	1,157,000	413,000	948,000	213,000	347,000
* Unreconciled Differences....	-	-	\$ 5,000	\$ 39,000	-	(\$ 44,000)	-
Percentages (Project Ledgers)		<u>100.0%</u>	<u>37.8%</u>	<u>14.7%</u>	<u>30.8%</u>	<u>5.4%</u>	<u>11.3%</u>

RECAPITULATION:

Obligations	\$3,156,000
Expenditures	<u>3,078,000</u>
Balance	<u>\$ 78,000</u>

* See B. Funding, a. Dollar Funds, page 8 for audit comments.

GLOSSARY OF TERMS

<u>Terms</u>	<u>Ministry or State Gov't</u>	<u>Definition</u>
<u>FEDERAL AGENCIES</u>		
FSESP	Public Health	A Special Public Health Foundation.
DNERu	Public Health	National Dept. of Rural Endemic Diseases.
DNOCS	Transport	National Dept. of Works for Drought Relief, (Northeast)
DNOS	Transport	National Department of Sanitary Works.
<u>REGIONAL AGENCIES</u>		
SUDENE	Interior	Superintendency for the Development of the Northeast.
CAEME		A "mixed" company under SUDENE for constructing and operating water and sewer services in communities of 1,000-40,000 in the Northeast.
CONESP		A "mixed" company for well drilling and explorations in the Northeast, established by SUDENE.
CVSF	Regional Entities	San Francisco Valley Commission.
<u>STATE AND LOCAL AGENCIES</u>		
DAE	All States	Department of Water and Sewer Activities.
SAER	Bahia	Superintendency of Water and Sewage Treatment for Salvador and three minor municipalities.
SESEB	Bahia	Superintendency of Sanitary Engineering.
SURSAM	Guanabara	Superintendency of Urban Development and Sanitation (primary responsibility for sewerage).
CEDAG	Guanabara	A "mixed" company for water supply.
COMAG	Minas Gerais	A "mixed" company for water supply.
DMAE	Minas Gerais	Municipal Department of Water and Sewage.
SAMEPAR	Paraná	A "mixed" company for water supply.
DSE	Pernambuco	State Department of Sanitation.
CORSAM	Rio Grande Sul	A "mixed" company for water supply.
DAES	Sta. Catarina	State-wide company for water supply.
DOS	São Paulo	State Department of Sanitary Works.

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APPENDIX II

AUDIT OF URBAN WATER AND SEWER SYSTEMS IMPROVEMENT - USAID/BRAZIL
PRIOR AUDIT COVERAGE

Audit Rep. No.	Particulars	Period of Coverage		Audit Value		No. of Audit Recommendations
		From	To	Dollar Grants	Local Currency	
					<u>NCr\$</u>	
	<u>NORTHEAST</u>					
3/66	Facilities - 58 Communities	12/62	3/65	-	850,600	9
	<u>EAST</u>					
1/64	Guanabara Program	2/62	5/63	-	422,425	-
4/66	Water Treatment Plant - Salvador	3/62	3/65	\$5,785	120,000	3
	<u>SOUTH</u>					
5/68	São Paulo - Hazen & Sawyer Contract	3/65	5/67	222,693	30,000	-
	<u>NORTH, SOUTH, CENTRAL-WEST</u>					
5/66	Programs: Goiás, Pará, Paraná, Santa Catarina	5/62	3/65	301,136	4,000	8
	TOTALS			\$529,664	1,727,025	20

EXHIBIT D

DISTRIBUTION OF
REPORT ON EXAMINATION
No. 4/70

	<u>COPY No.</u>
Minister William A. Ellis, Director, United States Agency for International Development Mission to Brazil	1
Dr. Conor M. Lion, Associate Director (NEAD) - USAID/B/NEAO	2
State Department - The Honorable J.K. Mansfield, Inspector General of Foreign Assistance (IGA)	3
State Department - Mr. Robert W. Dean, Country Director - Office of Brazil Affairs (ARA/BR)	4
AID/W - Executive Director (ARA-LA/MGT/EX)	5 - 6
AID/W - Office of the Controller (A/CONT)	7
AID/W - Office of the Auditor General (AG/AUD)	8 - 9
AID/W - Special Assistant for Program Management (PMCA)	10 - 11
USAID/Panama - Inspector in Charge, Inspections and Investi- gations Staff, A.I.D. (IIS)	12
USAID/B - Evaluations Officer (OPEV)	13
USAID/B - Office of Assistant Director for Program (ADPR)	14
USAID/B - Program Coordination Division (PRPC)	15
USAID/B - Office of Management (ADMG/MGEX/MGMA)	16
USAID/B - Engineering and Natural Resources Office (ENRO)	17
USAID/B - Office of Development Planning (ADDP)	18
USAID/B - Legal Staff (LGS)	19
USAID/B/NEAO - Engineering, Industry and Natural Resources Division (NEEIR)	20
USAID/B - Office of the Controller (CONT)	21
USAID/B - Controller's Official File Copy	22
USAID/B - Audit Division (C/AUD)	23 - 27

NOTE: All audit work papers are attached to Copy No. 23 which is on file
in the Office of the Controller, Audit Division (C/AUD), USAID/B.