PD-AA4-530
58709

A.I.D. EVALUATION SUMMARY – PART I

1. BEFORE FILLING OUT THIS FORM, READ THE ATTACHED INSTRUCTIONS.
2. USE LETTER QUALITY TYPE, NOT "DOT MATRIX" TYPE.

IDENTIFICATION DATA

A. Reporting A.I.D. Unit:
Mission or AID/W Office: USAID/SRI LANKA
(ES# 88)

B. Was Evaluation Scheduled in Current FY Annual Evaluation Plan?
Yes [X] Slipped [ ] Ad Hoc [ ]
Evaluation Plan Submission Date: FY ___ Q ___

C. Evaluation Timing
Interim [X] Final [ ]
Ex Post [ ] Other [ ]

D. Activity or Activities Evaluated (List the following information for project(s) or program(s) evaluated; if not applicable, list title and date of the evaluation report.)

Project No.	Project /Program Title	First PROAG or Equivalent (FY)	Most Recent PACD (Mo/Yr)	Planned LOP Cost (000)	Amount Obligated to Date (000)
383-0088	WATER SUPPLY & SANITATION SECTOR	08/24/84	08/31/89	12,300	12,300

ACTIONS

E. Action Decisions Approved By Mission or AID/W Office Director

Action(s) Required	Name of Officer Responsible for Action	Date Action to be Completed
1. Authorise an extension to the current PACD by thirteen months from August 31, 1989 to September 30, 1990.	NWSDB, USAID	Jan. '89
2. Authorise an increase in the planned LOP cost.	ES, USAID	March '89
3. Authorise an extension of the WASH monitoring functions to include two additional annual monitoring/evaluation workshops.	WASH, USAID	Feb. '89
4. Authorise an increase in overseas training of participants to include specialized programs in financial management and planning.	ES, NWSDB USAID	Dec. '88
5. Develop a water sector database and initiate a long-term master planning process for the water sector.	NWDSB, ES	March '89
6. Explore the possibility of the NWSDB meeting its debt servicing obligations in the near future.	NWSDB, ES MLGHC	March '89
7. Formulate plan to encourage GSL to reimburse NWSDB for payments in default.	NWSDB, ES, MLGHC	March '89
8. Develop a strategy and plan to recover the economic cost of water.	NWSDB, ES, MLGHC	March '89
9. Review current and future NWSDB training needs.	ES, USAID, MLGHC	Dec. '88
10. Reassess requirement for ES to prepare progress reports on a monthly basis.	ES, USAID	Dec. '88

(Attach extra sheet if necessary)

APPROVALS

F. Date Of Mission Or AID/W Office Review Of Evaluation: (Month) 6 (Day) 15 (Year) 88

G. Approvals of Evaluation Summary And Action Decisions:

	Project/Program Officer	Representative of Borrower/Grantee	Evaluation Officer	Mission or AID/W Office Director
Name (Typed)	JOE THANARAJAH ENG	T.B. MADUGALLE Chairman, NWSDB	JAN EMMERT PRM	PETER J. BLOOM DIRECTOR
Signature				
Date	11/18/88	21/11/88	11/18/88	11/21/88

AID 1330-5 (10-[illegible]) Page 1

ABSTRACT

H. Evaluation Abstract (Do not exceed the space provided)

The project purpose is two-fold: (a) to develop and improve the institutional capabilities of the National Water Supply and Drainage Board (NWSDB) to plan, design, rehabilitate/construct, operate and maintain water and sanitation systems throughout Sri Lanka; and (b) to develop and improve national health education, rural sanitation services and community participation in water supply and sanitation. USAID provides funding for technical assistance and partial funding for training, commodities, construction of facilities and the construction/rehabilitation of six water systems. The project is intended to produce: (1) a reorganized, consolidated and decentralized NWSDB with an increased capacity and priority for operations and maintenance; (2) established NWSDB operational units and improved policies and procedures; (3) more effective NWSDB operation through better trained and motivated staff and improved facilities, equipment and through better trained and motivated staff and improved facilities, equipment and logistical support; (4) a more effective public health outreach through better trained rural health workers as facilitators of community health; and (5) a NWSDLB water rehabilitation/construction program in up to six regions of the country. The purpose of the evaluation was to: (1) provide a summary of progress to date; (2) identify major problems in achieving project goals and purposes; (3) assess the likelihood of the project achieving its goals and purpose; (4) assess the project's effectiveness in addressing current AID policy objectives; (5) recommend modification of project activities and/or implementation procedures; and (6) identify areas meriting special consideration. The evaluation was conducted approximately three and one-half years after project initiation. Information was gathered by a review of USAID project files, contractor reports, interviews with a wide range of individuals associated with the project and visits to three field sites where project activities were being undertaken. The major findings and conclusions are: (1) Despite serious initial problems, the institutional development aspects of the project have recently begun to progress in a very satisfactory manner and the momentum in this area appears to be increasing. Documented progress in such areas as improved billing time, improved rates of collection and improved customer relations is highly indicative of the type of progress being achieved. (2) The concept of decentralization appears to have been fully accepted within most parts of NWSDB and is operating effectively in those regions where it has been implemented. (3) The village health and sanitation program appears to be operating effectively and the quality of the latrines being constructed is extremely high. However, the delay in the construction/rehabilitation of the accompanying water systems is beginning to cause concern at the local level. (4) The quality of technical assistance being provided by Engineering Science Inc. is of a high standard and is generally well received at all levels within the NWSDB. (5) The management training and annual monitoring services provided by the WASH project have proved extremely beneficial. The senior management training was useful in building a common understanding of the project within the NWSDB.

COSTS

I. Evaluation Costs

1. Evaluation Team Name	Affiliation	Contract Number OR TDY Person Days	Contract Cost OR TDY Cost (U.S. $)	Source of Funds
James W. Dawson	CHECCHI & COMPANY	80	46,500	Project
Michael G. Powell	CONSULTING, INC			
Munitunga Randeniya				

2. Mission/Office Professional Staff Person-Days (Estimate) 10

3. Borrower/Grantee Professional Staff Person-Days (Estimate) 10

A.I.D. EVALUATION SUMMARY - PART II

SUMMARY

J. Summary of Evaluation Findings, Conclusions and Recommendations (Try not to exceed the three (3) pages provided)
Address the following items:

- Purpose of evaluation and methodology used
- Purpose of activity(ies) evaluated
- Findings and conclusions (relate to questions)
- Principal recommendations
- Lessons learned

Mission or Office:	Date This Summary Prepared:	Title And Date Of Full Evaluation Report:
USAID/SRI LANKA	11/10/88	Mid-Term Evaluation of the Water Supply & Sanitation Sector Project No: 383-0088

PURPOSE AND METHOD OF EVALUATION:

The purpose of the evaluation was to: (1) provide a summary of progress to date; (2) identify major problems in achieving project goals and purposes; (3) assess the likelihood of the project achieving its goals and purpose; (4) assess the project's effectiveness in addressing current AID policy objectives; (5) recommend modification of project activities and/or implementation procedures; and (6) identify areas meriting special consideration.

The evaluation was conducted approximately three and one-half years after project initiation. Information was gathered by a review of USAID project files, contractor reports, interviews with a wide range of individuals associated with the project and visits to three field sites where project activities were being undertaken.

PURPOSE OF ACTIVITIES EVALUATED

The primary objectives of the evaluation are:

(1) Provide a summary of progress to date in each of the critical areas of NWSDB institutional development, NWSDB/MOH/NGO coordination and community health organization;

(2) Identify major problems in achieving project goals and purposes;

(3) Assess the likelihood of the project achieving its goals and purposes;

(4) Assess the project's effectiveness in addressing current AID policy objectives;

(5) Recommend modification of project activities and/or implementation procedures to overcome problems or otherwise facilitate progress; and

(6) Identify areas meriting special consideration.

FINDINGS AND CONCLUSIONS:

1. Despite serious initial problems, the institutional development aspects of the project have recently begun to progress in a very satisfactory manner and the momentum in this area appears to be increasing. Documented progress in such areas as improved billing time, improved rates of collection and improved customer relations is highly indicative of the type of progress being achieved.

2. The concept of decentralization appears to have been fully accepted with most parts of NWSDB and is operating effectively in those regions where it has been implemented.

3. The village health and sanitation program appears to be operating effectively and the quality of the latrines being constructed is extremely high. However, the delay in the construction/rehabilitation of the accompanying water systems is beginning to cause concern at the local level.

4. The quality of technical assistance being provided by Engineering Science, Inc. is of a high standard and is generally well received at all levels within the NWSDB.

5. The management training and annual monitoring services provided by the WASH project have proved extremely beneficial. The senior management training was useful in building a common understanding of the project within the NWSDB, and the annual monitoring program is an effective mechanism for focusing attention on objectives still to be achieved.

6. Inspite of the substantial progress that has occurred to date, the team is concerned over the slow rate at which the NWSDB is developing its in-house training capacity. Much of the progress to date has been as the result of substantial levels of externally provided assistance and a number of key training positions remain vacant.

7. The current unfavourable financial position of the NWSDB is caused by: (a) the failure of the present tariff structure to reflect the economic cost of supplying water and (b) the inability of the NWSDB to collect revenue in a timely manner.

8. The delay in the construction/rehabilitation of six planned water systems appears to be closely linked to the inability of the NWSDB's Planning Section to provide sufficient resources to process these schemes in a timely manner.

9. The absence of a forward-looking national water plan appears to be the result of the failure to be more specific about what should be planned, the planning period, the scope of the plan and who should be responsible for its development.

10. The continued necessity for ESI to provide USAID with a monthly progress report appears unwarranted. The existing quarterly report appears more than adequate for good project management.

RECOMMENDATIONS

1. The current technical assistance efforts should be extended in certain areas of the project to ensure: (a) continued progress in the institutionalization of accomplishment to date, and (b) the completion of other important tasks that cannot be achieved by the end of the current TA contract.

2. The annual project monitoring function performed by WASH should be continued until the 1989 review, if sufficient project resources are available.

3. Additional overseas training should be provided to strengthen the commercial and financial planning capabilities of NWSDB. This should be provided through a mix of graduate and shorter-term training at one of the Asian regional institutions that have a specialized program in financial management and planning.

4. The current PACD of August 31, 1989 should be extended up to one year in order to accommodate the continued technical assistance and new training requirements.

5. The NWSDB should initiate the formulation of a long-term master plan in which the annual demand for water and water-related services is assessed. This data should subsequently be translated into a strategic plan in which the annual economic, financial, managerial and commercial resources are set forth.

6. The outstanding debt of the NWSDB for water supply to local authorities to be held by the GSL, since the NWSDB will not be able to meet it debt servicing obligations in the foreseeable future.

7. The GSL should agree to reimburse NWSDB for water supply to local authorities who are in default for over three months, if the NWSDB is able to improve its performance to an established level of acceptability.

8. In view of the restrictive nature of the present tariff system it is recommended that: (a) NWSDB establish tariffs which are adequate to recover the economic cost of water, (b) the GSL determine which areas would be provided with subsidized or free water, and further agree to reimbuse the Board for water supplied to these areas, and (c) all other customers pay the economic cost of water received. Additional capital investments in the water supply sector should only be undertaken if they are economically feasible.

9. The NWSDB should reexamine its current training approach in relationship to its current training organization in order to determine if the NWSDB can continue to meet its long-term training requirements after project assistance is terminated. If not, the approach should be modified and the existing staff vacancies filled.

10. The requirement for ESI to prepare a monthly progress report should be discontinued, but the quarterly report should be expanded to include more performance indicators that show present status vs. planned achievements.

11. The project should be continued as currently designed, with the possible exception of modifications that might be required by Recommendation No. 9.

LESSONS LEARNED

The project encountered major implementation problems shortly after it was initiated and little progress was made during the first year or so of the project. In retrospect, it appears that the problem was caused by: (1) the rigid, "by-the-book" approach utilized by the Board's top management and the contract technical assitance team in attempting to implement the project, and (2) their failure to undersand and/or recognize the organizational culture of the NWSDB. Lacking any attempt at coalition building, the NWSDB staff perceived the rapid and somewhat radical approach being proposed by the project as threatening to their status and security within the organization. As a result, they became uncooperative and began placing obstacles in the way of project implementation.

The problem was ultimately resolved by: (1) replacing the Board's Chairman and General Manager and key members of the technical assistance team, (2) altering the project's approach to implementation, and (3) developing processes and systems by which adequate coalition-building for the project's objectives could be undertaken. Specifically, these steps included:

1. The development of a step-by-step approach to installing planned project interventions. Instead of attempting to introduce all interventions simultaneously throughout the project, an approach was taken whereby an intervention or change was taken in one specific area, tested and the improvements were recognized before undertaking further replication throughout the system.

2. The reaction of the Management Cell which provided an organizational mechanism for including a greater number of senior managers in the decision-making process.

3. The development of a senior management training program, which was conducted in three phases over a period of approximately one year, for the purpose of: organizational development, bringing about greater understanding of the project by top management and senior staff, and building the necessary organizational coalitions to achieve the project objectives.

4. The use of the annual project monitoring and review workshops as a forum where organizational tensions caused by the project could be identified, fully discussed in a non-threatening manner and agreements reached on methods to resolve outstanding problems.

ATTACHMENTS

K. Attachments (List attachments submitted with this Evaluation Summary; always attach copy of full evaluation report, even if one was submitted earlier; attach studies, surveys, etc., from "on-going" evaluation, if relevant to the evaluation report.)

A. Mid-Term Evaluation, Water Supply and Sanitation Sector Project Project No. 383-0088.

COMMENTS

L. Comments By Mission, AID/W Office and Borrower/Grantee On Full Report

This evaluation was comprehensive, unbiased, and represents a clear and impartial view of project progress to date. The Mission has endorsed all major recommendations which have been listed in Part One of the AID evaluation summary in order of Mission priority and reworded in a concise, action-oriented fashion. Together with the Government of Sri Lanka, the Mission intends to address all of the Part One recommendations by mutual agreement.

NWSDB, ESI and USAID have always felt a continuing need to reexamine the training approach. The training approach has been continuously modified by the Steering Committee to reflect current needs of the NWSDB.

MID - TERM EVALUATION

OF

THE WATER SUPPLY

AND SANITATION SECTOR PROJECT

SRI LANKA

PROJECT NO. 383 - 0088

Prepared For

United States Agency for International Development

Colombo, Sri Lanka

March 1988

MID-TERM EVALUATION

OF

THE WATER SUPPLY AND SANITATION SECTOR PROJECT

SRI LANKA

PROJECT NO. 383-0088

James W. Dawson, Team Leader
Michael G. Powell
Munitunga Randeniya

United States Agency for International Development

Colombo, Sri Lanka

March, 1988

9'

TABLE OF CONTENTS

BASIC PROJECT IDENTIFICATION DATA

1.	Country:	Sri Lanka
2.	Project Title:	Water Supply and Sanitation Sector.
3.	Project Number:	383-0088
	Loan Number:	383-U-034
4.	Project Dates:	
	a. First Project Agreement:	August 24, 1984
	b. Final Obligation:	FY 86
	c. PACD:	August 31. 1989
5.	Project Funding	
	a. A.I.D. Bilateral Funding:	U.S. $12.3 Million
	b. Other Major Donors:	None
	c. Host Country Counterpart Funds:	U.S.$7.3 Million rupees
6.	Mode of Implementation:	AID direct contract with Engineering Science Inc. (ESI) and Camp Dresser and Mckee Intl., Inc. (WASH Project). Host country contract with Engineering Consultants Ltd. AID Grant and Loan to Government of Sri Lanka (GSL) along with GSL funds to finance participation of the National Water Supply and Drainage Board in the program.
7.	Project Design:	The Government of Sri Lanka, USAID/Colombo and Camp Dresser and Mckee.
8.	Responsible Mission Officials:	
	a. Mission Director:	Frank Correl 1984-1986 Robert Chase 1986-1987 Peter Bloom 1987
	b. Project Officer:	Eric Loken 1984-1987 J. Thanarajah 1987
9.	Previous Evaluation:	None
10.	Cost of Present Evaluation:	Contract with Checchi & Company Consulting, Inc. (IQC), 80 person days, US $46,500.

EXECUTIVE SUMMARY

Initiating Mission: USAID, Colombo, Sri Lanka

Title: "Mid-Term Evaluation of the Water Supply and Sanitation Sector Project (383-0088), USAID/Sri Lanka". March 1988.

Brief Project Description: The Project purpose is two-fold: (a) to develop and improve the institutional capabilities of the National Water Supply and Drainage Board (NWSDB) to plan, design, rehabilitate/construct, operate and maintain water and sanitation systems throughout Sri Lanka; and (b) to develop and improve national health education, rural sanitation services and community participation in water supply and sanitation. USAID provides funding for technical assistance and partial funding for training, commodities, construction of facilities and the construction/rehabilitation of six water systems.

The project is intended to produce (1) a reorganized, consolidated and decentralized NWSDB with an increased capacity and priority for operations and maintenance; (2) established NWSDB operational units and improved policies and procedures; (3) more effective NWSDB operation through better trained and motivated staff and improved facilities, equipment and logistical support; (4) a more effective public health outreach through better trained rural health workers as facilitators of community health; and (5) a NWSDB water rehabilitation/construction program in up to six regions of the country.

Purpose and Method of Evaluation: The purpose of the evaluation was to (1) provide a summary of progress to date; (2) identify major problems in achieving project goals and purposes; (3) assess the likelihood of the project achieving its goals and purpose; (4) assess the project's effectiveness in addressing current AID policy objectives; (5) recommend modification of project activities and/or implementation procedures; and (6) recommend on areas meriting special consideration.

The evaluation was conducted approximately three and one-half years after project initiation. Information was gathered by a review of USAID project files, contractor reports, interviews with a wide range of individuals associated with the project and visits to three field sites where project activities were being undertaken.

Findings and Conclusions:

1. Despite serious initial problems, the institutional development aspects of the project have recently begun to progress in a very satisfactory manner and the momentum in this area appears to be increasing. Documented progress in such areas as improved billing time, improved rates of collection and improved customer relations is highly indicative of the type of progress being achieved.

2. The concept of decentralization appears to have been fully accepted within most parts of NWSDB and is operating effectively in those regions where it has been implemented.

3. The village health and sanitation program appears to be operating effectively and the quality of the latrines being constructed is extremely high. However, the delay in the construction/rehabilitation of the accompanying water systems is beginning to cause concern at the local level.

4. The quality of technical assistance being provided by Engineering Science, Inc. is of a high standard and is generally well received at all levels within the NWSDB.

5. The management training and annual monitoring services provided by the WASH project have proved extremely beneficial. The senor management training was useful in building a common understanding of the project within the NWSDB, and the annual monitoring program is an effective mechanism for focusing attention on objectives still to be achieved.

6. In spite of the substantial progress that has occurred to date, team is concerned over the slow rate at which the NWSDB is developing its in-house training capacity. Much of the progress to date has been as the result of substantial levels of externally provided assistance and a number of key training positions remain vacant.

7. The current unfavorable financial position of the NWSDB is caused by (1) the failure of the present tariff structure to reflect the economic cost of supplying water and (2) the failure and inability of the NWSDB to collect revenue in a timely manner.

8. The delay in the construction/rehabilitation of six planned water systems appears to be closely linked to the inability of and/or unwillingness of the NWSDB's Planning Section to provide sufficient resources to process these schemes in a timely manner.

9. The absence of a forward-looking national water plan appears to be the result of the failure to be more specific about what should be planned, the planning period, the scope of the plan and who should be responsible for its development.

10. The continued necessity for ESI to provide USAID with a monthly progress report appears unwarranted. The existing quarterly report appears more than adequate for good project management.

Recommendations:

1. The current technical assistance efforts should be extended in certain areas of the project to ensure (1) continued progress in the institutionalization of accomplishment to date, and (2) the completion of other important tasks that can not be achieved by the end of the current TA contract.

2. The annual project monitoring function performed by WASH should be continued until the 1989 review, if sufficient project resources are available.

3. Additional overseas training should be provided to strengthen the commercial and financial planning capabilities of NWSDB. This should be provided through a mix of graduate and shorter-term training at one of the Asian regional institutions who have specialized program in financial management and planning.

4. The current PACD of August 31, 1989 should be extended up to one year in order to accommodate the continued technical assistance and new training requirements.

5. The NWSDB should initiate the formulation of a long-term master plan in which the annual demand for water and water related services is assessed. This data should subsequently be translated into a strategic plan in which the annual economic, financial, managerial and commercial resources are set forth.

6. The outstanding debt of the NWSDB should be converted to equity capital to be held by the GSL, since the NWSDB will not be able to meet it debt servicing obligations in the foreseeable future.

7. The GSL should agree to reimburse NWSDB for water supply to local authorities who are in default for over three months, if the NWSDB is able to improve its performance to an established level of acceptability.

8. In view of the restrictive nature of the present tariff system it is recommended that (1) NWSDB establish tariffs which are adequate to recover the economic cost of water, (2) the GSL determine which areas would be provided with subsidized or free water, and further agree to reimburse the Board for water supplied to these ares, and (3) all other customers pay the economic cost of water received. Additional capital investments in the water supply sector should only be undertaken if they are economically feasible.

9. The NWSDB should reexamine its current training approach in relationship to its current training organization in order to determine if the NWSDB can continue to meet its long-term training requirements after project assistance is terminated. If not, the approach should be modified and the existing staff vacancies filled.

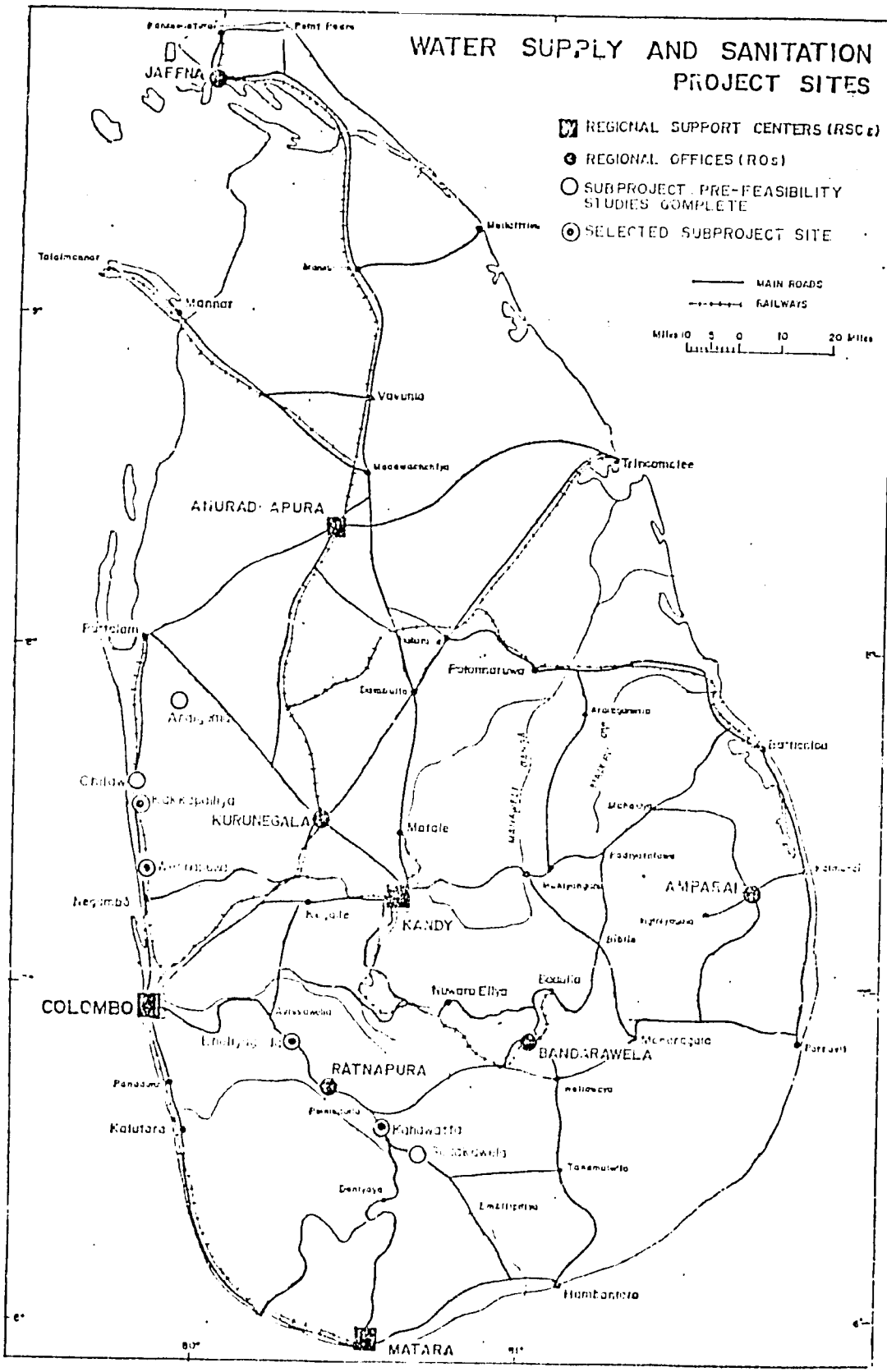
10. The requirement for ESI to prepare a monthly progress report should be discontinued, but the quarterly report should be expanded to include more performance indicators that show present status vs. planned achievements.

11. The project should be continued as currently designed, with the possible exception of modifications that might be required by Recommendation No. 9.

....

ACRONYMS AND ABBREVIATIONS

AGM	-	Assistant General Manager
COP	-	Contractor Chief-of-Party
CSSS	-	Community Services and Support Section
DDC	-	District Development Council
EDI	-	Economic Development Institute (IBRD)
ESI	-	Engineering Science, Inc.
GM	-	Gramodaya Mandalaya (Village Council)
GSL	-	Government of Sri Lanka
IBRD	-	International Bank for Reconstruction and Development
LOP	-	Life-of-Project
MMS	-	Maintenance Management System
MF&P	-	Ministry of Finance and Planning
MOH	-	Ministry of Health
MLGHC	-	Ministry of Local Government, Housing & Construction
MC	-	Muncipal Council
MIS	-	Management Information System
NWSDB	-	National Water Supply & Drainage Board
OIC	-	Officer-in-Charge
O&M	-	Operations and Maintenance
PM	-	Pradeshiya Mandalaya (Divisional Council)
PMAU	-	Performance and Management Analysis Unit
PACD	-	Project Agreement Completion Date
PID	-	Project Identification Document
PP	-	Project Paper
PHI	-	Public Health Inspector
RM	-	Regional Manager
RSC	-	Regional Support Center
RSU	-	Rural Sanitation Unit
TA	-	Technical Assistance
USAID	-	U.S. Agency for International Development
VHW	-	Village Health Worker
WASH	-	Water and Sanitation for Health
W.H.O.	-	World Health Organization


WATER SUPPLY AND SANITATION
PROJECT SITES
REGIONAL SUPPORT CENTERS (RSCs)
REGIONAL OFFICES (ROs)
SUBPROJECT PRE-FEASIBILITY STUDIES COMPLETE
SELECTED SUBPROJECT SITE
MAIN ROADS
RAILWAYS
Miles 10 5 0 10 20 Miles
JAFFNA
Point Pedro
Mannar
Vavuniya
Trincomalee
ANURADHAPURA
Puttalam
Kurunegala
KURUNEGALA
Matale
KANDY
AMPARAI
COLOMBO
RATNAPURA
BANDARAWELA
Nuwara Eliya
Kalutara
Kahawatta
Matara
MATARA

16

EVALUATION REPORT

1. INTRODUCTION

In 1980, the Government of Sri Lanka (GSL) adopted a long-term plan to provide safe and adequate water and sanitation facilities to all of its sixteen million inhabitants by 1995. This ten-year plan (commonly known as the Decade Plan) projected an investment of Rs.14,400 million (U.S. $572 million) in 1980 prices to:

- Provide safe and adequate water to 100% of the urban and estate areas; and 50% of the rural areas by 1990;
- To provide water to the remaining 50% by 1995; and
- To provide approved sanitation facilities to 100% of the population by 1990.

The current (1984-88) investment plan projected expenditures of Rs.3,306 million (U.S. $132 million) in support of the total financial requirements of the longer-term plan.

At the beginning of the plan period it was estimated that only 19% of the total population received water through either domestic or public piped facilities, with the remainder of the population supplying its water needs from unprotected sources. From a sanitation standpoint, only 5% were estimated to have flush toilets, with 61% utilizing some type of latrine facilities. The remaining 35% were entirely without any type of excreta disposal facilities. From a public heath perspective, these poor sanitation conditions are believed to be responsible for causing more than 20% of all hospital admissions, with diarrhoea attributing to the third highest cause of hospital morbidity and intestinal helminthiasis as the fifth highest cause of hospital mortality.

During the first six years of the plan there was substantial progress with the provision of improved water supplies, but with most of the progress effecting only the 14% of the national population who reside in urban areas. By 1986, it was estimated that 95% of the urban population was now being served by piped water through domestic connections (30%) or public stand-posts (65%). this represents a 40% increase over 1980, when only 68% of the urban population was served by piped water facilities. From a percentage standpoint, progress in the rural areas was also impressive with 30% of the population now receiving water from piped systems or safe wells. This compares to a 1980 estimate of 18%. However, in gross terms this still means that over 50% of the country's total population is not being provided with safe water.

17

In the sanitation area there has been substantially less progress during the same period. In 1986, it was estimated that 65% of the urban and 39% of the rural population were served by either flush toilets, pour flush latrines or properly ventilated pit privies. Overall, this represents a national coverage of 43% and is only marginally higher than the conditions that existed in 1980.

The primary responsibility for achieving the long-term plan objectives in the water sector have been assigned to the National Water Supply and Drainage Board (NWSDB), a public corporation established in 1975. This organization has experienced a dramatic growth in both its responsibilities and in the organization itself as shown by the following indicators:

- Increases in its capital budget from Rs.33 million in 1975, to Rs.1321 million in 1986;

- Increases in staff from 1,600 in 1975, to over 6,000 in 1986;

- Management of 250 water schemes in 1986, as compared to only 94 in 1981;

- The construction of 3744 deep wells by 1987, as compared to 1560 wells by 1984; plus the co-ordination of 4,000 wells constructed under donor funded programs.

Prior to its formation as a public corporation, the NWSDB functioned as a government department whose main responsibilities were limited to planning, design and construction of water systems. Upon its conversion to a public corporation it assumed the additional responsibilities of systems operation and maintenance, and the billing and collection for the services provided; all of which was to be performed in a financially viable manner. As a government department, the NWSDB operated primarily in a reactive mode, responding in an ad hoc manner to requests for new services from the Ministry of Local Government, Housing and construction (MLGHC), local authorities and Members of Parliament. This mode of operation was largely carried over into its new corporate organization and a number of problems soon developed which continue to limit its ability to become a fully effective and financially viable organization. Some of the more serious problems included:

- A low emphasis on the actual operation and management of water systems;

- Lack of accounting and budget discipline;

- Construction of systems that were not financially viable;

- Lack of strategic planning;

- Low emphasis on community participation;

- Continued reliance on GSL budget subsidies.

Upon the recognition of these organizational problems, the USAID Water and Sanitation Sector Project was designed in 1984, with the primary purpose of strengthening the institutional capacity of the NWSDB to address its expanded role and mission in a planned, responsive and financially viable manner.

II. PROJECT DESCRIPTION

A. Project Goal and Purpose

The project's logical framework matrix is included as Appendix I. In summary, the project goal is to improve the health and well-being of the people of Sri Lanka. The achievement of this goal will be measured by the increase in the number of people served by safe and reliable water supply systems and adequate sanitation facilities, and by the reduced incidence of water related morbidity and mortality.

The purpose of the project is two-fold: (a) to develop and improve the institutional capabilities of the NWSDB to plan, design, rehabilitate/construct, operate and maintain water supply and sanitation systems throughout Sri Lanka; and (b) to develop and improve national health education, rural sanitation services and community participation in water supply and sanitation. By the end of the project, the combined project activities are expected to produce:

- A reorganized, consolidated and decentralized NWSDB with an increased capacity and priority for operations and maintenance;

- Established NWSDB operational units and improved policies and procedures for management, planning, public relations, commercial operations, personnel management, training, construction, operations and maintenance, information management and research;

- More effective NWSDB operations through better trained and motivated staff and improved facilities, equipment and logistical support;

- A more effective public health outreach through better trained rural health workers as facilitators of community health;

- A NWSDB water rehabilitation/construction program in up to six regions of the country that fully integrates a Ministry of Health (MOH) community health and latrine construction program.

B. Project inputs and Anticipated Outputs

Financial inputs to the project are provided through grant and loan funds from AID in the amount of $U.S. 12.3 million, and GSL cash and in-kind contributions of approximately 7.3 million. The total provides for technical assistance ($4.8 million), training ($ .6 million), commodities ($3.8 million), facilities ($3.3 million), construction/rehabilitation of systems ($5.4 million), research studies ($ .1 million) and recurrent operating costs ($1.6 million). A detailed project financial plan and cost attribution is provided in Appendix V, Table No.1.

Planned project outputs include a wide range and mix of institutional and physical achievements which are summarized as follows:

- New and renovated office, training, laboratory, workshop, warehouse and staff housing facilities with equipment, supplies and logistical support at the NWSDB Central Office, three Regional Support Centers and five regional offices ;

- Established and tested operating plans, procedures and manuals for each of NWSDB operations;

- Trained and motivated staff in all NWSDB units;

- Two long-term trainees, 34 short-term overseas trainees, and 15 in-country workshops;

- Completion of five technical research studies;

- Establishment of a Regional Sanitation Units within the NWSDB, with teams being posted in the regional areas;

- The construction of two new water systems and the rehabilitation of four existing systems;

- Construction of 15,000 improved latrines in six sub-project areas;

- Intensive health education training in six sub-project areas;

- Completion of three health-related socio-economic research studies.

C. Project Design Assumptions

The major assumptions on which the project design was based included:

- Continued GSL stability and economic growth;
- Favourable GSL policies and resources to carry-out planned activities on a timely basis;
- Other donor and community contributions received as planned/required;
- Implementation of effective preventive health programs by the GSL and other donor organizations;
- NWSDB and community groups able to retain qualified, trained personnel and new acquired skills effectively applied.

III. Project History

The project was initiated in August, 1984, with the signing of the Loan and Grant Agreement and the obligation of U.S. $12.3 million in project funds. The Mission moved quickly through the contracting process required for obtaining technical assistance, and by May, 1985, the firm of Engineering-Science, Inc. had been awarded a contract and had a six-person U.S. advisory team in place in Sri Lanka. In November, 1985 the GSL satisfied the last of the conditions precedent under the Agreement, and the project should have been positioned to move quickly into full implementation. Unfortunately, this was not the case. During the latter half of 1985, a sizeable number of the NWSDB staff recognized that the manner in which the project was being implemented was subjecting them to rapid and radical organizational, attitudinal and behavioural changes at a rate quicker than they were prepared to accept. Strong resistance to these changes developed quickly, with resultant delays in planned areas of improvement. This impasse was finally resolved in early 1986, by the replacement of several senior members of both the NWSDB and the technical assistance team. This action, together with a more incremental approach to change within the project, appears to have basically resolved this problem and the project is now moving forward at a much better rate. However, the delays resulting from this initial problem have caused many activities to slip more than a year behind their original completion date.

To date, most of the planned organizational changes have been undertaken, staff has been trained, policies and procedures are in various stages of development and the planned decentralization objectives have for the most part been achieved. The construction and renovation of project facilities is just now getting underway and is scheduled to continue until mid-1989. The construction and

renovation of six water systems has not yet begun. Five of the six schemes have been identified and are currently undergoing feasibility analysis. The sixth has been delayed by security problems in the northern area of the country.

As of December 31, 1987, 94% of the project grant funds and 17% of the project loan funds had been committed, and the total accrued expenditures were 31% of obligations.

IV. Evaluation Methodology

This is the first evaluation of the Sri Lanka Water Supply and Sanitation Sector Project. The primary objectives of the evaluation are to:

- Provide a summary of progress to date in each of the critical areas of NWSDB institutional development, NWSDB/MOH/NGO coordination and community health organization;
- Identify major problems in achieving project goals and purposes;
- Assess the likelihood of the project achieving its goals and purposes;
- Assess the project's effectiveness in addressing current AID policy objectives;
- Recommend modification of project activities and/or implementation procedures to overcome problems or otherwise facilitate progress;
- Recommend on areas meriting special consideration.

A complete Scope of Work for the evaluation is contained in Appendix II.

The evaluation was conducted by an outside consulting team provided under an Indefinite Quantity Contract (IQC) with Checchi and Company Consulting, Inc. The team consisted of James W. Dawson, Team Leader and Organizational Development/Management Specialist, Michael G. Powell, Financial Management Specialist and Muntunga Randeniya, Water Supply Engineer. The evaluation was undertaken between February 25 and March 23, 1988, with the first draft of the report provided to the Mission for review fifteen working days after the initiation of the contract.

The findings and conclusions on which the report recommendations are based were obtained primarily from existing documentation, interviews with a wide range of persons associated with the project and visits to three field sites where project activities are being undertaken. The documents reviewed included Mission

files, eleven contractor quarterly reports and copies of policy and procedural documents prepared by the project. Interviews were conducted with Mission and the ESI contract staff, concerned GSL officers at the NWSDB Central Office in Colombo and two regional offices (Matara and Kandy), and concerned officials at the Ministry of Health and the Ministry of Local Government, Housing and Construction. A listing of key documents reviewed and persons with whom the team interacted are contained in Appendix III and Appendix IV. Appendix VI contains a sample of an evaluation matrix prepared and used by the team in its analysis of the project. It proved extremely useful for documenting progress for completed and on-going activities, but less so for those activities that were just getting underway or where no action had yet taken place.

V. PROJECT STATUS AND EVALUATION FINDINGS (BY SUB-PROJECT AREAS)

A. NWSDB Reorganization, Decentralization and Personnel Management.

Due to the strong interlinkages between each of the above subject areas, this section of the report treats them as a single topic rather than as entirely separate and discrete subject areas. The principal reorganization objectives of the Project Paper were (1) the consolidation of project and non-project areas, (2) adoption of a revised table of organization, (3) preparation of job descriptions, and (4) the staffing of key central and regional positions. The PP was less specific regarding the planned decentralization objectives, but the evaluation indicators in Annex J included (1) the development of a special regional incentive program, (2) substantial delegation of authority to the regions, and (3) the degree to which local representatives are now directing requests for water services to regional offices instead of the Central Office. Recommended changes in the personnel management system are closely related to the decentralization issue and contained provisions for (1) a special incentive package for regional staff, (2) incentive packages and career advancement criteria based on performance, (3) development of manuals of personnel policies and procedures, and (4) a Manpower Planning Unit within the NWSDB Personnel Department.

In general, the evaluation team found that substantial progress has been made in both reorganization and decentralization, but that considerably less progress has occurred in the area of personnel management. The following compares planned with actual achievements using established evaluation indicators for each of the three subject areas covered in this section of the report :

1. Reorganization

a. Planned : Revised Table of Organization established and key positions staffed.
Actual : Table of Organization established and all but 17

key positions filled by mid-1987. The principal vacancies (10) were in the areas of training and water quality.

b. Planned : Preparation of job descriptions and their utilization in the recruitment process.
Actual : Job descriptions have been prepared and evidence indicates that they are being used in the recruitment process.

c. Planned : NWSDB units established and being staffed.
Actual : Newly planned units, such as the Public Relations Unit and the Community Services and Support Section, have been established and staffed as planned. Organizational charts for each of the NWSDB organizational units are contained in Appendix VIII and indicate the staffing of key positions as of March 31, 1987.

d. Planned : Consolidation of Project and Non-Project areas.
Actual : Action completed in 1986.

e. Planned : Improvements to facilitate communications and coordination through policy manuals and circulars, and increased frequency of meetings among management staff.
Actual : Numerous manuals and policy circulars prepared, but a relatively large percentage are still in the approval process or have not been implemented. There has been a substantial increase in the number of project related meetings. In January 1988, there were thirteen separate meetings of established project committees.

2. Decentralization

a. Planned : Establishment of regional incentive packages.
Actual : The packages were developed, but their impact was subsequently negated when all financial incentives were deleted.

b. Planned : An increase in the number and quality of NWSDB personnel assigned at regional offices.
Actual : At the two regional centers visited, the team found both offices almost fully staffed; with only one or two key vacancies. The team also found the staff to be of high quality, strongly motivated, and the lack of financial incentives appeared to have been at least partially offset by their increased authority and greater independence of action.

c. Planned : Improved employee retention rate at regional offices.
Actual : The relatively short time period these offices had been operational made it difficult to make a reasonable judgement with regard to the retention rate, but it appeared to be at least as good as that of the Central Office and the issue was not raised as a problem during the course of our interviews.

d. Planned : Substantial authority delegated to the regional and being exercised extensively.
Actual : Delegation has taken place and is being exercised extensively.

e. Planned : Local authorities directing more requests to regional centers, rather than to the Central Office.
Actual : This appears to be the case with O&M related issues, but less so with respect to requests for new water schemes.

3. Personnel Management

a. Planned : Development of a personnel policy manual.
Actual : The manual has been developed, translated into Sinhala and has received clearance as high as the Ministry of Local Government, Housing and Construction (MLGHC). However, for reasons that are not entirely clear, it has not been issued or utilized. The same basic situation exists with respect to the Employees Handbook.

b. Planned : Development of a Manpower Plan and procedural manuals.
Actual : The team has not been able to verify the existence of a Manpower Plan per se, but did note that various elements of such a plan are in various stages of development. This includes such things as an organizational manual, job descriptions, a manual on recruitment and promotion, a salary and allowance survey, and an employee evaluation system that is currently being tested. However, there is little evidence to suggest that these actions constitute what would normally be defined as a plan or that they are in fact being utilized to any degree at this point in time.

c. Planned : An increase in persons serving in managerial positions who have administrative/managerial backgrounds, as opposed to engineering backgrounds.
Actual : Increased staffing of persons with non-engineering backgrounds does not appear to be happening at the rate anticipated by the Project Paper or subsequently approved staffing guidelines. Improvements to date have been limited to the areas of public relations and environmental health, and a few positions in such support areas as logistics and finance.

d. Planned : A revision and upgrading of salary scales to make the NWSDB more competitive and to lower the rate of employee turnover.
Actual : No action has occurred due to financial constraints imposed on the NWSDB GSL.

The team concludes that the rather dismal performance in the area of personnel management results from a series of institutional rigidities that are built into a system that tends to punish

decision making more than it rewards it. Also, the heads of any organization or organizational units are generally reluctant to relinquish their existing authority over matters relating to personnel and personnel management. Since the very act of codifying personnel policy and procedures has the effect of removing certain areas of authority, it is reasonable to expect a certain degree of resistance in areas of personnel management.

B. STRATEGIC PLANNING

The actions anticipated under this component of the project were the formation of a Strategic Planning Committee and the institutionalization of the strategic planning process. The process was defined as a means of facilitating policy formation and decision making in the sector by determining future needs, establishing priorities, developing programs and ensuring the availability of resources, generally with the intention of achieving the goals of the Decade Plan. It is unclear from the various documents reviewed, and in particular the Project Paper, whether the strategic planning process to be initiated by the project was intended to cover the whole of the water supply sector, or only that part of it which is, or might in future be under the Board's control. Moreover, component parts and processes of the planning are referred to in general rather than specific terms, so that the intentions are again obscure. In this section of the report we evaluate what has actually been done under the project and discuss the issues later under conclusions and recommendations. In the related field of policy formation, the expected output was the preparation, annual review and continuous updating of the NWSDB Business Policy Manual.

In September, 1985 the Board affirmed that it had formed the Strategic Planning Committee as required under the USAID Agreement. The purpose of the Committee was stated to be to set goals and policies for sector development, based upon long range financial forecasts and other information, in order to assess NWSDB needs and responsibilities. A further stated objective was the achievement of NWSDB solvency in the shortest practicable time.

In January, 1985, an Interim Strategic Plan was presented making certain recommendations which were said to form the NWSDB Inception Plan and which identified some immediate areas of concern, principally financial. Certain of the plan's recommendations (eg. in regard to cost reductions) have been implemented, but the plan itself has been overtaken by events and is now outdated. In March, 1987 the Committee was replaced by a Management Cell, which brought together representatives of the Ministry, the NWSDB and the consultants.

The Management Cell has addressed a number of important policy issues, which have been initiated following joint approval of the NWSDB and the MLGHC. Current policies so initiated and now being monitored by the Cell include :

- Project selection and evaluation procedures to be followed by all applicants for new or additional water supplies. The procedure ensures that projects are accepted only on objective financial economic and social criteria, and that finance for construction is available. Certain amendments still await approval from the Ministry.

- Technical quality control procedures, which provide liaison between staff and departments during planning, design and construction of projects.

- Water quality control throughout the country for all supplies using the Board's equipment provided under the contract.

- Certain new contract procedures designed to reduce the use of direct labour for construction.

- Development of a financial recovery strategy, including cost savings through reduction staff, approved as policy by the MLGHC, but not yet submitted to the Treasury.

- The proposals to privatise part or all of the water supply within the Colombo Municipal area.

A strategic plan for 1988, to cover the years 1988 and 1991 is in the course of preparation. This will be the first formal plan to have been produced as part of the project.

The Management Cell has proved a most successful concept and has provided a forum for informal discussion of important topics which would probably not otherwise have been raised. The decision to enforce policy on project selection which, when fully in place will reduce the political pressures on the Board and its staff is a particularly good example.

While the activities described above are a necessary part of the strategic planning process, the Team notes that there has emerged as yet no national plan for water supply in which the country's long term needs for water and water related services have been assessed, potential sources of water and associated projects identified, and the economic and financial resources estimated.

Moreover, despite the efforts of the Management Cell, the NWSDB's financial position has deteriorated. This is discussed later under the heading of Financial Planning and Financial Viability.

C. Management Information Systems

This project element proposes the development of a comprehensive NWSDB management information system to assist senior board staff improve the quality and timeliness of the organization's decision making process. Project support includes technical assistance in

the development of the overall system and key performance indicators, computerization and the training of staff in its overall operation and application.

Organizationally, plans are nearing finalization to reorganize the existing Statistics and Coordination Unit into the Performance and Management Analysis Unit (PMAU), which will operate under the supervision of the Strategic Planning Unit. It will have responsibility for the following:

- Operation of a project management information system that will maintain data on the current status and projected programming of all the Board's capital projects;
- Development of performance indicators for all principal activities ;
- Policy analysis ;
- Preparation of management reports.

At the present time the person who will head this new organization is currently in short term training with a water authority in the U.K., and a portion of this training is focused on the development and utilization of management information systems.

To date various systems have been developed for use at both the regional and central level, but these systems have not yet been fully institutionalized within the Board. Performance indicators have been developed to monitor monthly billing and collection results, monthly expenditure and the level of cost recovery. This system has been computerized and is functioning in the regions that are currently operational. The system as currently operating also monitors:

- Budget performance ;
- Key indicators of systems operation and maintenance ;
- Capital expenditures ;
- Construction progress ;
- Water quality control ; and
- Preventive maintenance scheduling.

In spite of the above progress, it is estimated that system is only about 65% complete. Additional effort is needed to formalize the structure and responsibilities of the new unit and to fully install and integrate the system within the NWSDB.

D. Supplies, Stores and Procurement

The original plan for the improvement of NWSDB's procurement and logistics system, as described in the Project Paper, proposed (1) increasing the number of managerial personnel, (2) the development of a system for information retrieval, (3) the preparation of procedural manuals, (4) upgrading of the central stores facilities in Ratmalana, (5) improvements in NWSDB's heavy transport capacity, and (6) the construction of eight regional warehousing facilities. Information gained during the course of the evaluation reveals that substantial changes have been made in this original approach, with the primary change being the greater delegation of authority to the regions to undertake their own procurement. The current approach, which is nearing final approval, embodies the following key elements :

- Decentralization of the stores system that would (1) eliminate the central store, (2) develop an inter-regional transfer system for supplies, and (3) establish a central transit warehouse in Colombo to serve regional operations ;

- The development of a decentralized procurement system for major items that would (1) limit authority for obtaining quotations to a small group of supervised, bonded officials, (2) provide for improved budgetary control, and (3) reduce the number of major procurement actions by utilizing an I.Q.C.-type master purchase order system ;

- The consolidation of the parts and supplies currently maintained separately by each of NWSDB's operating divisions ;

- A reduction in the level of supplies currently being maintained at various NWSDB locations, but with a provision that all pumping stations would maintain an adequate supply of spares to handle emergency breakdowns. This revised approach is still within the approval process within the NWSDB. It has been cleared by a Stores Policy Task Force and currently awaits approval by the General Manager.

The evaluation team's general conclusion is that the development of an effective procurement and logistics system is not progressing in a timely and satisfactory manner, and that progress in this area is only about 30% of the planned target. This lack of progress is attributed primarily to (1) the timely recruitment and retention of adequate staff, (2) internal resistance by the Board's operating divisions to relinquish control over the supply process, and (3) the delay in the construction of regional stores facilities.

One very positive action noted by the team was the Board's relatively recent action to increase the financial authority of the regional managers. This action increased the managers' overall monthly expenditure authority from Rs. 25,000 to Rs. 500,000, and increased his approval authority for local tenders from Rs. 25,000 to Rs. 100,000. This now permits him to undertake a large number of local procurement actions that would have formerly required Central Office approval.

E. Training

Assistance provided under this project component is intended to assist the NWSDB in their efforts to reorganize and expand their training capacity in a way that would lead to the institutionalization of a structured in-house skill training program. Planned outputs include, (1) the recruitment of 25 additional training officers, (2) the development of a comprehensive training information, planning and evaluation system, (3) development of a certification program for skilled job categories, (4) development of a core curriculum incorporating trainer's manuals and materials, (5) development of a training of trainers program, and (6) the construction of a new central training center and two regional training facilities. Planned inputs included the services of a long-term training advisor, equipment for the training centers and the construction of new facilities.

Nevertheless, the Training Department is making slow, but steady progress in achieving its assigned objectives. The following is the status of the Training Department's key indicators of progress:

- A core curriculum has been developed for nine of the fourteen planned programs and the remaining five are in the process of preparation. Curricula developed to date, include programs in senior management training, operations and maintenance, plant operations and training for pump operators, pump mechanics, clerks, storekeepers and foremen.

- One of two planned skills certification programs has been developed ;

- Standard training manuals have been completed for three of six planned programs ;

- A training of trainers program has been initiated and four manuals to assist the trainers are nearing completion ;

- the rate at which persons are being trained within the project has increased significantly over the past three years. The number of person-days of training during the last quarters of 1985, 1986 and 1987 were 732, 1622 and

4863 days, respectively.

- 1,496 NWSDB employees have attended at least one training program ;

- Approximately 90% of senior staff, 50% of middle management staff and 25% of supervisory staff have attended at least one training program.

In spite of the progress cited above, the team is concerned that institutionalization of the planned in-house training capacity is not occurring at a rate that will allow its full achievement by the end of the project. Much of the progress that has been achieved to date has been as the result of substantial amounts of externally provided assistance. It also appears that the training unit is not fully perceived by rest of the NWSDB as an integral and important part of the organization. There are still a number of key personnel vacancies within the unit and the planned renovation of the training center has not yet been undertaken. This latter factor has resulted in less than optimum training conditions and the under-utilization of project provided equipment.

F. Financial Viability

The financial viability of NWSDB may be defined as the ability to meet its financial obligations from its sources of funds. The obligations comprise its costs of operation including the costs of construction and rehabilitation and the servicing of its debts, together with working capital requirements. Its sources of funds comprise capital funds, either as grants or loans, and revenue from sales of water and water related services.

During the period of the project (and previously) the Board's revenue has not been adequate to meet even the direct costs of operation, and annual subsidies from GSL have been necessary. The NWSDB debt repayments have also been met by GSL. Some of the underlying causes of the present situation are as follows:

- government control over the NWSDB's tariff policies and its capital funding;

- inefficiency of the NWSDB's billing and collection functions;

- inability or refusal of some customers to pay for bulk supply;

- ineffective disconnection policies;

- construction of uneconomic projects; and

- imposition or acceptance of unrealistic loan (on-lending) terms and conditions.

As part of the USAID Project, the NWSDB's accounting and finance functions have been considerably modified to bring its policies and procedures into line with modern commercial practice. Actions have included the development and installation of computerized accounting system, the introduction of new budgeting procedures, on the job training and other measures to improve basic skills and efficiency. Such modifications were a necessary prerequisite for addressing the problems referred to above and, as a result of studies and recommendations of ESI, actions were instituted by the NWSDB as follows:

- establishment and staffing of a commercial department;
- improvements to billing and collection procedures by means of improved control measures, incentive programs, public relations programs, performance monitoring and computerization of the system;
- enforcement of disconnection procedures;
- location of illegal connections and reduction of waste through leakage detection;
- improvement in the rate of connection, new metering and meter rectification programs;
- identifying and pursuing large debtors (often government);
- discussion with Local Authorities of problems with meeting the cost of bulk supplies; and
- discussions with GSL on changes in tariffs.

These measures have achieved some success. The billing time lag in all regions was reduced from six months in 1986 to one month at the end of 1987. Collections within two months of billing improved in 1987 from 17% to 42%.

On the other hand, the absolute level of arrears is increasing, receivables over one year old having risen from Rs.92m to Rs.105m during 1987.

In addition to the above measures, the NWSDB has proposed a financial recovery strategy which aims to reduce its present operating deficit from about Rs.164m to Rs.80m in 1988. This is to be achieved principally through staff reductions, and through reduced power costs and other measures. All these measures have been proposed by the NWSDB and await GSL approval.

There are other factors which will also influence the Board's financial position. First, GSL has stated that it will no longer continue to subsidize the operating deficit, which it has been doing in the amount of Rs.100m annually. At the same time, they

have given their agreement to the removal of the Rs.150 limit on domestic consumers' bills. It is estimated that this will increase NWSDB's annual revenue by approximately Rs.15m.

Taking the above factors into account, the NWSDB's initial and final position over the next five years is summarized as follows:

	1988(a)	1988(b)	1992
	Rs.m	Rs.m	Rs.m
Total billings	304	304	415
Total collections	210(69%)	219(72%)	372(90%)
Operating/overhead	290	383	744
Operating Loss	(80)	(164)	(372)
Debt service	229	229	349
Cash deficit	(309)	(393)	(721)

(a) assumes that all cost reductions will be approved by MLGHC
(b) assumes that no cost reductions will be approved by MLGHC

If revenue were to be adequate to recover operating costs only for the current year, collections would have to be 95% of billings compared with the projected 72%. This appears improbable, so that if the present GSL control over tariff policies is likely to be permanent, with the NWSDB unable to exercise any degree of financial autonomy, then it will have to be accepted that subsidies will from time to time be necessary to cover operating deficits. Moreover in these conditions there is no prospect of the Board ever being able to meet it debt servicing obligations.

Under theses circumstances the Team considers that the NWSDB can never become financially viable by the definition stated initially.

G. Operations and Maintenance

The principal areas of activity in this category of the project are given as process control; i.e. water treatment from source to distribution, maintenance management and water quality.

The NWSDB's Operations and Maintenance (O&M) Division is responsible for some 250 schemes throughout the country, including the rehabilitation work being carried out on some 30 schemes under the program funded by ADB. Under the USAID project most of the work has been decentralized, to the Board's considerable advantage in terms of efficiency of working, increased awareness of problems, keenness and enthusiasm on the part of Staff.

Regional offices are located in Jaffna, Ampara, Bandarawela, Kurunegala, Ratnapura and Kandy. Regional Support Centers (RSC) are located at Anuradhapura, Matara and Kandy. Designs for new stores, workshops and administrative offices have been completed and some are at the tendering stage.

33

Kandy and Matara RSCs are virtually fully staffed, but this is not yet the case at Anuradhapura. Security problems prevent access to some districts of the RSCs.

Ongoing activities include:

- Extensive and continuous training, both on-the-job and through seminars and instruction by visiting specialists;
- Design and implementation of O & M procedures specific to each task or scheme, and the preparation of preventive maintenance schedules;
- Introduction of reporting and monitoring methods;
- Problem solving at existing works, particularly at Ambatale (Colombo);
- Organizing and operating pilot projects;
- Establishing laboratories, training in chemical, physical and bacteriological testing procedures and production of standard testing manuals;
- Studies of optimum staffing levels.

Some, but not all laboratory and workshop equipment being supplied under the contract has been delivered. There have been considerable delays in the construction of buildings including laboratories and workshops both for the Regional Offices and the RSCs. Completion if this work under the capital facilities part of the project is expected by August 1989.

The O&M project consultant spends most of his time in the field indentifying problems, training and assisting operators of water treatment works and pumping stations. It is estimated that about 70% of the work covered by his contract scope of work has been completed.

The Team noted the excellent build up of on-the-job training relationships that was evident at all sites visited. However to ensure success of the program considerable follow up work will be necessary to check that all procedures are being followed and that equipment is being put to proper use.

H. Capital Facilities Management

A number of planned outputs were included under this activity, comprising the preparation of draft manuals for project preparation and design, research work on selected subjects, establishment of a Rural Sanitation Unit, a schedule for a nationwide well drilling program, and the planning design and construction of four water supply rehabilitation projects and two

new projects for demonstration purposes.

The following work has been undertaken:

- A draft manual on pre-feasibility studies for use in project planning has been prepared and is currently under review;

- Feasibility studies have been undertaken on five new supply systems; these studies are to be used in the preparation of a feasibility study manual;

- Research projects have been initiated as follows:

  - o development of plumbing standards;

  - o groundwater survey and inventory of resources;

  - o survey of consumers to investigate reasons for non-payment of water bills; and

  - o methods of tubewell rehabilitation.

- Establishment of a CSSS Unit within the NWSDB's Planning and Design department to advise on socio-environmental factors to be taken into account in project feasibility. The head of this unit has recently returned from training overseas;

- Establishment of a nationwide well drilling schedule: guidelines have been drawn up for this and have been circulated for comment;

- Proposals to assign all new projects to a single Project Director have been discussed. The intention is to improve project management procedures through the whole process of investigation, design, construction and operation;

- Preparation of draft manuals for design, tender procedures and commissioning guidelines have been prepared and circulated for comment;

- Proposals for the establishment of a cost estimating section within the Planning and Design division have been discussed and a senior engineer assigned responsibility for the work;

- recommendations for the establishment of a national groundwater authority following a technical review of the groundwater sector.

The six projects are still at the planning and design stage, feasibility reports having just been completed. The principal

reason for the delay of over nine months in this part of the project has been the NWSDB's inability to provide its own inputs of staff and equipment.

It is understood that engineering staff were assigned to the work in September 1987 - which should have commenced in 1985 - and that other work prevented their full time participation. It is also understood that work was disrupted because the necessary drilling rigs were only made available intermittently.

I. Health and Sanitation Activities

The principal planned outputs of the project's health and sanitation component were (1) the creation of a functional rural sanitation unit within the NWSDB, (2) the initiation of a community-based health education program that would be jointly managed at the field level by the MOH and NWSDB, and (3) the construction of approximately 15,000 latrines in the six areas where project-financed water schemes will be constructed or renovated. The RSU, whose name has subsequently been changed to the Community Support and Sanitation Section (CSSS), has two primary functions. At the planning and design level it is responsible for assuring that adequate concern is given to environmental health, sanitation and socio-economic factors when planning the construction of new or rehabilitated systems. At the implementation level it is responsible for working with the MOH to handle all aspects of training, local coordination and community participation.

AID-financed inputs for this project component consist of (1) two M.A. level training programmes in the U.S., (2) technical assistance, (3) research studies, and (4) partial reimbursement for latrine construction costs.

Upon review of this activity, the evaluation team found that it was being implemented in a highly satisfactory manner, generally on schedule and being carried out in a manner that was highly consistent with the original project design. A summary of accomplishments to date, includes :

- Formation and staffing of the Section in accordance with the approved staffing plan;

- One participant has completed his long-term training and returned to the Section, while the other one is currently in training in the U.S.;

- Planned coordination and cooperation between the NWSDB and the MOH is occurring on a regular basis;

- District Coordinating Committees and Local Action Committees have been formed and are actively participating in the planning and implementation of sub-project activities;

- Training has been provided to sub-project field personnel, community leaders and health volunteers in the four sub-project areas where this activity is currently in progress;

- Five socio-economic studies have been completed and are being used in planning sub-project activities;

- Construction of improved latrines began in mid-1987 and by the end of February 1988 a total of 1,016 had been completed, with an additional 3,688 at various stages of completion.

During the course of the evaluation, team members visited two of the four sub-project areas and were highly impressed by (1) the overall quality of the latrines being constructed, (2) the level of community participation and involvement, and (3) the enthusiasm displayed by the volunteer health workers and their degree of acceptance by the local participants. The team also noted some preliminary evidence that the work being performed by the volunteers may lead to a greater demand for other types of health services. Those cited were immunization and improved maternal health care.

Several implementation problems were also noted by the team, but it was generally felt that this activity would achieve most, if not all, of its major objectives by the planned project completion date. The problems noted included :

- The need for improved reimbursement procedures for reimbursing program participants for latrine construction costs.

- That the delay in implementation of the accompanying water systems was beginning to cause a certain loss of interest among the programme participants. It is also delaying the initiation of planned local income generating projects.

- That program activities in the Ahangama sub-project area had been postponed, apparently due to the lack of adequate GSL funding.

J. Technical Assistance and Support

The principal technical assistance contractor is ESI who have sub-contracted to Ernst and Whinney, Chartered Accountants, and to Resource Development Consultants, who have been providing engineering and other staff.

After some initial problems in implementing the Project, resulting in staff replacements, ESI performance has been of a uniformly high professional standard, acknowledged as such by USAID, NWSDB, MLGHC and the donor community generally. That this has been

achieved is due in large part to the establishment of trust and mutual respect following such an unpromising beginning. For this, as in most such cases, good personal relationships between individuals in all the various groups have proved essential for success.

The ESI contract runs until August, 1988 so that only five months remain. By that time it is estimated that because of the initial project delays the work will be about 75% complete, although the figure will vary between tasks. A list of these tasks is given in Appendix VII, which shows that continuing technical assistance is needed for commercial operations, accounting systems installation, strategic planning and further decentralization of NWSDB operations. Short term assistance will still be required for training in all areas, operations and maintenance and in health related activities. It is estimated that for the successful completion of the project a further 54 man-months of US technical assistance will be necessary with a commensurate level of local input through sub-contracts, and that the assistance will be needed over a period of 18 months following completion of the present contract period.

This project has also provided intermittent technical assistance from the centrally funded AID/WASH project. This has included an initial pre-implementation workshop in April 1985, a series of three senior management training programs during 1986 and 1987 and two annual monitoring workshops in 1986 and 1987. The training program is considered to have been very successful in providing a better understanding of goals and objectives, in highlighting failures and advocating action. The monitoring reports are thorough and detailed and contain recommendations for action which are, as the presence of similar recommendations in this evaluation report would indicate, not always implemented. The acceptance and success of the WASH program also has its origins in the personal relationships developed over the years, and the general attitudes and approaches of the individuals concerned which has generated harmony and cooperation.

VI. Conclusions and Recommendations

A. Conclusions

1. Despite serious initial problems, the institutional development aspects of the project have recently begun to progress in a very satisfactory manner and the momentum in this area appears to be increasing. Interviews with a wide range of NWSDB staff and other concerned individuals strongly indicated that the project's institutional strengthening activities are being recognized as extremely useful and beneficial. The almost total unanimity of these views, together with documented progress in such areas as improved billing time, improved rates of collections and improved customer relations is highly indicative of the progress

noted. We also believe that further improvements will continue as other new systems and procedures are developed, and as additional staff receive more training. However, past history leads us to believe that institution building is a slow and lengthy process, and is seldom fully achieved within the period of a normal AID project.

2. The concept of decentralization appears to have been fully accepted within most parts of the NWSDB and higher levels of the GSL, and is operating effectively in those regions where it has been implemented. Although it has only been operational for a relatively short period of time, important progress has already been demonstrated in such areas as systems operation and maintenance and in increased collection of water fees. The Matara region is a prime example, where collections during the past six months have almost doubled over prior periods.

3. The village health and sanitation program being carried out between the NWSDB and the MOH appears to be very well received and operating effectively. The quality of the latrines being constructed is extremely high in comparison to similar programs observed by the team leader in other countries (Philippines, Yemen and Liberia). However, the delay in the construction/rehabilitation of the accompanying water systems is beginning to raise a certain degree of apprehension at the local level about the GSL's commitment to their completion.

4. The quality of assistance being provided by ESI is of a high standard and is generally being well received at all levels within the NWSDB. They have generated a lot of useful policies/ideas/concepts, although many still require approval of the government before implementation. However, recent project history indicates that these last steps are often the most difficult to achieve and not always attainable. The personnel management issues are a prime example of this point.

5. The evaluation team also feels that the management training and annual monitoring services provided by the WASH Project have proved extremely beneficial. The management training appears to have been particularly useful in building a common understanding of the project and its objectives throughout the NWSDB organization. The annual monitoring program is an effective mechanism for focusing NWSDB attention on objectives still to be achieved.

6. Financial Viability

The present financial position of the NWSDB has two main causes :

- the failure of the tariff structure to reflect the economic cost of supply and so generate sufficient revenue; and

- the failure, and in some cases inability to collect revenue in a timely manner.

There are numerous related causes but all stem ultimately from these two.

The question of tariffs is predominantly a matter of GSL policy and therefore outside the control of the NWSDB; the failure or inability to collect revenue is mainly (but not exclusively) a question of the NWSDB's own commercial practices.

The National Water Supply and Sewerage Board Law No. 2 of 1974 makes the NWSDB the sole authority responsible for water and sewerage throughout the country, and provides it with power to recover charges for its services. The Finance Act No. 38 of 1971 applies to the financial control and accounts of the NWSDB and requires that over any five year period revenue shall be sufficient to maintain a surplus on the revenue account.

Section 12 of the first quoted Law however gives the Minister power to direct the NWSDB on any matter which appears to him to be in the national interest. Section 17 of the second quoted Act gives the NWSDB the right to claim a subsidy from the GSL if, due to such a direction, the NWSDB cannot meet the requirement that it maintain a surplus.

It is the view of the Team that application of the law as it stands is not conducive to the effective management of water supply and related services, and that changes are needed in order to limit or make more specific the circumstances in which the GSL may intervene in the NWSDB's affairs.

7. In spite of the substantial progress that occurred to date, the team is concerned over the slow rate at which the project's in-house training capacity is being institutionalized within the NWSDB. Much of the progress to date has been the result of substantial levels of externally provided assistance and a number of key training positions remain vacant. The planned renovation of the NWSDB's training center has not been undertaken, which has resulted in less than optimum training conditions and the under-utilization of project provided equipment.

It also appears that a number of modifications have been made to the agreed training approach to accommodate existing staff shortages. These modifications have not been adequately documented and creates a situation that makes it difficult to determine exactly what staffing levels are necessary to provide for NWSDB's long-term training requirements.

8. The delay in the construction/rehabilitation of six planned water systems appears to be closely linked to the inability

and/or unwillingness of the NWSDB's Planning Section to provide sufficient resources to process these schemes in a timely manner.

9. The absence of a forward-looking, national plan arises in part through a failure to be more specific about what, in physical terms, should be planned, the planning period, the responsible persons or departments, and whether such planning should encompass the whole sector or only that part under the NWSDB's jurisdiction. Other factors of importance are the GSL's control over the NWSDB's fiscal process, and random decisions by GSL as to which projects or which areas should receive priority. Under these circumstances planning becomes virtually impossible. The team is satisfied however that there is a growing realization, at all levels, of the need for change and that, with continued insistence by the NWSDB upon its new policies and procedures being followed.

10. The evaluation team seriously questions the need for ESI to continue to provide USAID with a monthly progress report. The existing quarterly report would appear more than adequate to meet USAID's management requirements.

B. Recommendations

1. Extension of selected technical assistance efforts in certain areas of the project to ensure (1) the continued progress on institutional development that has been accomplished to date, and (2) the completion of other important tasks that will not be completed by the end of the current TA contract period. This extension is required for both U.S. and Sri Lankan consultants and should be focussed primarily in the areas of (1) commercial operations, (2) strategic planning, and (3) the further decentralization of NWSDB operations. There is also a shorter-term requirement for continued assistance in training, operations and maintenance, and environmental health activities. A list of the specific tasks to be accomplished during the proposed extension period is included in Appendix VII. The scope of work for the proposed contract extension should require the development of a carefully phased program to gradually transfer full responsibility for all project activities to the NWSDB staff prior to the end of the extension, and this plan should be monitored closely by USAID. (Action: USAID and NWSDB)

2. The annual project monitoring function performed by the WASH should be continued until 1989 review. In addition to the activities normally monitored, the scope of this annual review should be broadened to include an indepth review of the technical assistance and training still required to ensure achievement of all planned project objectives. (Action: USAID and NWSDB)

3. Additional overseas training should be provided under the project to further strengthen the commercial and financial planning capabilities of the NWSDB. Such training should be in the area of graduate training in economics or in a M.B.A. program. Shorter-term training at such institutions as the Asian Institute of Management or other regional institutions with programs in financial management and planning would also be appropriate. Arrangements should also be made with the IBRD to send several persons to their EDI program. This training is needed to accelerate the rate at which the NWSDB needs to transform itself into a commercially oriented program, rather than as a government department. (Action: USAID and NWSDB)

4. The current Project Assistance Completion Date (PACD) of August 31, 1989 should be extended by as much as one year. This action is needed to offset delays that occurred early in the life of the project as the result of problems that have now been largely corrected. This action is also required to accommodate the proposed extension of certain technical assistance services and the additional training recommended above. (Action: USAID)

5. The NWSDB should initiate the formulation of a long-term master plan, covering a twenty year period, in which the annual demand for water and water related services (sanitation and sewerage) is assessed. This data should be translated into a strategic plan in which the annual economic, financial, managerial and commercial resources necessary for designing, constructing, operating and maintaining the supplies and services are stated. The plan should be continually updated, amended and revised as necessary to meet changing conditions always maintaining a 20 year horizon. The plan should be fully computerized using program budgeting or other similar techniques. The NWSDB should be responsible for the development of the plan, in compliance with the provisions of the Act that established NWSDB. This does not require the NWSDB to be responsible for the design, construction or operation of all projects, but only that it ensures that the work is carried out in accordance with the plan and other associated criteria. (Action: NWSDB and ESI)

6. The outstanding debt of the NWSDB should be converted to equity capital to be held by the GSL, since the NWSDB will not be able to meet its debt servicing obligations in the foreseeable future. (Action: GSL)

7. To the extent that NWSDB improves its revenue collections within agreed supply areas to the levels set by agreed performance indicators and takes steps to reduce its operating costs, the GSL should underwrite or otherwise reimburse the NWSDB to revenues lost through Local Authorities who are more than three months in default in the

payment for water. (Action: NWSDB and GSL)

8. In view of the restrictive nature of the present tariff system and its de-stabilizing effect on the NWSDB's financial position it is recommended that:

   - The NWSDB establish its tariffs so that revenues are adequate to recover the economic cost of supply. (Action: GSL and NWSDB)

   - The GSL, in consultation with the NWSDB, determine the consumer categories or areas where it will be necessary to provide free or subsidized supplies of water. The NWSDB would meter such consumers or areas separately and bill GSL at the economic cost. (Action: GSL and NWSDB)

   - That all other consumer categories in all areas pay for all measure consumption at the economic cost. (Action: GSL)

   - The National Water Supply and Drainage Act should be amended to reflect the changes contained in Recommendation No. 8, and that the power of the Minister under Section 12 of the Act be limited to specific circumstances which should be clearly defined. (Action: GSL)

   - Further capital investments in water supply should undertaken only if proposed projects are able to demonstrate that their cash receipts are able to meet their cash disbursements for a period of at least ten years. (Action: GSL and NWSDB)

9. NWSDB and ESI should re-examine its current training approach in relationship to its current training organization to determine if the NWSDB can continue to meet the Board's long-term training requirements after project assistance has been terminated. If not, the approach should be modified accordingly and action should be intensified to recruit additional staff if they are required. Any modifications to the approach and training organization should be carefully documented. (Action: NWSDB and ESI)

10. The requirement for ESI to prepare a monthly progress report should be discounted. However, ESI should include more information on performance indicators in their quarterly report on a regular basis, and these indicators should be more closely related to planned achievements. (Action : USAID and ESI)

11. The project should be continued as currently designed, with exception to the modifications suggested in Recommendation No. 9.

VII. Effectiveness of Project in Addressing AID Policy Objectives

The project has made substantial progress, albeit in varying degrees, in addressing each of the AID's four major policy objectives; i.e., institution building, policy dialogue, technology transfer and greater private sector involvement. The greatest progress has been in the first three areas noted above, with a somewhat lesser degree of progress being made in the private sector area. The degree to which each of these four policy objectives have been addressed is discussed as follows:

A. Institutional Development

The major objective of this project is institutional development and consists of a comprehensive mix of "software" and "hardware" focussed primarily on strengthening NWSDB's capabilities in all aspects of its operations. The evaluation found that substantial progress was being made in virtually every area of the NWSDB organization, with particular success being achieved in:

- a reorganized institutional structure that has decentralized its operations, with a resultant increase in the efficiency of its operations. Particular progress was noted in its commercial operations, operations and maintenance, and improved customer relations.
- Increased quantity and quality of senior management and technical staff;
- The creation and staffing of new organizational units with responsibilities for environmental health and public relations/consumer education.
- A growing in-house capacity to address the training needs of the organization.

B. Policy Dialogue

An important objective in the project's institutional development is the creation of capacity to carry out policy research and to develop the necessary framework in which policy issues can be addressed and resolved. The Team noted a growing capacity within NWSDB to achieve this objective, demonstrated by progress in such important issues as (1)institutional rationalization/coordination, (2) central vs. local administration (decentralization), (3) institutional autonomy, (4) investment priorities, and (5) cost recovery.

C. Technology Transfer:

Approximately 40% of the AID project support (U.S. $5.0 million) is focussed on technical assistance and training. These two primary methods of technology transfer affect virtually every

aspect of the project; including such important areas as improved water quality surveillance, sanitation and health. Within each of these areas, new and improved technologies are being developed, field-tested and implemented through improved systems, procedures and enhanced equipment capabilities. All these contain a strong training element for the application of the new technologies/systems. The project also contains a research component to determine ways of improving existing technologies and/or improved methods of application within the local context.

D. Private Sector Promotion

In Sri Lanka, as is the case with most countries, water is treated as a public utility. However, within this context the NWSDB has undertaken several initiatives to increase private sector involvement. The first, which is the part of a major staff reduction plan within the organization, transfers greater responsibility for the construction/ rehabilitation of water schemes from the NWSDB to the private sector. Instead of performing this type of work with its own staff, the NWSDB will place greater emphasis on the use of private contractors. The second major initiative involves the transfer of NWSDB's current water supply responsibilities in the Colombo Municipality to a private company. A preliminary proposal for such action is currently under review and a scope of work for a feasibility study is under preparation.

VIII. Lessons Learned

The project encountered major implementation problems shortly after it was initiated and little progress was made during the first year or so of the project. In retrospect, it appears that the problem was caused by (1) the rigid, "by-the-book" approach utilized by the Boards top management and the contract technical assistance team in attempting to implement the project, and (2) in their failure to understand and/or recognize the organizational culture of the NWSDB. Lacking any attempt at coalition-building, the NWSDB staff perceived the rapid and somewhat radical approach being proposed by the project as threatening to their status and security within the organization. As a result, they became uncooperative and began placing obstacles in the way of project implementation.

The problem was ultimately resolved by (1) replacing the Board's Chairman and General Manager and key members of the technical assistance team, (2) altering the project's approach to implementation, and (3) developing processes and systems by which adequate coalition-building for the project's objectives could be undertaken. Specifically, these steps included:

- The development of a step by step approach to installing planned project interventions. Instead of attempting to introduce all interventions simultaneously throughout

the project, an approach was taken whereby an intervention or change was taken in one specific area, tested and the improvements were recognized before undertaking further replication throughout the system.

- The creation of the Management Cell, which provided an organizational mechanism for including a greater number of senior project management in the decision making process.

- The development of a Senior Management training program, which was conducted in three phases over a period of approximately one year, for the purpose of (1) organizational development, (2) bringing about greater understanding of the project by top management and senior staff, and (3) building the necessary organizational coalitions to achieve the project objectives.

- The use of the annual project monitoring and review workshops as a forum where organizational tensions caused by the project could be identified, fully discussed in a non-threatening manner and agreements reached on methods to resolve outstanding problems.

The Evaluation Team feels that the above actions have been highly effective in resolving what was a major obstacle to successful project implementation.

APPENDICES

I. Logical Framework Matrix

II. Evaluation Scope of Work

III. Principal Contacts

IV. Documents Consulted

V. Tables and Figures

VI. Evaluation Matrix

VII. Continued Technical Assistance Requirements

VIII. NWSDB Organizational Charts (Selected Departments)

ANNEX B
PROJECT DESIGN SUMMARY
LOGFRAME MATRIX

Life of project: FY 84 thru FY 89
Total U.S. funding 12.3 million
Date prepared: July 20 1984

Project name & number: Water Supply and Sanitation Sector 383-0088

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Goal: To improve the health and wellbeing of all of the people of Sri Lanka	Measures of final achievement: 1. Increased number of people served by safe and reliable water supply system. 2. Increased number of people served by adequate sanitation facilities. 3. Reduced incidence of value-related morbidity and mortality in Sri Lanka	1. Housing funding and statistics data 2. GSL and other donor health and water supply and sanitation sector assessments. 3. MOH morbidity and mortality reports and data	1. Continued political viability and economic growth 2. Continued favorable GSL policies and resource commitments to carry out ? plan on a timely basis 3. Other donor and community contributions received as required toward ? plan achievement. 4. Effective preventive health programs being implemented by GSL and other donor organizations.
Project purpose: To develop the institutional capability to provide safe and reliable water supply and sanitation facilities and to educate the public in health and sanitation	Measures of purpose achievement (?): 1. Better functioning NWSDB through organizational consolidation, decentralization and increased operations and maintenance priority. 2. Established units, policies and upgrading procedures for NWSDB business management, planning, public relations, commercial, personnel, training, capital facilities management, operations and maintenance, information management, research and administrative areas. 3. More effective NWSDB operations through better trained and motivated staff and improved facilities, equipment and logistical support. 4. More effective public health outreach through better trained peripheral health workers as facilitators of community health. 5. Active integrated NWSDB water supply construction/rehabilitation and MOH community health education and latrine construction programs in most regions of the country.	1. Project monitoring and evaluation reports. 2. Project and GSL records, including indicator reports 3. GSL planning documents and progress reports 4. Site visits, observations and interviews 5. Project and other donor documents and studies	1. GSL, NGO(?) and community groups have and continue to make available sufficient resources to implement sector programs on a timely basis. 2. GSL, NGO and community groups are able to retain qualified, trained personnel. 3. Trained personnel apply their newly acquired skills

APPENDIX 1

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs: 1. Consolidated, decentralized NWSDB placing increased emphasis on supply system O&M. 2. Functional NWSDB units in each of the following areas: a. Management-strategic planning, policy making, public relations, managemenet information systems. b. Commerical bugeting, accounting, financial planning, billing and collection, supplies and stores, tenders and contacts, fixed asset inventory. c. Human Resources Development - training systems development, skills training, personnel administration. d. Capital Facilities Management-facilities planning, design, construction and rehabilitation. 3. A functioning Rural Sanitation Unit in the NWSDB. 4. ? ? ? ? ? ? ? ?	Magnitude of Outpits: 1. New or rennovited office, training, laboratory, workshop, workman and staff housing facilities with equipment, supplies and logistical support at teh NWSDB Central Office, and 3 Regional Support Centers and 5 regional offices located throughout the country. 2a. Established, tested operating plans, procedires and manuals for wach area of NWSDB operations. 2b. Trained and motivated staff in all NWSDB units (? 3000 permanent staff). 2c. 2 long-term trainees, 34 short term overseas trainers, 15 in-country workshops. 2d. 5 technical research studies completed. 3a. RSU at NWSDB Central Office. 3b. Regional Sanitation teams in the field. 4a. Two new watrsupply systems construction subprojects 4b. Four water supply system rehabilitation subprojects 4c. ? 15,000 latrines constructed in 6 subproject areas. 4d. Intensive health education including delivered to 6 subproject areas. 4e. 3 socioeconomic research studies completed	1. GSL planning and investment documents 2. NWSDB MIS Reports. 3. NWSDB training reports; trainer reports and interviews and degrees/certificates awarded 4. NWSDB manuals and office records. 5. Planning, feasibility and design reports and contract documents. 6. Project files and quarterly, semi-annual and annual implementation progress reports. 7. Contractor consultant reports. 8. Project studies, evaluations, and monitoring reports. 9. Site visits and inspections. 10. Technical and socio-economic studies	1. Timing and quality of inputs to specifications 2. NWSDB/MOH abot to recruit required qualified personnel.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS

Inputs:

Magnitude/Source of Inputs (000s):

	AID Grant	AID Loan	AID Total	GSL Total	Project Total
1. Technical assistance	3,810	-	3,810	-	3,810
2. Training	85	345	410	25	455
3. Research studies	55	-	55	-	55
4. ?	-	1,285	1,285	1,085	2,470(?)
5. Facilities (?)	-	1,340	1,340	1,085	2,425
6. Construction	-	1,340	1,340	475	?
7. Rehabilitation (?)	-	600	600	400	1,000
8. Recurrent costs (?)	-	-	-	?	?
9. Inflation (?)	?	?	?	?	?
10. Contingency	390	520	930	440	1,370
Totals	5,000	7,300	12,300	7,100	19,400

1. NWSDB budgets
2. Project records and reports.
3. Project audits

1. NWSDB budgets forthcoming as planned
2. Suitable consultants available.

Scope of Work

Water Supply & Sanitation Sector Mid-Term Evaluation

PROJECT TITLE; WATER SUPPLY AND SANITATION SECTOR (WS&SS)

PROJECT NUMBER: 383-0088

PROJECT DATES:

a. First Project Agreement.....AUG 24, 1984
b. Final Obligation..... FY 86
c. Project Activity Completion Date...Aug 31, 1989

PROJECT FUNDING:

a. AID Authorized Grant..... $5,000,000
b. AID Authorized Loan.....$7,300,000
c. Host Country.....$7,300,000

I. ACTIVITY TO BE EVALUATED

The project's purpose is two-fold: (a) to develop and improve the institutional capabilities of the National Water Supply and Drainage Board (NWSDB) to plan, design, rehabilitate/construct, operate and maintain water and sanitation systems throughout Sri Lanka; and (b) to develop and improve national health education, rural sanitation services and community participation in water supply and sanitation.

To achieve the purpose of this project by the PACD the combined activities in the project are expected to result in the following conditions:

a. A better functioning NWSDB through reorganizational consolidation, decentralization and increased operation and maintenance priorities.

b. Establish units, policies and operating procedures for NWSDB business management, planning, public relations, commercial, personnel, training, capital facilities management, operations and maintenance, information management, research and administrative areas.

c. More effective NWSDB operations through better trained and motivated staff and improved facilities, equipment and logistical support.

d. More effective public health outreach through better trained peripheral health workers as facilitators of community health.

e. Active, integrated NWSDB water supply construction/rehabilitation and Ministry of Health (MOH) community health and latrine construction programs in up to six regions of the country.

II. PURPOSE OF EVALUATION

The primary purpose of this mid-term evaluation is to determine the following:

* Summary of progress to date in each of the critical areas of NWSDB institutional development, NWSDB/MOH/NGO coordination and community health education.

* identification of major problems in achieving project goals and purposes;

* assessment of the likelihood of the project achieving its goals and purposes by the PACD;

* assessment of the project's effectiveness in addressing current AID policy objectives;

* recommendations for modification of project activities and /or implementation procedures to overcome problems or otherwise facilitate progress;

* recommendations on areas meriting special consideration;

III. BACKGROUND

The USAID Water Supply & Sanitation Sector Project is a major institutional development project being carried out for the National Water Supply & Drainage Board (NWSDB) in Sri Lanka. In accordance with USAID policy of evaluating project progress, the project is to be evaluated at mid-term and after completion, by an independent team. These evalautions are in addition to regular monitoring and evaluation undertaken by USAID through the WASH contract. The project history to date is summarized as follows:

1. Sri Lanka is a developing country in South Asia with an estimated total population in 1986 of 16 million. The bulk of the population, about 86%, live in rural areas and Government of Sri Lanka (GSL) policy is to maintain this high rural proportion through continuing development of rural services.

2. The quality of life in Sri Lanka is reasonably good when compared to other developing countries in the region. Life expectancy for males and females was 67 and 70 years respectively in 1986 compared to 59 and 58 years respectively in 1956. The national average infant mortality rate has fallen from 71/1000 live births in 1956 to about 34/1000 in 1986. However, the national average masks a large regional variation and it is estimated that 60% of all hospital admissions are connected with water-related diseases.

3. In accordance with UN Water Decade goals, Sri Lanka has established targets of providing adequate water supplies to the urban population by 1990 and the rural population by 1995. By the end of 1986 about 95% of the urban population had been provided with a piped water supply, compared to 68% in 1980. Of this provision, about 30% of the urban population are provided with house connections, the remainder rely on public standposts. In the rural sector about 30% of the population were provided with an adequate supply by the end of 1986 compared to 18% in 1980. Adequate water supply in the rural context is based on the WHO definition of piped supply or safe well. At the end of 1986 about 15% of the rural population had a piped supply, a further 15% had access to safe wells.

4 The overall provision of safe water in Sri Lanka, therefore, was about 51% of the population at the end of 1986. The bulk of the shortfall is in the rural sector. It is estimated that in order to meet the target of supplying all the rural population with an adequate supply by 1995, an additional 34000 deep wells will be required.

5. The GSL target for adequate sanitation coverages is to serve the whole population by 1990. At the end of 1986 about 65% of the urban and 39% of the rural population had adequate excreta disposal facilities, representing an overall national average provision of 43%. Adequate sanitation is defined as a flush toilet, pour flush latrine or ventilated improved pit privy. The bulk of the facilities are pour flush latrines, only 6% of the population being provided with flush toilets. There has been little change in the sanitation sector provision in recent years, with the overall provision remaining at 43% since 1980.

6 The prime organization in Sri Lanka for providing water supply facilities is the National Water Supply and Drainage Board (NWSDB). This Public Corporation was established in 1975, being formed out of the Water Supply Department of the Department of Public Works.

7. The NWSDB, with over 6000 employees, is currently responsible for over 90% of the total investment in the water/sanitation sector. The NWSDB capital budget was Rs.33 million in 1975 increasing to Rs.1321 million in 1986. Projected figures for 1987 and 1988 are Rs.1202 and Rs.1132 million respectively. Foreign exchange represents a significant proportion of the total capital budget, ranging from 36 to 68% over the period 1983 to 1988.
Public corporations account for about 50% of the total GSL capital expenditure. The NWSDB accounts for about 6% of the total expenditure on Public Corporations and almost 3% of the total GSL capital expenditure.

8. The NWSDB is currently responsible for 250 out of 397 piped water supply schemes in Sri Lanka, compared to only 96 schemes in 1981. Of the total population of 3.4 million currently served with piped water, the NWSDB serves 80%. In the groundwater area the NWSDB had constructed 3744 deep wells with handpumps by July 1987, compared to 1560 at December 1984. In addition, the NWSDB has directly coordinated a further 4000 deep wells and handpumps constructed under foreign-funded programs . The NWSDB target is to construct 20000 deep wells by 1995.

9. With the transition from Government Department to a Public Corporation, the role of the NWSDB changed substantially. As a Department, the main responsibilities were planning, design and construction of water supply schemes. As a Corporation, with the major role in Sri Lanka for providing water supply services the main responsibilities of the NWSDB are operations and maintenance, billing and collection.

In support of these main responsibilities are a whole range of functions such as training; audit; supplies; stores and procurement; personnel and administration; public relations; traditional functions of planning, design and construction of new and rehabilitated schemes.

10. The change from a Department to a Corporation resulted in a major change in emphasis from an organization concentrating on capital projects to an organization charged with providing operations and maintenance and commercial functions in a financially viable manner. However, this major transition could not be achieved automatically. As a Department the organization operated in a reactive management mode, responding on an ad hoc basis to the demands for new schemes from the Ministry of Local Government, Housing & Construction (MLGHC), local authorities and Members of Parliament. This management mode continued after the establishment of the Corporation with the result that the NWSDB exhibited major inadequacies, some of the more serious being:

    - o Low emphasis on operations and maintenance.
    - o No accounting/budget discipline
    - o No account taken of financial viability when selecting schemes
    - o No strategic planning
    - o No emphasis given to community considerations
    - o Continued reliance on GSL subsidies.

11. These inadequacies were recognized by GSL and the donor community generally in the early 1980's, particularly by the latter, with increasing concern for more effective utilization of foreign funds and the need to ensure that only financially viable projects were selected for funding.

12. The USAID Water Supply and Sanitation Sector Project was designed with the express goal of improving the health and well-being of the people of Sri Lanka through developing and improving the institutional capabilities of the NWSDB and through developing and improving national health education, rural sanitation services and community

participation in water supply and sanitation. In particular, the institution development component, the main purpose of the project, envisaged the achievement of three basic objectives, namely reorganizational consolidation, decentralization and increased emphasis on the proper operations of water supply and sanitation facilities.

13. The project represents the first attempt anywhere in Asia to implement a comprehensive institutional development programs in a water sector organization in a developing country. The project was designed over the period 1983/1984 by a team of USAID personnel and consultants, in consultation with NWSDB and GSL officers.

14. The project agreement was signed in 1984 and Engineering Science Inc. (ES) were selected as prime consultants to implement the project commencing in April 1985.

15. It must be recognized that despite the initial acceptance of the project by GSL/NWSDB, its design was essentially carried out under the impetus of the donor. The overall project period was reduced from the original estimate of seven down to five years, with the actual contract period of the consultants being fixed at 40 months. In order to accommodate this rapid rate of institutional development, the work programs embodied in the project design envisaged an aggressive implementation of new procedures, rapid decentralization and construction of regional facilities and demonstration sub-projects and the development of a major training department within NWSDB with a large cadre of in-house trainers.

16. A review of the project history to date shows that an institutional development cycle has evolved which is quite different from that envisaged at the project inception as embodied in the project design. 1985 was a year of adjustment, by NWSDB, USAID and ES to the reality of a situation where NWSDB officers suddenly realized that, through the project, they were to be subjected to radical organizational, attitudinal and behavioral changes. This threat to the existing order resulted, quite naturally, in resistance to such change. Development of new procedures was obstructed through delays and the training concept was completely changed to an emphasis on OTJ using NWSDB officers in a training role, assisted by a small cadre of specialized NWSDB trainers and other Sri Lankan training organizations. During 1985 the NWSDB Chairman was replaced and at the end of the year a new ES Project Manager and Deputy Project Manager were appointed.

17. In 1986 there was a beginning of project acceptance by the NWSDB officers. Mutually agreed change strategies and new procedures were developed, and major reorganizational changes such as regional decentralization were redesigned on a demonstration basis. A permanent NWSDB Chairman and GM were appointed early in the year and a gradual build up of confidence was realized.

18. 1987 has witnessed the start of change implementation. Experience learned from the decentralization/training demonstration projects have been incorporated into the overall institutional development strategies, NWSDB functional area visions have been mutually defined and performance indicators are in the process of being implemented. Basic senior management training courses have been concluded and there has been a noticeable recognition by NWSDB officers of the advantages to the organization which will result from the project. Half way through the year a new GM was appointed in the NWSDB.

19. The more significant project components which have been implemented to date can be summarized as follows:

Reorganization

- o Consolidation of project (Greater Colombo) and non-project areas
- o Establish of three RSC's and five RO's
- o Major restructuring of organization involving 55 staff levels and 76 officers

Structural training

- o Executive management retreat
- o Senior management training courses
- o Middle management training courses
- o OIC training (field based OJT)
- o Training of trainers
- o Formal courses (over 4000 training man days/quarter in first half of 1987 compared to 820 in 1985)
- o Two Masters Degree candidates undergoing training in public health at the University of Hawaii

Integrated training

- Day-to-day coaching and facilitating by consultants
- Annual WASH monitoring/evaluation
- Task force activities (cost containment, vehicle allocation, job descriptions, personnel procedures, commissioning procedures, etc.)

Decentralization

- Regional offices
- Decentralized computerized billing and collecting in six unit offices in Greater Colombo
- Delegation of financial and personnel/administration authority

  Design, prequalification of contractors and issue of tender documents for construction of regional facilities to a total value of about US$ 2.4 million. Offices, stores, workshops, laboratories, staff quarters)

- Provision of commodities primarily for regional offices (workshops, laboratories, training equipment) to a value of about US$ 1.5 million overseas and US$0.5 million in-country.

Demonstration Projects

- Feasibility studies for four rehabilitation sub-projects involving water supply upgrading, latrine construction and health education. (over 2000 latrines under construction, 209 health volunteers trained, 126 health volunteers under training)
- Operations and maintenance upgrading and staff reductions in Southern and Central Regions (average 25-30% staff reduction planned in plant operating personnel)
- Computerization of stores inventory at Head Office and Southern Region

- Computerized in-house billing and collection in Greater Colombo (billing lag time reduced from 6 months to 30 days in four units and 10 days in one unit)

- Water quality monitoring in the regions coordinated through a revamped Central Laboratory (163 bacteriological analyses/months during 1987 compared to almost zero in 1985. Faecally contaminated treated water samples reduced from 25% in 1986 to 5% in 1987).

Donor Coordination

- Project prioritization procedures coordinated with ADB

- Financial recovery strategy adopted by IDA

- Collection of local authority arrears coordinated through Urban Programme unit (IDA-funded)

- Organization strengthening assisted by IDA/ADB through provision of local consultants

- Organization of foreign donor coordination meeting (agenda items, include project prioritization, financial viability, design criteria, equipment standardization , community participation)

Private Sector involvement

- Facilities and water supply sub-project construction will be by private contractors

- NWSDB commitment to gradual reduction of direct labor contracts (average cost over-run 100%)

- Poor supervision of private contractors can reverse privatization advantages (25% of IDA crash metering programs had to be rectified)

Strategic Planning

Evolution from GSL directives in 1985 through Strategic Planning Committees with MLGHC involvement in 1986 to current Management Cell with consultant advisors. Policies developed include project prioritization, local authority agreements, financial recovery, amendments to the Board Act, groundwater management, etc.

Increasing NWSDB Autonomy

- Personnel procedures
- Management Cell
- Project prioritization based on financial viability
- Financial plan
- Regional decentralization
- In-house public relations unit (complaints reduced from 10% to less than 4% connections)
- MLGHC weekly Monitoring meeting attendance reduced from 80 to 5.

Financial

- Financial plan developed and accepted by other donors (earlier IDA financial plan rejected)
- Cost reduction strategy approved (dual electricity tariff, staff cost reduction of 30% by end 1988)
- Collections increased from 31% operating expenses in 1984 to 72% in 1986 (projected 100% in 1988 compared to target of 82% by 1995 in original project design)
- Budgetary procedures implemented (for 1988 revenue budget) based on demonstrated technical needs.

Management

- o Increased commitment to institutional development
- o Establishment of goals for each functional area
- o Development of performances indicators
- o Collaborative work organization introduced
- o Improved basic management competence (meetings, time management, responsibility/delegation)
- o Beginning of transition from a personal to a corporate agenda

20. Perhaps a unique element of the project is the degree of formal monitoring and evaluation which has taken place. In addition to the regular monthly progress reports prepared by ES, annual evaluations have been conducted by WASH consultants in June 1986 and June 1987, together with more training/management - competence related evaluations carried out in conjunction with the Senior Management Training Courses in September 1986, April 1987 and September 1987. A USAID - confidential evaluation was also carried out by Mr. Gardiner at the end of 1986. These documents provide an invaluable reference sources on the development of the project to date.

21. The project is now entering the critical implementation phase where new procedures and policies, some of which have been tested in demonstration projects, are to be put in place throughout the organization. There will inevitably be modifications required in some areas and intensive coaching will be necessary to maintain the momentum of change, particularly for sensitive areas such as cost reduction and employee evaluation. In addition, there is an ever-present need for continual on-the-job training and facilitating in a number of areas, primarily strategic planning and policy formulation, financial management, upgrading management effectiveness generally, and operations and maintenance.

22. A new development which was agreed with MLGHC early November is the further reorganization/decentralization of NWSDB to establish a separate organization for Greater Colombo as a subsidiary company. This marks a major move towards privatization and is in accordance with GSL devolution policy. Continuing consultant assistance will be essential to develop and implement this development, which will also serve as a demonstration model for extending the concept to NWSDB regional organizations at a later date.

23. The institutional development of the NWSDB involves the implementation of some policies which are at variance with local practice, these relate not only to financial management (cost control, increased revenue generation, project viability criteria), but also to sensitive personnel matters (evaluation , performance accountability, management effectiveness) and to broader sectorial issues (community involvement, urban/rural subsidies, priority development areas, O&M efficiency). As noted earlier in relation to setting up a subsidiary company for Greater Colombo, the reorganization is still evolving and active consultant assistance will be required to assure the success of such changes.
The consultants are now acting as change agents, having gained the confidence of MLGHC/NWSDB officers, and in the atmosphere of mutual cooperation the project is progressing. In addition, members of the consultants' team are also involved in high level MLGHC and donor policy/implementation committees, and are thereby able to provide feedback on GSL/donor priorities to the project, and to highlight achievements and problems of the NWSDB institutional development project to MLGHC/donors. It will be some time yet before the NWSDB will be in a position to totally take over the upgraded organization and manage it successfully so as to withstand the varied pressures to revert to traditional ways. Once the new policies and procedures have been seen to work and are accepted as standard practice, the project will be completed.

IV. STATEMENT OF WORK

The evaluation should answer the following questions, ennumerating clearly conclusions and the evidence on which the conclusions are based.

A. Has the institutional capability of the NWSDB to provide reliable sources of potable water to the people of Sri Lanka been strengthened?

1. Overall Organizational Structure

   a. Has the revised Table of Organization been established and key positions staffed?

   b. Have job descriptions been prepared? Have they been used to recruit quality staff?

   c. Are NWSDB units being established and staffed as planned?

   d. Is there a move towards consolidation of project and Non-Project Areas?

   e. Are improvements being made to facilitate communication and coordination?

2. Decentralization

   a. Has a special regional incentives packages been developed and put into effect?

   b. Is the number and quality of NWSDB personnel at the regional offices increasing?

   c. Once recruited and assigned to regional offices, is NWSDB able to retain staff? How can the special incentives packages be improved to increase retention?

   d. Has substantive authority been delegated to the regional office? Have regional authorities exercised the authority given to them? Is there a reduction in the number of decisions referred to the Central Office that concern regional matters?

e. Are local representatives beginning to direct more of their requests to the regional staff rather than directly to the NWSDB Chairman or General Manager?

3. Strategic Planning

a. Has a strategic plan been established and is it being followed?

4. Management Information Systems

a. What progress has been made in designing and implementing the Management Information System?

5. Supplies, Stores, Tenders and Contracts

a. Are improvements in efficiency of tender preparation and evaluation and sub-contract management occuring?

b. Has a manual for supplies and stores been developed?

c. Have the regional stores been constructed and stocked?

d. Are the regional stores continuing to function over time?

e. Are stores serving NWSDB's operations more efficiently?

6. Personnel

a. Has a personnel policy manual been developed?

b. Has a manpower plan and procedures manual been developed? Is this reviewed and revised on a regular basis using existing manpower data?

c. What percentage of persons in managerial positions have administrative/managerial backgrounds as opposed to strictly engineering backgrounds?

d. Has NWSDB reviewed salary scales and upgraded salaries or established salary supplements to be more competitive?

7. Training

a. Are training plans based on the assessment of needs?

b. Has a core curriculum been developed and put into operation? Has the current curriculum been expanded and revamped?

c. Is the size of the training staff adequate to meet the training needs of NWSDB?

d. Have trainers' skill been upgraded and are they applying new methodologies?

e. Are trained employees applying the skills they acquired during training? Has this resulted in improved job performance?

f. Has the skill certification program been developed and installed?

g. What progress has been made in building and equipping the Central training facility? What progress has been made in adding regional training space to Regional Support Centers?

8. Capital Facilities

a. Is an organized approach being taken in planning for expansion and rehabilitation of facilities?

b. Is there an increase in the number of water facilities being constructed or rehabilitated serving as on-the-job training models for NWSDB staff?

c. What progress has been made in extending coverage to the population of Sri Lanka?

9. Operations and Maintenance

a. What progress has been made in building and equipping the regional labs?

b. Is there a shift in workload occuring from the Central to the regional labs to allow the Central lab to focus more on other areas?

c. Is a preventive maintenance program established and operating?

d. Is there evidence that NWSDB is providing more reliable water service and safer water to its customers?

e. Is there a special awards program for excellence in O & M? If so, how many such awards have been given, and how are they distributed over the regions?

10. Financial Viability

a. Is NWSDB's ability to pay for its own operations increasing?

B. Have appropriate links been established among the NWSDB, the Ministry of Health, local government authorities and NGOs to support a combined effort for safe water supply and improved sanitation practices?

1. Relationship/Coordination of MOH with NWSDB

a. To what extent does collaboration between MOH and NWSDB exist at the community level?

b. Do the PHI's activities reflect an increased role in environmental health?

2. Community and Local Government Participation in the Various Aspects of Obtaining and Using Safe Water

a. What is the balance of projects emanating from the Gramodaya Mandalaya with those from higher levels of Government?

b. Is the level of participation of Municipal, Urban and District Development councils in the operations, maintenance and payment for systems increasing?

. What changes, if any, are occurring among the target beneficiaries at the community level that may be related to water and sanitation?

1. Sanitation Practices Health Changes

a. Are sanitation practices changing at the household level?

b. Is there a decrease in the incidence of water-related diseases?

2. Water-Related Income-Generating Activities

a. Since the project's provision of an improved water source have any water-related income - generating activities developed?

D. Assess the performance of each of the organizations (ie. Ministry of Local Government Housing and construction - MLGH&C), National Water Supply and Drainage Board (NWSDB), USAID, Engineering Science Inc (ES), etc. involved in implementing the project?
What have been the strengths and weaknesses of each?

a. How well have the contractors (ES and WASH) fulfilled their scope of work?

b. How well have the GSL and USAID monitored the project? Were sufficient resources devoted to monitoring?

c. Was communication between these organizations satisfactory? Did it improve after the two WASH evaluation workshops?

E. Has this been an effective and useful project?

a. Was the design or strategy appropriate for the project purpose and goal?

b. Were the assumptions specified in the logframe correct? Were there other important assumptions not identified at the time of project design?

c. What are the major problems (and strengths) in the implementation of the project? How can the performance be improved?

Are there any recommendations for any of the involved parties concerning the continued use of the assets created under the project? Are there any important lessons learned from this project that would be useful in designing or implementing a similar project in Sri Lanka or elsewhere?

V. Methodology and Procedures

The basic methodology is (1) to compare the project design (planned strategy, inputs, outputs, and purpose) with the actual implementation and accomplishment of the project, and (2) to specifically compare the institutional strengthing of the NWSDB and the community and Local Government participation in the various aspects of obtaining and using safe water with the standards agreed to under the project and with other standards the evaluator believes suitable to the situation.

In making these comparisions, the evaluator will review all major project documents and files, make site visits to examine construction, and interview key actors in the project (e.g. NWSDB and GSL officials, USAID staff, the ES contractors and the other donors). The evaluator will determine the appropriate methodologies for examining the institutional strengthening and the community and local government participation and specify the methodologies used.

All project documents and files in USAID, ES, NWSDB and WASH will be available to the evaluator. Documents relating to project design and plans include the project paper, and the project agreement. Documents related to project implementation include all other project files, monthly progress reports, project implementation letters (PILS) exchanged between USAID and GSL and the WASH monitoring and evaluation reports. This information will be supplemented by discussions and interviews with the key NWSDB, MOH and community representatives; and site visits and observations of selected NWSDB facilities and operations and sub-project target communities.

The evaluation team will work out of the hotel in Colombo, as USAID is not likely to have available office space. The NWSDB Office is located at Ratmalana, south of Colombo, and can be reached from Colombo in less than 45 minutes.

The team shall use funds provided in this budget to arrange for car rental, micro-computer rentals, office materials, report reproduction, local secretarial support, office space in Colombo, and any other miscellaneous expenses.

The evaluation is planned to include 24 work days incountry beginning on or about February 4, 1988. A period of two days will be allocated for the initial briefing and preparatory work in Washington DC.

In the evaluation report, the evaluation team will distinguish clearly among their findings (i.e., the evidence), their conclusions (i.e, interpretation and judgements) about the findings, and their recommendations. Clearly indicate the agency or office responsible for implementing recommendations.

VI. Team Composition

1. The evaluation will be conducted by a team comprising of three members. In addition, NWSDB will be invited to participate in any major interviews or discussions. However, the preparation of the mid-term evaluation report is the responsibility solely of the team leader.

2. The mid-term evaluation team will include the following expertise:

   Organizational Development/Management Specialist

   with prior experience in evaluating the institutional aspects of operations and management of public sector organizations in developing countries. In particular, an appreciation of the public sector constraints which mitigate against cost effective operations would be desirable. This individual should also have expertise in evaluation methodologies, including both representative sampling and survey techniques and rapid low cost approaches.

   Financial Management Specialist

   familiar with Local Government and public sector financial mechanisms, including revenue collections, budgeting, accounting and audit procedures. This individual will be familiar with financial planning strategies and welfare/cross subsidy policies in public sector organisations.

   Water Supply Engineer

   with extensive expertise in the design, construction and evaluation of water supply systems in developing countries, and previous experience conducting rapid reconnaisance studies of water supply services. This individual will be familiar with the Sri Lankan concerns on engineering and technical performance of water supply systems.

3. The Organizational Development/Management Specialist will be the team leader and will be responsible for coordinating inputs from other team members into a cohesive, integrated evaluation.

4. Services of the evaluation team will be required for 28 working days including travel. The team is expected to work the hours that are necessary in order to complete the evaluation within the stipulated period.

VII. Reporting Requirements

The Team Leader shall be responsible for submitting a draft evaluation report no later than 15 working days after the evaluation team has begun work. Review comments will be given to the evaluation team, within 3 working days of submission of the draft. Thirty copies of the final printed report shall be submitted to the USAID project officer prior to the departure of the team from Sri Lanka. The report shall address all questions contained in the Scope of Work and shall include but not be limited to the following sections:

1. Title page.
2. A Basic Project Identification Data sheet (outline attached attachment..)
3. An executive summary. (This section will be used for the agency's computerized record of evaluations, so must be able to stand alone as a separate document. It is limited to 3 pages, single spaced, and should contain all elements required on page 25 of the attached ANE Bureau Evaluation Guidelines.)
4. Table of contents.
5. List of Acronyms.
6. The body of the report (limited to approximately 30 pages with any especially lengthy analysis or listing of data placed in the Appendices).
7. Conclusions and Recommendations
8. Any useful appendices (including the evaluation scope of work, the logical framework with indications of any other methodology used in the evaluation and a bibiliography of written works consulted.)

All copies of the draft report shall clearly be labeled "DRAFT". The title page of the final report shall include the following disclaimer: "This report presents the independent findings and recommendations of an evaluation team. It does not necessarily represent the official views of the Government of Sri Lanka or the Agency for International Development"

A debriefing will be scheduled at USAID around the time of the submission of the draft report. A similar debriefing may also be scheduled in Ratmalana at the National Water Supply and Drainage Board.

VII. Relationships and Responsibilities

The evaluation team will report to the USAID WS&SS Project Officer and is responsible to him for completion of the evaluation activities. The AID/W Backstop Officer for the evaluation team will be the ANE/PD Officer responsible for Sri Lanka.

APPENDIX III

PRINCIPAL CONTACTS

USAID

Gary Nelson	Deputy Director, USAID/Colombo
Jan Emmert	Evaluation Officer
J.J. Pinney	Engineering Officer
J. Thanarajah	Project Manager

WASH Project

Fred Rosenweig	
Leo St. Michael	

Ministry of Local Government, Housing & Construction

M.R. Paskaralingham	Secretary
D. Jayawardena	Additional Secretary

Ministry of Health

Dr. E. Rajanathan	Deputy Director, Public Health
Dr. Herath	Director, Environmental Health

Engineering Science, Inc.

Dr. R.M. Bradley	Chief of Party
C.H. Tomasides	Financial Planning & Organizational Development Specialist
G.A. Bridger	Environmental Engr. Specialist
J.V. Dornum	Training Specialist
R.J. Peterson	Supplies & Stores Specialist
H.I. Karunadasa	Social Scientist
R. Michael	Public Relations Specialist

NWSDB

T.B. Madugalle	Chairman
A.P. Chandraratne	General Manager
S. Nagaratnam	Add. GM (O)
P.M.R. Pathiraja	PM/DGM (USAID Project)
W.D. Tissera	DGM (P&A)
G.M.O. Fernando	DGM (O&M)
Peter Lawrence	AGM (F)
P. Sathkunam	AGM (C)
Dominic Seneviratne	DGM (F)
T.M.M. Mediwaka	Commercial Manager
K. Chandrasiri	AGM (P)
S.R. Saputhanthri	AGM (A)
D.L.J. Seneviratne	DGM (F)
H. Pinidiya	AGM (P)
P.U. Gunasinghe	AGM (D)
C.J.A. Stembo	AGM (GW)
K.L.L. Premnath	AGM (CZ)
W.A. Karunaratna	AGM (W/W)
M.D.T. Perera	AGM (CSO)
W.M.P. Wijesundara	AGM (Supplies)
S. Weeraratna	AGM (Matara)
S.R.J.R. Senanayaka	AGM (Kandy
M. Wickramage	PM/DGM (ADB Project)
H.L. Premasiri	M (R&C)
M. Jayasingha	M (SS)
R.D.A. Tillekaratne	M (O&M)
M.L. Weeratunga	M (C)
Mr. Dayaratna	M (O&M)
Mr. Nissanka	M (S&S)
Mr. Balasuriya	Plan & Coordinating
A.M. Cassim	M (Ampara)
W.A.N. Weerasinghe	CSSS, Section Chief
S.M.I. Kaleel	CSSS/Health Ed.
S.M.D. Premaratne	CSSS/Soc.

OTHER

Asitha D.B. Talawatte	Ernst & Whinney
Michael J. West	Binne & Partners/Watson Hawkley Asia (3rd IBRD Water Supply Project)

APPENDIX IV

KEY DOCUMENTS CONSULTED

1. AID Project Paper-Project #383-0088
2. Grant and Loan Agreement with GSL-Project #383-0088
3. ESI Quarterly Reports (#1 through #11)
4. Project Core Document File, including Project Implementation Letters - USAID Files
5. Documents submitted by GSL to Satisfy Conditions Precedent of Grant and Loan Agreement-USAID Files
6. Memorandum of Understanding between the Ministry of Health and NWSDB, August 28, 1985
7. WASH Field Report #151-Pre-implementation Workshop, August, 1985 (Edwards and Austin)
8. Reports on First and Second Annual Project Monitoring and Review Workshop (Edwards, etal)
9. Reports on Senior Management Training Program, Phases I-III (Edwards and Salt)
10. Operations and Maintenance Efficiency Study of NWSDB, August 22, 1986 (Jordan and Cardoza)
11. An Analysis of Bulk Tariff Rates, January, 1988 (ESI)
12. A Financial Analysis of Budgeted and Proposed Capital Projects, April 1987, (ESI)
13. NWSDB 1988 Capital Budget, February 1988, NWSDB
14. Report of the Financial/Commercial Policy Task Force (Colombo), January 1987, ESI/NWSBB
15. Proposal to Improve the Financial Situation of the National Water Supply and Drainage Board Through Reducing Staff Costs, Cabinet Memorandum (Draft No.4), January 1988, NWSDB
16. Projected Financial Summary, 1988, January 1988, ESI
17. Financial Plan 1987 to 1992, July 1987, NWSDB/ESI
18. Proposed Financial Recovery Strategy, August 1987, NWSDB/ESI

19. Financial Viability Assessment of 1987 Capital Budget, 1987, (ESI)

20. Performance Indicators for Central RSC, February 1988, (NWSDB)

21. Performance Indicators for Colombo, January 1988, (NWSDB)

22. Analysis of Unaccounted-for Water, (not issued), (ESI)

23. Performance Indicators for Billing and Collection, Budget Performance and Operations Performance by Region, February 1988, (NWSDB/ESI)

24. Correspondence with MLGHC on Establishment of Strategic Planning Committee, September 1985, (NWSDB)

25. An Analysis of the Statistics and Coordination Unit, 1985, (ESI)

26. Policy Statements on:

    - Direct Labour Contracts
    - Re-organization of Groundwater Area
    - Technical Quality Control
    - Procedure for Project Implementation, 1986, (NWSDB)

27. Research Study on Consumer Attitudes to Water Supply and Related Issues - Questionnaire, March 1988, (NWSDB/ESI)

28. National Water Supply and Drainage Board Law, February 1974

29. Proposed Amendments to the National Water Supply and Drainage Board Law, 1987 (NWSDB)

30. Greater Colombo Leak Detection Study-Final Report, October 1985 (ESI et alia)

31. Operations and Systems Control of the Greater Colombo Water Supply System, January 1988, (ESI et alia)

32. Improving the Water Supply and Sewerage Service in Greater Colombo Through the Establishment of a Separate Company, Cabinet Memorandum (Draft No.4), December 1987 (MLGHC)

APPENDIX V

Table 1

Summary Cost Estimate and Financial Plan ($ 000s)

Water Supply and Sanitation Sector Project

(383-0088)

Item/Source	AID			GSL Total	Project Total
	Grant	Loan	Total		
Technical Assistance	4,810	-	4,810	-	4,810
Training	115	455	570	40	610
Commodities	-	2,235	2,235	1,560	3,795
Facilities	-	1,700	1,700	1,650	3,350
Construction/Rehabilitation	-	2,910	2,910	2,450	5,360
Research Studies	75	-	75	-	75
Recurrent Costs	-	-	-	1,600	1,600
TOTALS	5,000	7,300	12,300	7,300	19,600

APPENDIX VI

EVALUATION MATRIX

REFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL		REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*
i	ORGANISATION STRUCTURE					
a	Revised Table established					
b	Key positions staffed (%)					
c	Job description established					
d	New staff meeting job description requirement (%)					
e	New NWSDB units estblshed					
f	New NWSDB units - staff positions filled (%)					
g	Job descriptions reflect consolidation of Project and non project activities					
h	Records of project and non project activities consldtd					
i	Employee duties reflected in consolidation					
j	Business policy manual prepared and utilised					
k	Conclusions on policy changes prepared and consldtd					
l	Frequency of management meetings					

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHEDULE F: NO SUBSTANTIAL ACTION

EVALUATION MATRIX

REFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL			REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*	
2	DECENTRALISATION						
a	Incentive plan developed						
b	Offered to all new recruits						
c	Established regional positions staffed (%)						
d	Regional staff performing above average (%)						
e	Turnover rate - Inc/Dec						
f	Common reasons for leaving						
g	Authority delegated to regions						
h	Regional staff exercising new authority						
i	Trend in decisions referred to head office						
j	Local authorisations direct requests to Reg. office vs head office - trend						

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHEDULE F: NO SUBSTANTIAL ACTION

REFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL			REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*	
3	STRATEGIC PLANNING						
a	Written plan established						
b	Updated annually						
c	Actions conform to strategy and priority						
4	MANAGEMENT INFORMATION SYSTEMS						
a	# sub-systems designed						
b	# sub-systems being implemented						
c	# sub-systems generating reports						

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHEDULE F: NO SUBSTANTIAL ACTION

EVALUATION MATRIX

EFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL			REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*	
5	SUPPLIES STORES TENDERS & CONTRACTS						
a	Increased authority to Regions for tenders and sub-contracts						
b	Time for contracting decreasing						
c	Manual for supplies and stores developed						
d	Regional stores constructed						
e	Regional stores stocked						
f	Inventory records maintained						
g	Stores adequately stocked and staffed						
h	Requests filled (%)						
i	Average days to fill request						

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHEDULE F: NO SUBSTANTIAL ACTION

EVALUATION MATRIX

REFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL			REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*	
6	PERSONNEL						
a	Policy manual developed						
b	Manpower plan developed						
c	Procedural manual developed						
d	Managers' admin and managmnt background vs. engineering background (%)						
e	Salary scale established for each position						
f	Staff leaving for higher salaries (%)						

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHEDULE F: NO SUBSTANTIAL ACTION

EVALUATION MATRIX

REFER NO.	ACTIVITY OR ITEM	PLANNED		ACTUAL			REMARKS AND COMMENTS
		Unit	Date comp	Unit	Date comp	Code*	
7	TRAINING						
a	Training plans based on needs assessment						
b	Data on skill levels of employees maintained						
c	Data on actual vs required skills maintained						
d	Core curriculum developed						
e	# new courses developed in past six monthsby training						
f	Adequacy of training staff:						
(1)	Avg # trainees/trainer						
(2)	Ratio of trainers to employees						
(3)	No courses given in last six months						
(4)	Employees who have taken at least one course (%)						
g	Trainers who have attended refresher courses in last six months (%)						
h	courses for which standard training manuals have been developed (%)						
i	Training evaluation system developed						
j	Skill certification program developed						
k	Central training facility constructed and equipped						
l	Training space added to regional centers						

A: ACTION COMPLETE/FULLY UTILISED B: ACTION COMPLETE/PARTIALLY UTILISED C: ACTION COMPLETE/NOT UTILISED
D: ACTION IN PROGRESS/AHEAD OF SCHEDULE E: ACTION IN PROGRESS/ BEHIND SCHED .E F: NO SUBSTANTIAL ACTION

APPENDIX VII

USAID WATER SUPPLY & SANITATION SECTOR PROJECT

CONTINUED TECHNICAL ASSISTANCE REQUIREMENTS

A. ORGANIZATIONAL DEVELOPMENT

1. Continue decentralization towards greater autonomy in the Regional Support Centres.

2. Transfer of complete personnel, financial and audit functions to the regions, theis will involve consideable efford on procedures development and training.

3. Develop Head Office organization to support autonomous regional organizations (policy formulation, quality monitoring, sector planning, data coordination, provision of specialist services).

4. Assist in reorganizationof Greater Colombo Region towards privatization through establishment of separate company.

5. Institutionalize regular donor coordination and integrate sector investment procedures.

6. Build capacity to do policy analysis (corporate planning) through establishment of Strategic Planning Unit (gradual evolution from Management Cell).

7. Institutionalize Performance and Management Analysis Unit.

8. Implement computerized MIS procedures based on performance indicators in all functional areas.

9. Upgrade public relations/public information awareness on water sector issues.

B. FINANCIAL MANAGEMENT

1. Build capacity for budget planning and control (capital and revenue).

2. Build financial systems and in particular achieve financial viability goals in regional and Head Office operations through adaption of sound commercial policies.

3. Establish ongoing financila planning over a longer timeframe than the 5-year PIP.

4. Carry out tariff studies on a regular basis, including evaluation of national/regional/individual scheme tariffs.

C. ENGINEERING

1. Develop sector master planning capability (long range water supply needs).

2. Ensure implementation of standardised procedures in such areas as feasibility study, process design, cost estimating, commissioning, etc.

3. Upgrade capital project management (planning through commissioning).

4. Upgrade construction management capabilities (particularly direct labour works, sixth sub-project).

5. Supervise implementation of rehabilitation sub-projects.

D. OPERATIONS AND MAINTENANCE

1. Refine and ensure implementation of new O & M procedures.

2. Intensive on-the-job training in regions, particularly in area of increased staff utilization efficiency.

3. Reinforce analytical capability to achieve regular water quality monitoring with emphasis on developing water quality/process control linkages.

E. HEALTH/COMMUNITY PARTICIPATION

1. Establish regular coordination of community participation activities among foreign donors.

2. Institutionalize Community Support & Sanitation Section role, with establishment of CSSS officer in each RSC.

3. Establish monitoring system, based on sub-project experience, to evaluate health impact of increased commitment to integrated water supply/sanitation/health education approach.

F. TRAINING

This activity links all functional areas, principal discrete training tasks are:

1. Upgrade communication/coordination/conflict resolution skills in engineering areas (planning through construction).

2. Institutionalize training of trainers.

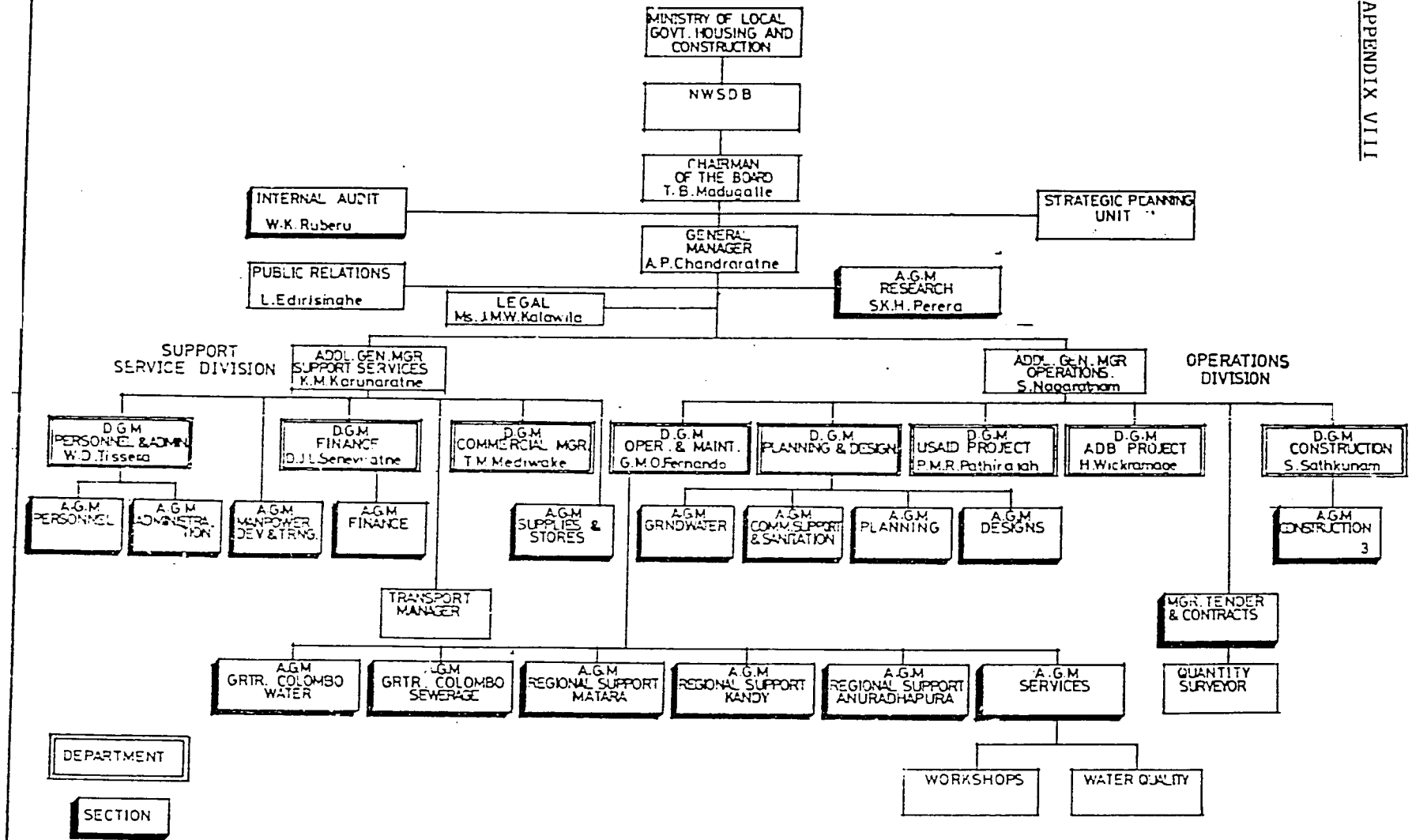
3. Performance and Management Analysis Unit.

4. Personnel/financial procedures in regions.

5. Supervisor skill upgrading.

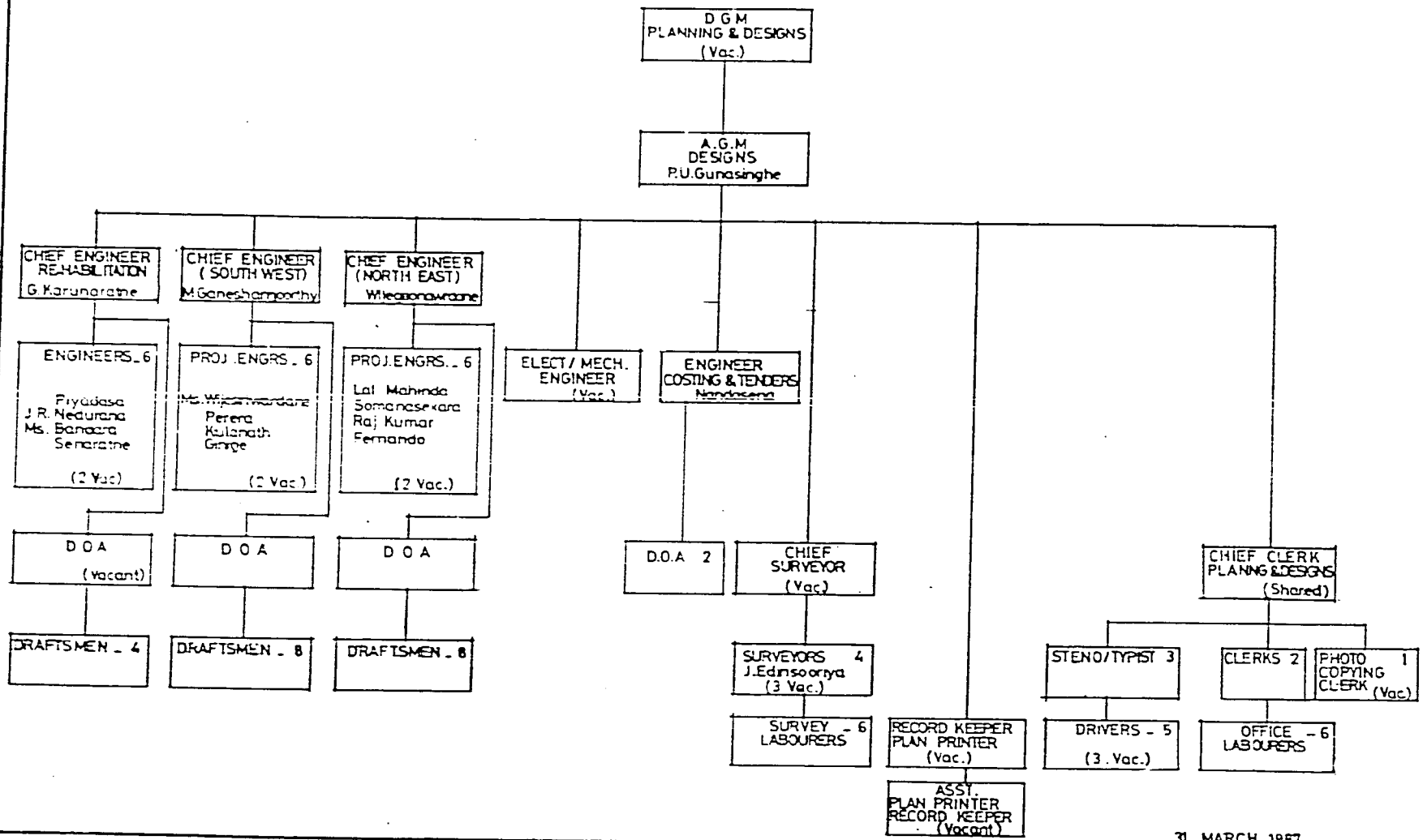
APPENDIX VIII

NATIONAL WATER SUPPLY AND DRAINAGE BOARD ORGANIZATION STRUCTURE



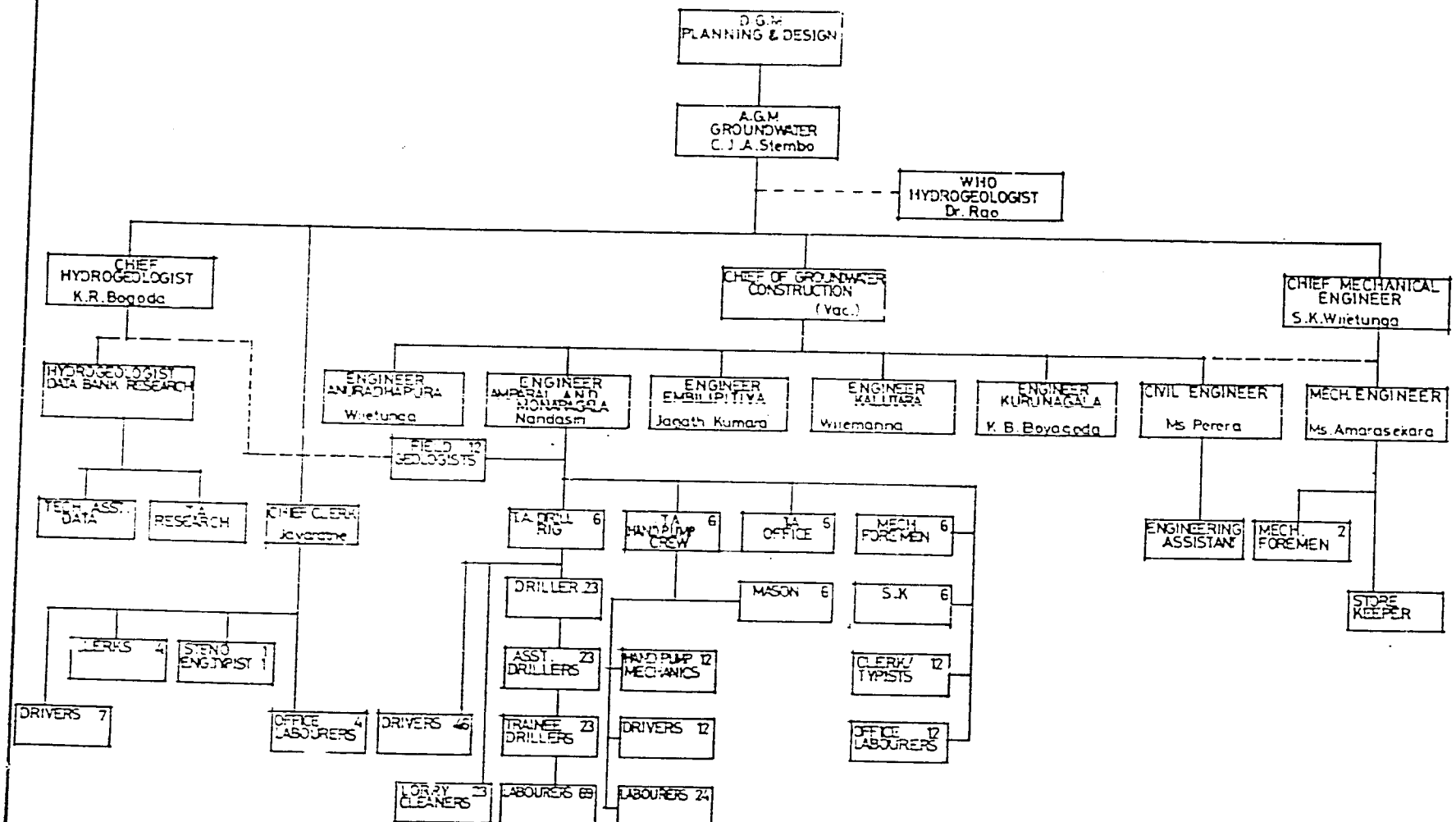
31 MARCH 198

DESIGNS SECTION



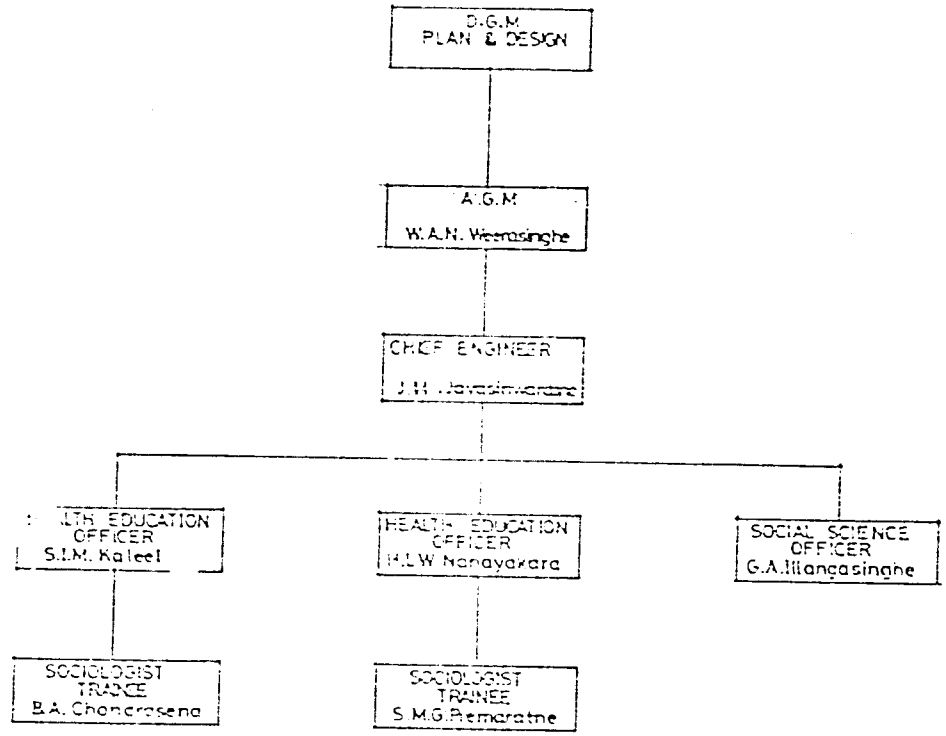
31 MARCH 1987

GROUNDWATER SECTION

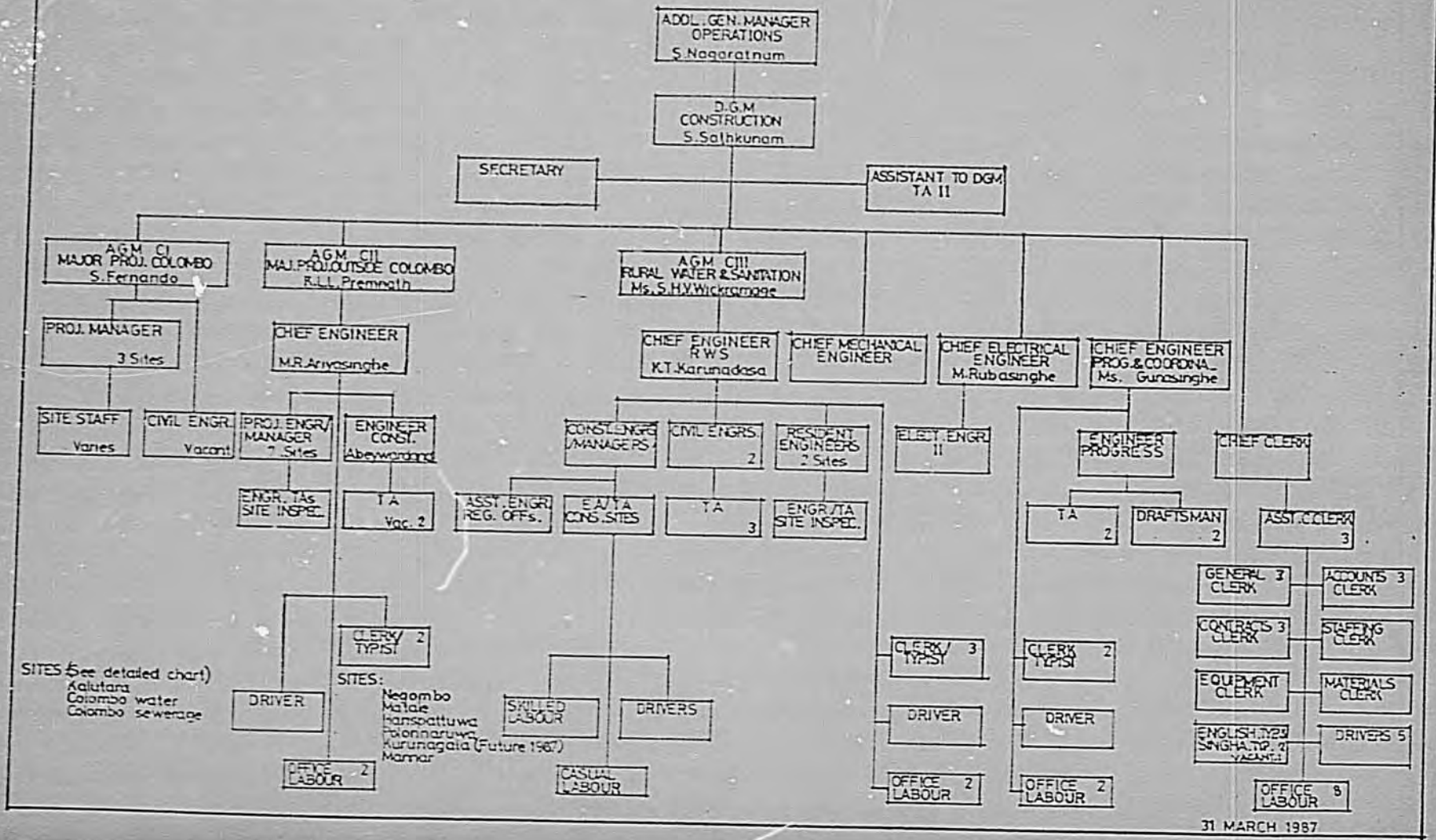


31 MARCH 1987

COMMUNITY SUPPORT AND SANITATION SECTION

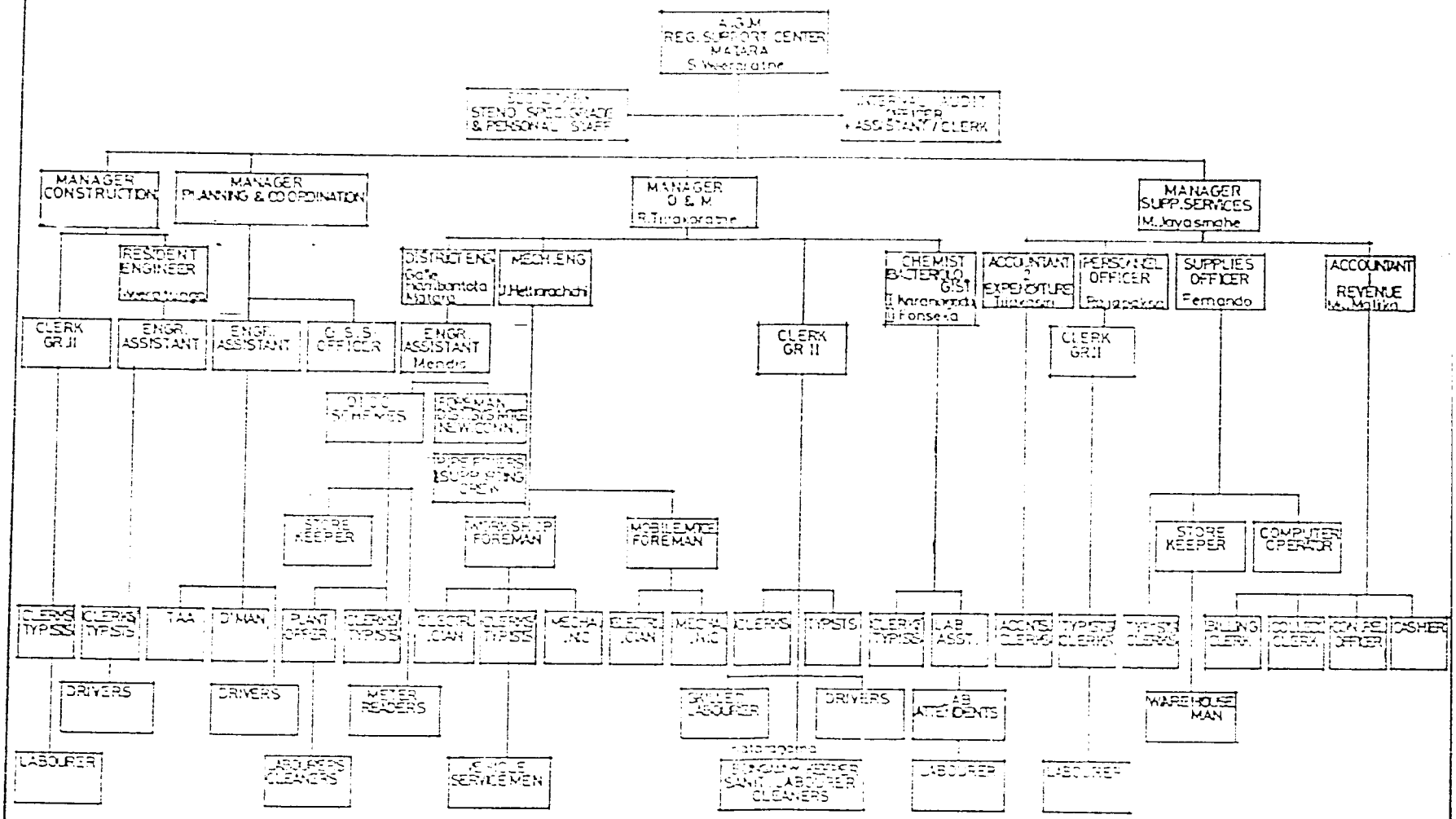


CONSTRUCTION DEPARTMENT



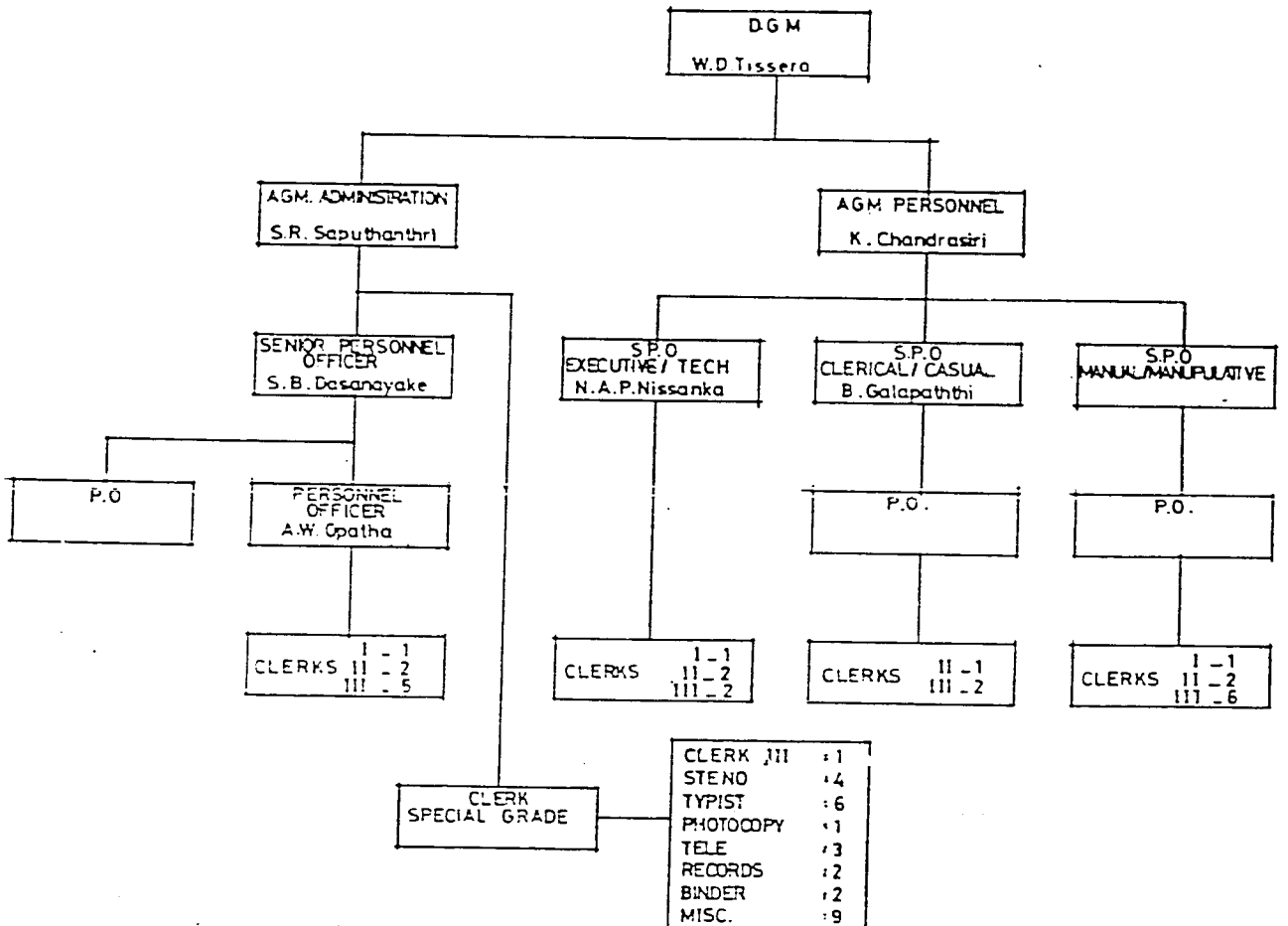
31 MARCH 1987

REGIONAL SUPPORT CENTRE ORGANIZATIONAL CHART (MATARA)



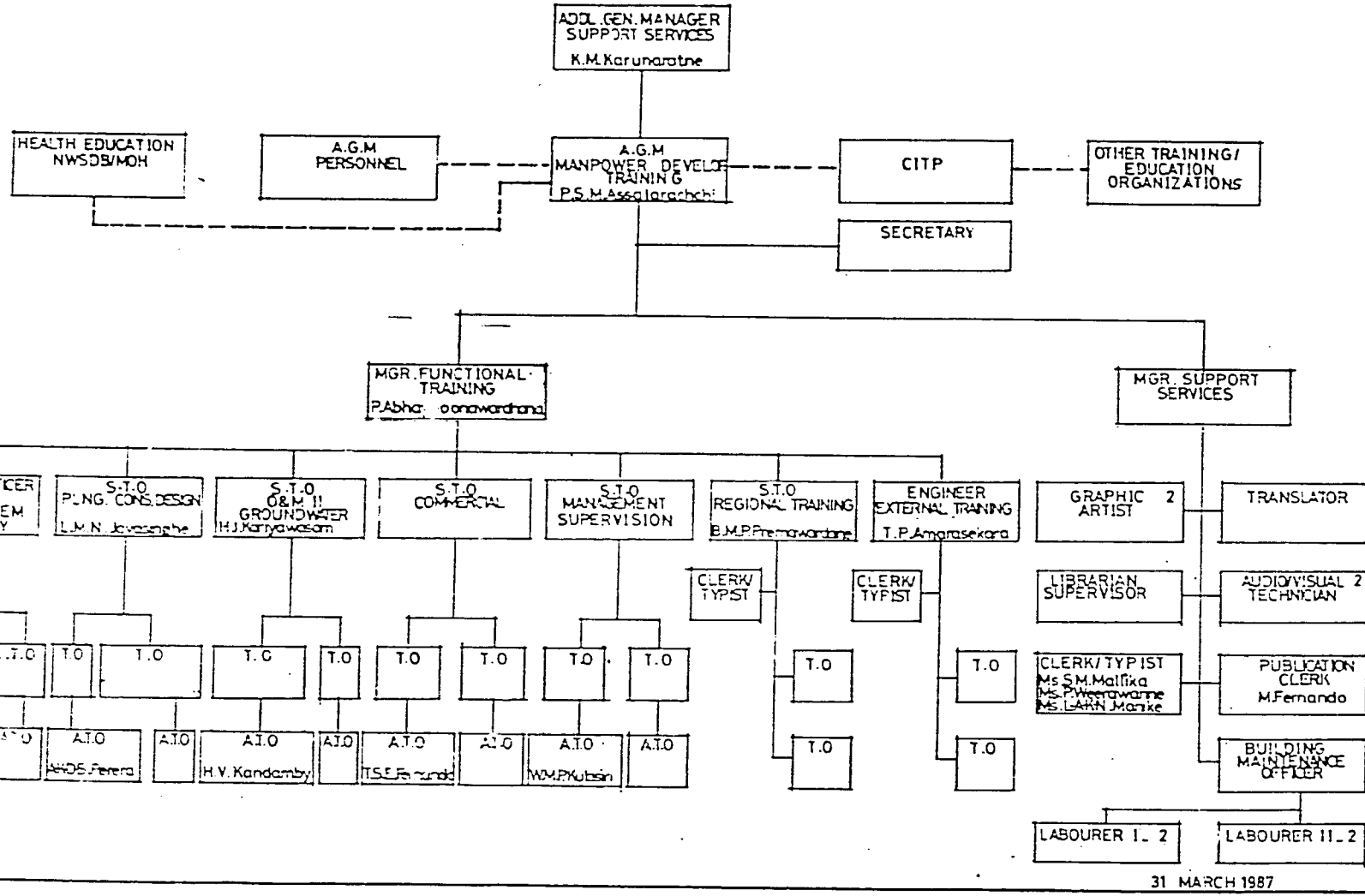
31 MARCH 1987

ADMINISTRATION & PERSONNEL DEPARTMENT



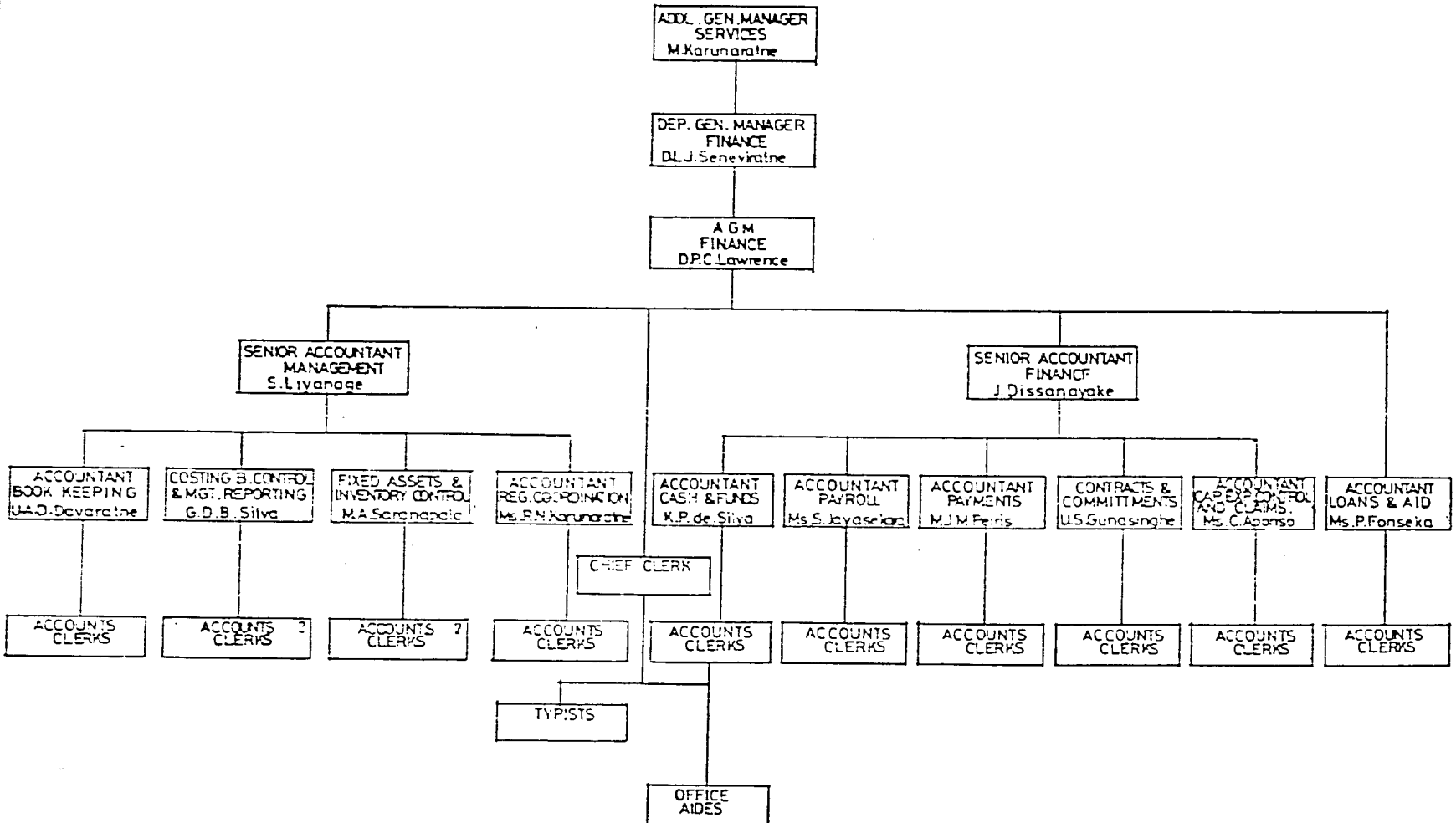
31 MARCH 1987

MANPOWER DEVELOPMENT AND TRAINING SECTION



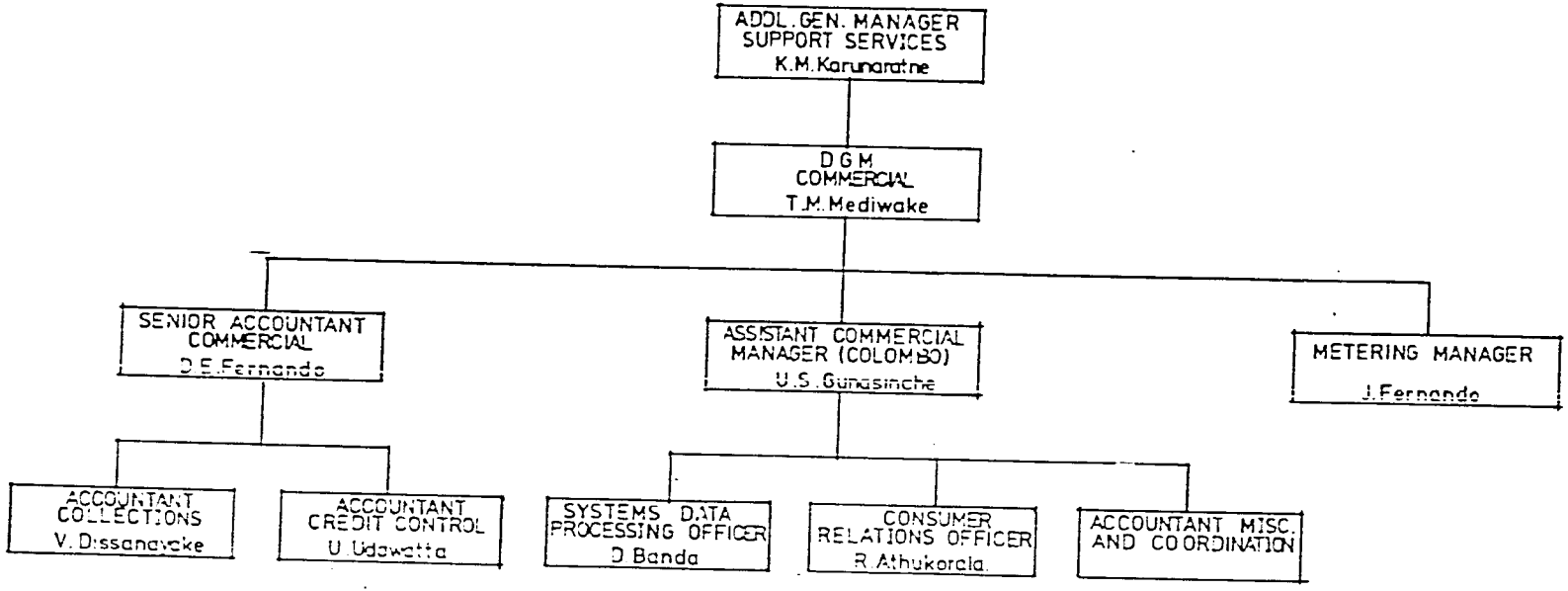
31 MARCH 1987

FINANCE DEPARTMENT



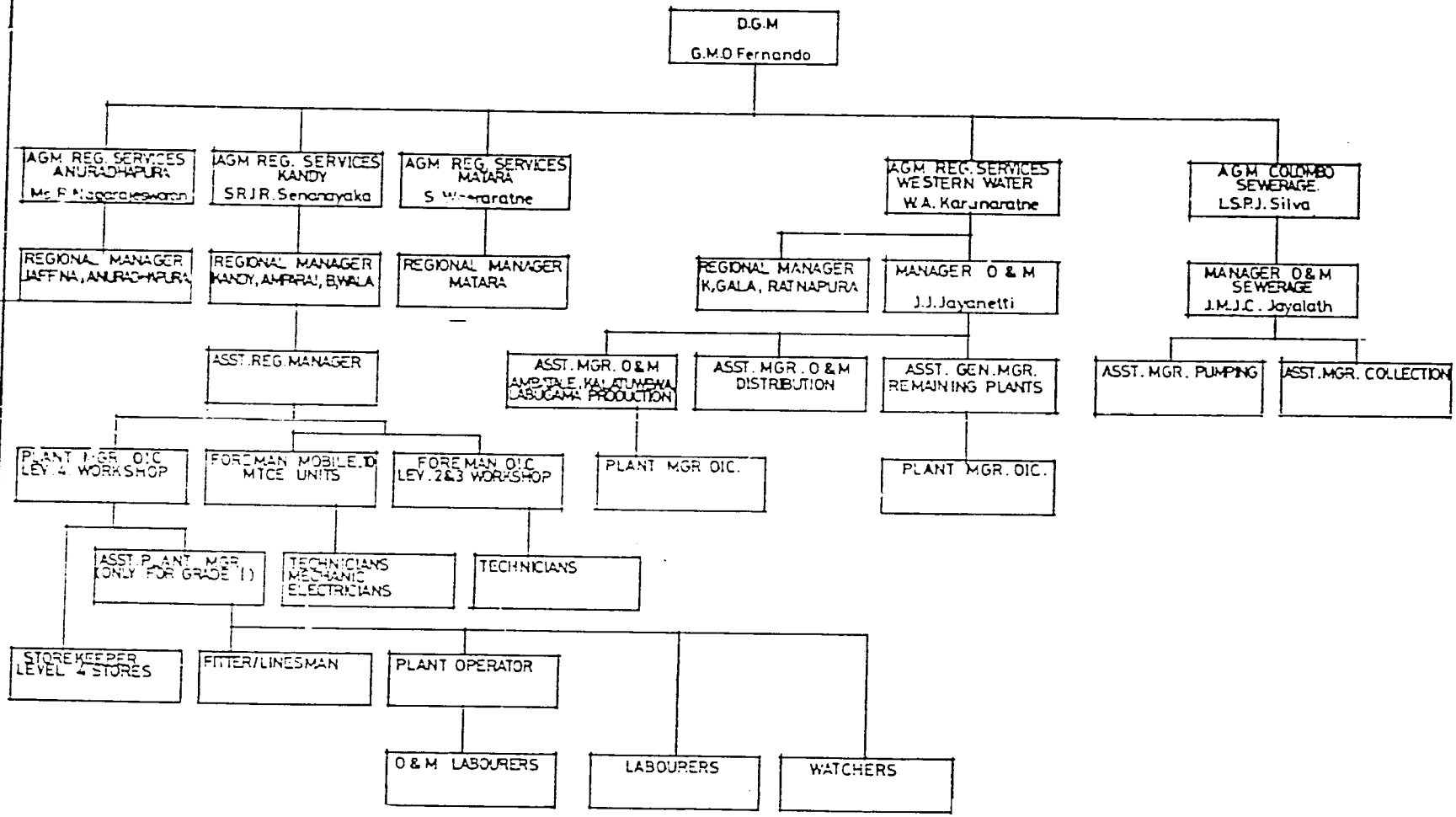
31 MARCH 1987

COMMERCIAL DEPARTMENT



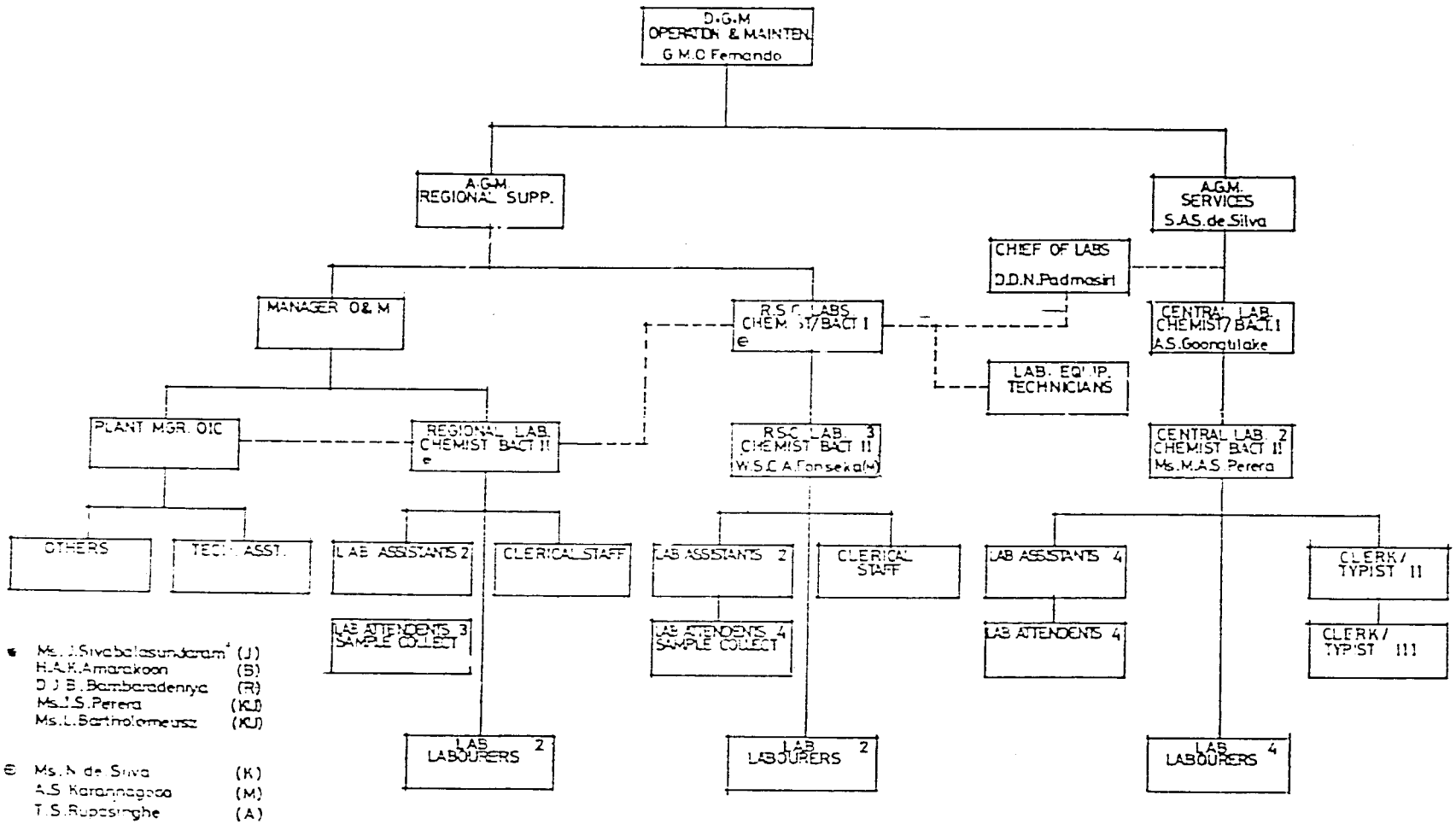
31 MARCH 1987

OPERATION AND MAINTENANCE DEPARTMENT



31 MARCH 1987

WATER QUALITY UNIT

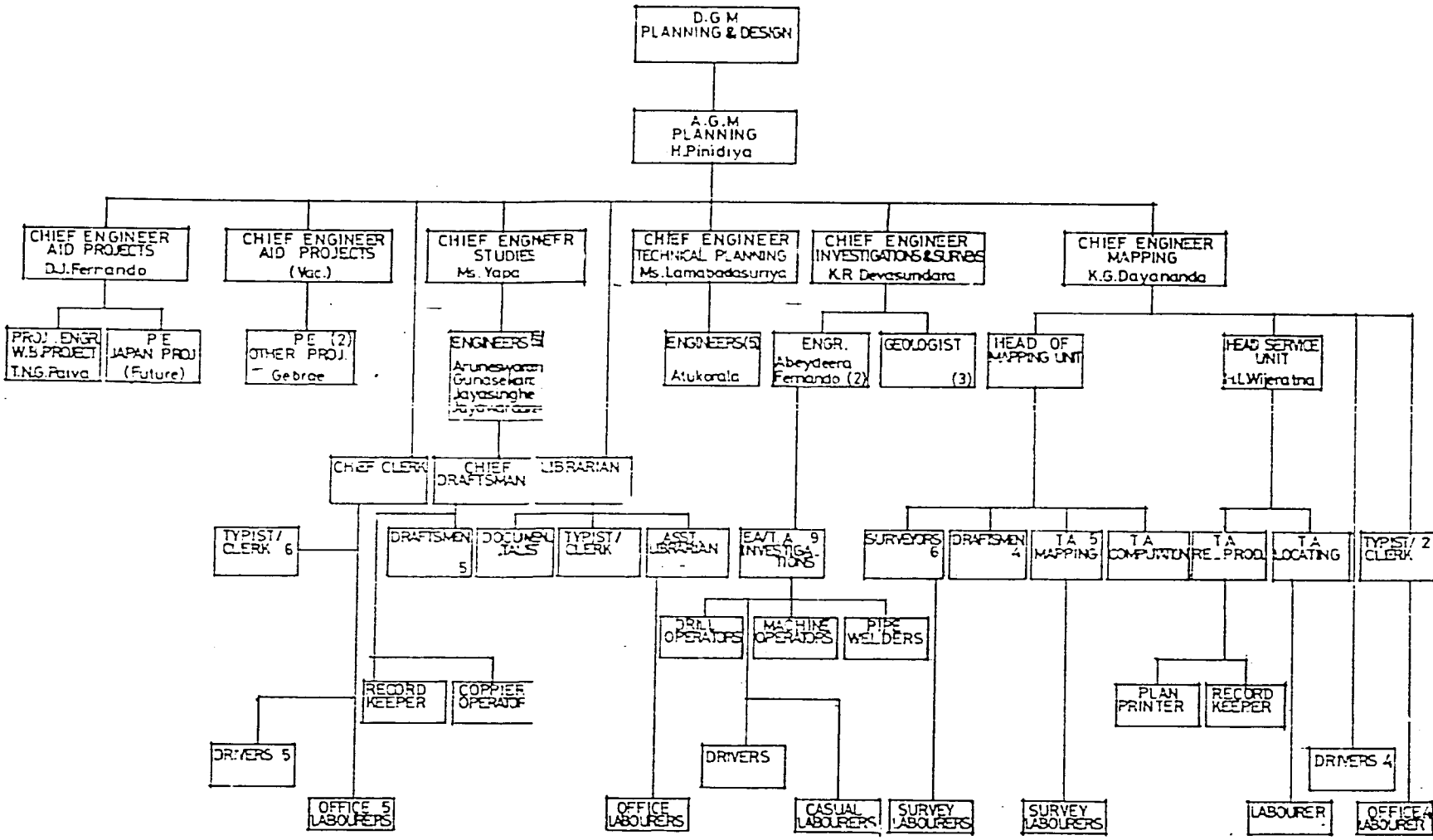


€ Ms. J. Sivabalasundaram (J)
H.A.K. Amarakoon (B)
D.J.B. Bamberadeniya (R)
Ms. J.S. Perera (KJ)
Ms. L. Bartholomeusz (KJ)

€ Ms. N. de Silva (K)
A.S. Karannagoda (M)
T.S. Rupasinghe (A)

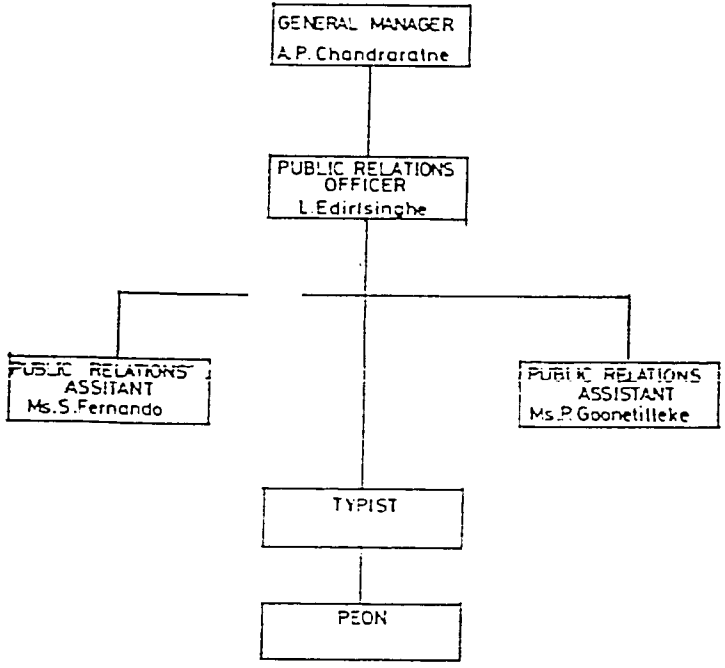
31 MARCH 1987

PLANNING SECTION



31 MARCH 1987

PUBLIC RELATIONS UNIT



LEGAL UNIT