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REPUBLIC OF INDONESIA
MINISTRY OF PUBLIC WORKS AND ELECTRIC POWER
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT

22p.

THE CITANDUY RIVER BASIN
DEVELOPMENT PROJECT

MONTHLY REPORT FOR THE PERIOD
Ending: 31 January 1976

SUBMITTED BY:

ENGINEERING CONSULTANTS, INC.
DENVER, COLORADO USA BANJAR, INDONESIA



ENGINEERING CONSULTANTS, INC.

CABLE ADDRESS :
ECIBANJAR
WEST JAVA
INDONESIA

PROYEK CITANDUY
PATARUMAN
BANJAR, WEST JAVA
INDONESIA

January 31, 1976

Directorate General of
Water Resources Development
Ministry of Public Works
and Electric Power
Jalan Pattimura 20
Kebayoran Baru, Jakarta
Republic of Indonesia

Our file: 1163/110
MR 1/76
Subject : Monthly Report
Citanduy River Basin
Development Project.

Attn: Ir. Y. Sudaryoko
Director of Rivers

Dear Sir:

We are herewith submitting our thirtieth monthly report, which covers the month of January 1976. As we enter the final year of the current Contract we hope that these reports will continue to be of assistance in your evaluation of contract progress.

Yours truly,

Encl: Thirty copies (30) of
Progress Report No. 30.

Engineering Consultants, Inc.

Gifford E. Rogers
Resident Manager

CC:

1. USAID/Jakarta, American Embassy
Jakarta, Republic of Indonesia
Attn: Mr. MacAleer
Engineering Section
Six (6) enclosures
2. Directorate of Rivers. Banjar Office
Attn: Ir. Soebandi Wirosoemarto, Project Manager
Citanduy Project. Five (5) enclosures.
3. ECI/Denver.
Attn: Mr. C.M. Langford, Project Sponsor
Three (3) enclosures.
4. ECI/Staff. Banjar.

I. GENERAL

As we enter the final calendar year of the current contract, we still have no decision regarding the disposition of the Segara Anakan Subproject. In our December 1975 Monthly Report, we stated that a decision must be made soon if we are to complete our work within the time allotted to us. This is even more true at this writing.

One of the more significant events of the month was the Steering Committee Meeting held on January 16, 1976. It was hoped that at this meeting some decision on Segara Anakan would be forthcoming; but such was not the case.

Mr. C.M. Langford, Project Sponsor and Vice President, Engineering Consultants, Inc., visited the project area during the month. We are very grateful for his timely advice and constructive criticism.

II. PERSONNEL

A. Present at last report:

- | | |
|------------------------|---------------------|
| 1. Gifford E. Rogers | - Resident Manager |
| 2. Saeed A. Rana | - Design Engineer |
| 3. Malcolm J. Crawford | - O & M Engineer |
| 4. Ralph L. Kerr | - Hydrologist |
| 5. C.L.G. Goss | - Surveyor & Mapper |
| 6. Peter Howard | - Geologist |
| 7. N. Fred Dennis | - Civil Engineer |
| 8. William J. Russell | - Farm Management |

B. Arrivals subsequent to last report:

- | | |
|------------------------|-------------------|
| 1. C.M. Langford, V.P. | - Project Sponsor |
| 2. H.C. Fletcher | - Land Management |

C. Departures subsequent to last report:

N o n e

D. Scheduled to arrive in February 1976:

- | | |
|----------------------|-------------------------|
| 1. M. Sabir Mirza | - Irrigation & Drainage |
| 2. Edward A. Polasky | - Materials Engineer |

E. Scheduled to depart in February 1976:

- | | |
|------------------------|-------------------|
| 1. C.M. Langford, V.P. | - Project Sponsor |
|------------------------|-------------------|

F. Scheduled to arrive at a later date:

- | | |
|--------------------|-----------------------|
| 1. John P. Jeffers | - Soil Scientist |
| 2. J.C. Ismert | - Mechanical Engineer |

G. Scheduled to depart at a later date:

N o n e

H. Administrative personnel present:

- | | |
|---------------------|---------------|
| 1. Nungki S.W. | - Secretary |
| 2. Pauline Sulianti | - Interpreter |
| 3. F.I. Susanti | - Clerk |
| 4. Setiani O.S. | - Typist |

III. IMPORTANT EVENTS AND FIELD TRIPS

<u>No.</u>	<u>Day of month</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
1.	2	Jakarta	Visit project officials	Rogers
2.	4,5,6	Jakarta	Visit project officials, PENAS, etc.	Dennis, Goss
3.	5	Langensari	Visit demonstration area	Russell, Rianto
4.	6	Rawa Onom	Visit Cijolang River headwork	Crawford, Karno
5.	6	Lakbok	Visit local agricultural agent	Russell, Rianto Bambang
6.	7	Bandung	Visit PENAS	Goss
7.	7	Citalahab	Visit irrigation area	Rana, Siswoko
8.	7,8	Bandung	Visit PENAS and other government officials	Goss
9.	13	Padaringan	Visit demonstration area	Russell, Bambang
10.	12 - 18	Jakarta	Meet new arrivals and Mr. Langford Project Sponsor, also attend Steering Committee	Rogers
11.	14	Langensari	Visit demonstration area	Crawford, Karno
12.	12 - 14	Cilacap	Visit proposed borrow pit areas	Howard
13.	14 - 16	Jakarta	Steering Committee meeting	Rana, Howard, Kerr
14.	15	Langensari	Visit demonstration area	Crawford, Karno
15.	15 - 16	Bandung	Visit PENAS and other officials	Goss

III. IMPORTANT EVENTS AND FIELD TRIPS

(Continued)

<u>No.</u>	<u>Day of month</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
16.	19	Langensari	Visit demonstration area	Crawford, Rianto, Bambang.
17.	22	Langensari	Visit demonstration area	Crawford, Rana, Rianto, Siswoko
18.	22	North Lakbok	Visit Langensari demonstration farm	Rana
19.	28	North Lakbok	Visit office of irrigation supervisor	Rianto, Siswoko Crawford, Karno
20.	28 , 29	Cilacap	Check progress of Geological mapping	Howard, Marteno
21.	29	Ciamis	Visit irrigation office	Crawford, Karno
22.	29 - 31	Banjar	USAID/Jakarta officials visited Project	MacAleer, Singleton
23.	30	Langensari	Visit demonstration area	Crawford, Karno

IV. MAJOR PROBLEM AREAS

Better arrangements must be made to clear our equipment through customs. As mentioned previously, our sediment sampling equipment has been held up in Jakarta customs for months. Soon it will be too late to be useful during this rainy season.

We also now have electronic distance measuring equipment and an Alidade which have been in customs for more than a month. These are badly needed in our survey programs.

Adequate transportation is still a problem. Our vehicles are old and badly in need of repair. It is both costly and time consuming to have a foreign consultant not be able to work because of lack of transport.

Housing, both residential and office is improving. The Office space is promised for mid-February. It will be sorely needed by then.

V. PROGRESS

A. TECHNICAL

1. Proposed final draft of Padaringan Pilot Demonstration Farm Design Report was completed in January.
2. Proposed final draft of Langensari Pilot Demonstration Farm Design Report will be completed in February.
3. Proposed final draft of Irrigation and Drainage Design Criteria Report will be completed in February.
4. Preparation of the proposed final draft of Flood Control Design Criteria Report is awaiting comments from the Client and from USAID.
5. Design of the Citalahab irrigation rehabilitation project continues.
6. Three additional topographic and planimetric map sheets were delivered by the Contractor, Tri Tunggal. They include Rawa Onom, Gunung Putri I, and Gunung Putri II.
7. We are still awaiting delivery of the final few map sheets by PENAS. These have been promised for delivery in the near future.
8. Soils and land classification work has been delayed by the delayed arrival of Mr. Jeffers, who will replace Mr. Boulter.
9. Except for electric power, the Soils Laboratory was completed and awaiting occupancy. This will enable us to conduct soil tests in quantity.
10. Work proceeds on the levee location and cross section work on the Ciseel River.

11. Work proceeds on the plotting of levee plan/ profiles for the Citanduy River.
12. Preparation of levee construction specifications was undertaken in January.
13. Preliminary work has been started on the preparation of specifications for irrigation and drainage.
14. Hydrological work proceeds as best it can, even though hampered by the lack of proper sedimentation sampling equipment.
15. Peak flood discharges are still being studied.
16. Preparation of equipment specifications continues.
17. Flood routing studies continues.

B. ADMINISTRATIVE

The following tables show the status of both the Rupiah and the US Dollar accounts. A total of 30 months (75%) of our allotted 40 months has now elapsed. During this time we have expended 52% of our Rupiah funds and 62% of our US Dollar funds. At the time of the writing of this report, it does not appear that there will be any budgeting problems on this project.

Budget Status - US and Rupiah Accounts

I T E M	Cost (US \$)		
	Budgeted	Actual	Balance
1. Resident Personnel, Base Pay	470,020	290,000	180,020
2. Overseas Differential	125,105	71,500	53,605
3. Overseas Overhead	332,533	183,000	149,533
4. TDY and Denver Personnel, Base Pay	206,350	142,000	64,350
5. TDY and Denver Overhead	175,520	106,000	69,520
6. Special Consultants	20,000	10,000	10,000
7. Travel	153,000	105,000	48,000
8. Per Diem	6,726	5,500	1,226
9. Transportation	45,800	25,000	20,800
10. Other Direct Costs	55,400	41,000	14,400
11. Ministry Personnel in Denver	76,000	63,000	13,000
12. Special Equipment	99,500	40,000	59,500
13. Fixed Fee	185,760	130,000	55,760
T o t a l	1,951,714	1,212,000	739,714

I T E M	Cost (Rupiahs)		
	Budgeted	Actual	Balance
1. Local Per Diem	28,515,000	14,807,000	13,618,000
2. Cables and Telephone	2,600,000	1,621,880	978,120
3. Postage	2,600,000	1,095,953	1,504,047
4. Reproduction and Printing	10,500,000	7,526,730	2,973,270
5. Supplies and Materials	5,600,000	3,173,073	2,426,927
6. Miscellaneous	3,200,000	2,306,946	893,054
7. In-Country Shipping	1,500,000	328,961	1,171,039
8. Personnel	20,300,000	8,740,757	11,559,243
9. Withdrawn	-	(372,000)	372,000
T o t a l	74,815,000	39,319,300	35,495,700

VI. PROGRAM

1. At the last Steering Committee meeting, the Client was advised that the absolute deadline for a decision on Segara Anakan would have to be March 1st. If the decision is affirmative, then we will be able to undertake our contract obligations on this sub-project in March. If the decision is negative, then we will have to negotiate a revision of the Scope of Work.
2. Design work will be undertaken on the Rawa Onom irrigation rehabilitation project as quickly as Mr. Mirza arrives.
3. There seems to be some lack of agreement concerning the aims to be sought in the agricultural sections of our work. Consequently, a meeting is being called in which all concerned organizations (USAID, DGWRD, Citanduy Project, Ministry of Agriculture, and Consultants) will attempt to arrive at some mutually agreeable guide lines for the Consultant to follow in the balance of his work.
4. Flood discharge and sediment load investigations will continue as soon as the equipment is released from customs.
5. Work on the preparation of bid documents will continue. Emphasis will be placed on the completion of the first year's work program documents by April.

VII. APPENDICES

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TABLE 1 - MANPOWER SCHEDULE
(Expatriate Specialists - Cumulative Man - Months)

DESCRIPTION		TOTALS		1 9 7 6											TOTALS	
POSITION TITLE	NAME	1/1/73	3/1/73	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	ACT.	CONT.
R E S I D E N T S T A F F																
RES. MANAGER	ROGERS	10.00	29.00	1.00												60.00
CIVIL ENGINEER	SCHOENLEBER	13.20	13.20	-	-	-	-	-	-	-	-	-	-	-	13.20	16.00
CIVIL ENGINEER	DENNIS	-	1.90	1.00												13.00
SURVEYOR	GOSS	-	7.50	1.00												13.00
HYDROLOGIST	SAUNDERS	10.30	13.80	-	-	-	-	-	-	-	-	-	-	-	13.80	14.00
HYDROLOGIST	KERR		0.30	1.00												18.00
IRRIG. & DRAIN.	BOGAN	16.50	19.00	-	-	-	-	-	-	-	-	-	-	-	19.00	17.00
IRRIG. & DRAIN.	MIRZA	-	-	-												11.00
IRRIG. O. & M.	CRAWFORD	-	7.70	1.00												18.00
HYDRAULIC DESIGN	RANA	-	7.70	1.00												13.00
MATERIAL ENGR.	HANCOCK	-	7.00	-	-	-	-	-	-	-	-	-	-	-	7.00	8.00
MATERIAL ENGR.	POLASKY	-	-	-												
GEOLOGIST	SCOTT	10.10	10.10	-	-	-	-	-	-	-	-	-	-	-	10.10	7.00
GEOLOGIST	HOWARD	-	8.40	1.00												17.00
AGRICULTURIST	EDWARDS	12.00	-	-	-	-	-	-	-	-	-	-	-	-	12.00	12.00
FARM MANAGER	BURKE	-	1.60	-	-	-	-	-	-	-	-	-	-	-	1.60	2.00
FARM MANAGER	RUSELL	-	0.50	1.00												12.00
SOIL SCIENTIST	GARDNER	12.00	-	-	-	-	-	-	-	-	-	-	-	-	12.00	12.00
SOIL SCIENTIST	BOULTER	-	7.50	-											7.50	8.00
SOIL SCIENTIST	JEFFERS	-	-	-												6.00
ECONOMIST	STRUTHERS	16.50	-	-	-	-	-	-	-	-	-	-	-	-	16.50	16.00
SUB-TOTAL		106.60	181.70	8.00												
D E N V E R A N D T D Y S T A F F																
PROJECT SPONS.	LANGFORD	1.70	2.10	0.50												4.00
PLAN ENGINEER	WILL	1.00	1.00	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00
PLAN ENGINEER	OTTER	-	1.10	-												4.00
CHIEF ENGINEER	KUEHL	1.60	1.80	-												3.50
CHIEF CIVIL ENG.	COLE	1.90	2.80	-												2.00
HYDROLOGIST	AU YEUNG	2.50	2.50	-												4.00
RIVER ENGINEER	STEVENS	3.00	4.10	-												9.00
LAND - USE	FLETCHER	4.00	4.00	0.60												3.00
MECH. ENGINEER	ISMERT	-	-	-												9.00
ENVIRONMENT.	CHURCHILL	1.90	1.90	-												1.50
FISH EXPERT	TO BE NAMED	-	-	-												3.00
SPECIALIST		-	-	-												20.00
SUB-TOTAL		17.60	21.30	1.10												
S P E C I A L C O N S U L T A N T S																
M. BIOLOGIST	TURNER	-	1.20	-	-	-	-	-	-	-	-	-	-	-	1.20	2.00
FOUND. SPEC.	BURKE	0.70	-	-	-	-	-	-	-	-	-	-	-	-	0.70	2.00
SUB TOTAL		0.70	1.20	-	-	-	-	-	-	-	-	-	-	-	1.90	4.00
TOTAL		130.90	208.90	9.10												

TABLE II - MANPOWER SCHEDULE
(Administrative Staff - Cumulative Man - Months)

DESCRIPTION		TOTALS		1 9 7 6												TOTAL
POSITION TITLE	NAME	31/1/75	31/12/76	JAN.	FEB.	MAR.	APR.	MAY.	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	
SECRETARY	NUNGKI. S. W	17.60	28.60	1.00												
INTERPRETER	SULIANTI. P	16.10	27.10	1.00												
INTERPRETER	DJOELIANDI	8.90	8.90	-	-	-	-	-	-	-	-	-	-	-	-	8.90
CLERK	SUPIARTI	17.30	23.30	-	-	-	-	-	-	-	-	-	-	-	-	23.30
CLERK	SRI Z. O.	17.60	17.60	-	-	-	-	-	-	-	-	-	-	-	-	17.60
TYPIST	ETJIH. S.	17.10	19.10	-	-	-	-	-	-	-	-	-	-	-	-	19.10
TYPIST	SUSANTI	-	7.00	1.00												
TYPIST	IRAWATI	-	2.10	-	-	-	-	-	-	-	-	-	-	-	-	2.10
TYPIST	SETIANI	-	4.70	1.00												
MESSENGER	DASIRAN	17.00	17.00	-	-	-	-	-	-	-	-	-	-	-	-	17.00
TOTAL		111.60	155.40	4.00												

TABLE III - ARRIVALS AND DEPARTURES

(ECI)

<u>Name</u>	<u>Position</u>	<u>Arrived</u>	<u>Departed</u>
<u>Expatriate Specialists</u>			
1. G.E. Rockwell	President, ECI	14/10/73	19/10/73
		18/10/75	22/10/75
2. C.M. Langford	Project Sponsor	23/ 7/73	4/ 8/73
		27/ 1/74	8/ 2/74
		7/ 7/74	23/ 7/74
		5/ 1/75	13/ 1/75
		10/ 7/75	22/ 7/75
		21/ 1/76	31/ 1/76
3. G.E. Rogers	Resident Manager	30/ 7/75	22/ 7/75
		8/ 7/75	-
4. W.J. Schoenleber	Civil Engineer	1/ 8/73	6/ 9/74
5. C.L.G. Goss	Surveyor	18/ 5/75	-
6. M.P. Saunders	Hydrologist	17/ 3/74	26/ 4/75
7. R.L. Kerr	Hydrologist	6/ 6/75	-
8. D.E. Bogan	Irr. & Drainage	12/ 8/73	15/12/74
		7/ 2/75	20/ 4/75
9. M.J. Crawford	Irrigation O & M	10/ 5/75	-
10. S.A. Rana	Design Engineer	10/ 5/75	-
11. D.P. Scott	Geologist	15/ 9/73	17/ 4/74
		19/ 6/74	19/ 9/74
12. P. Howard	Geologist	4/ 4/75	-
13. A.E. Hancock	Const. Management	3/ 4/75	1/11/75
14. R.T. Edwards	Agriculturist	16/ 9/73	31/ 8/74
15. R.A. Gardner	Soil Scientist	15/ 9/73	31/ 8/74
16. K.E. Boulter	Soil Scientist	17/ 5/75	31/12/75
17. R.E. Struthers	Economist	15. 9/73	18/ 1/75
18. E. Will	Planning Engineer	15/ 9/73	15/10/73
19. P.N. Otter	Planning Engineer	30/ 3/75	25/ 4/75
20. M.K. Kuehl	Chief Engineer	26/ 8/73	18/ 9/73
		29/ 3/74	21/ 4/74
		6/12/75	15/12/75

Name	Position	Arrived	Departed
Expatriate Specialists			
21. H.N. Cole	Chief Civil Engineer	22/ 6/74	18/ 8/74
		16/ 8/75	10/ 9/75
22. Min Au Yeung	Hydrologist	25/ 8/73	13/10/73
		9/ 3/74	12/ 4/74
23. M.A. Stevens	River Morph.	27/10/73	1/12/73
		6/ 7/74	5/ 9/74
		30/ 3/75	2/ 5/75
24. H.C. Fletcher	Land Management	13/ 1/74	12/ 5/74
		15/ 1/76	-
25. Dick Churchill	Environment	17/ 2/74	3/ 4/74
26. H.W. Burke	Geologist	6/ 7/74	28/ 7/74
27. R.E. Turner	M. Biologist	11/ 6/75	25/ 6/75
		10/ 8/75	1/ 9/75
28. William Burke	Farm Management	12/ 9/75	31/10/75
29. N. Fred Dennis	Civil Engineer	1/11/75	-
30. William Russell	Farm Management	16/12/75	-
Administrative Staff			
1. Nungki S.W.	Secretary	13/ 8/73	-
2. Pauline Sulianti	Interpreter	28/ 9/73	-
3. Sylvia Djoeliandi	Interpreter	13/ 9/73	30/ 6/74
4. Supiarti	Clerk	28/ 8/73	1/ 8/75
5. Sri Z. Oemar	Typist	13/ 8/73	31/ 1/75
6. Etjih Suhari	Typist	29/ 8/73	31/ 3/75
7. Susanti	Typist	1/ 6/75	-
8. Irawati	Typist	4/ 8/75	2/10/75
9. Setiani O.S.	Typist	11/ 8/75	-
10. Dasiran	Messenger	1/ 9/73	31/ 1/75

TABLE IV - ARRIVALS AND DEPARTURES

(Counterpart Team)

N A M E	POSITION	ARRIVED	DEPARTED
1. Ir. Soebandi Wirosoemarto	Team Leader	1/4/75	-
2. Ir. Sriyono Mitrosutarno	Deputy Team Leader I	1/4/75	-
3. Ir. Satriyo Untung	Deputy Team Leader II Hydraulic Structures	1/4/75	-
4. Ir. Imam Hidayat	General Planning Hydrology	1/4/75	-
5. Ir. Siswoko	Chief Planning Eng. Irrigation/Drainage	1/4/75	-
6. Ir. Bare Tjupang	Surveying/Mapping	1/4/75	Part time
7. Drs. Subagyo	Surveying/Mapping	1/4/75	
8. Ir. M. Djihad	Const. Material Eng. Chief Engineer	1/5/75	-
9. Drs. Y. Sitanggang	Const. Material Eng.	1/5/75	-
10. Ir. Sambudhi Subdibyo	Soil/Land Class.	1/4/75	-
11. Drs. M. Rianto	Land Use/Management	1/6/75	-
12. Ir. Soedaryanto H.S.	Geology	1/4/75	-
13. R. Abdul Karno	O & M	1/7/75	-
14. Drs. Hudadi	General Affairs/ Finance	1/4/75	Part time
15. Hendro Pradono S.H.	General Affairs/ Finance	1/4/75	Part time
16. Ir. Djoko Subarkah	Irrigation/Drainage	1/12/75	-

Assistant Counterparts

1. Djoko Subarkah	Irrigation/Drainage	1/6/75	1/12/75
2. Trisriyar D.S.	Const. Material Eng.	1/5/75	-
3. B. Suprobowasono	Hydraulic Structures	1/5/75	31/7/75
4. Martono	Geology/Chief Eng.	1/4/75	-
5. Sutarto	Hydraulic Structures	1/8/75	-

N A M E	POSITION	ARRIVED	DEPARTED
6. Rachman Sutanto	Soil/Land Class	1/7/75	-
7. Agus Wardoyo	Surveying/Mapping	1/8/75	-
8. Dradjat Suhardjo	surveying/Mapping	1/8/75	-
9. Ir. Setyadi	Irr. & Drainage	17/9/75	-
10. Ir. Bambang Sudiby	Farm Management	15/10/75	-

Draftsmen

1. Dasiran	Draftsman	1/4/75	-
2. Walaman	Draftsman	1/7/75	-
3. M. Latief	Draftsman	1/7/75	-
4. Maman	Draftsman	1/7/75	-

TABLE V - SCHEDULE OF SUBMITTALS
(First Amendment Only)

<u>REPORT NO.</u>	<u>SUBJECT</u>	<u>DUE</u>	<u>SUBMITTED</u>	<u>MONTHS</u>
1.	Work Plan	1/ 7/75*	30/ 9/75	5
+2.	Design Criteria - Flood Control	1/ 9/75	1/12/75 (Draft)	7
3.	Design Criteria - Irrig.& Drain.	1/ 9/75	4/ 9/75 (Draft)	7
+4.	Design Criteria - Levees, Structures, Canals	1/12/75	1/12/75	10
5.	Specifications - Levees	1/ 2/76		12
6.	O & M Manual, Pilot Project	1/ 2/76		12
7.	Land Classification	1/ 2/76		12
8.	Specifications - Irrigation and Drainage	1/ 4/76		14
9.	O & M Manual, Irrigation	1/ 6/76		16
10.	Specifications - Canals and Structures	1/ 6/76		16
11.	O & M, Flood Control	1/ 8/76		18
12.	Specifications - Civil, Mechanical, Electrical (Draft)	1/ 8/76		18
13.	Final Design Report - Irrigation and Drainage	1/10/76		20
14.	Segara Anakan Land Classifica- tion	1/10/76		20
15.	Final Design Report - Flood Control	1/11/76		21
16.	Specifications - Civil, Mechanical, Electrical	1/11/76		21
17.	Final Design Report - Segara Anakan	1/11/76		21

* Time extension granted by Steering Committee

+ Combined into one report

TABLE V - SCHEDULE OF SUBMITTALS (CONTINUED)

(First Amendment Only)

<u>REPORT NO.</u>	<u>SUBJECT</u>	<u>DUE</u>	<u>SUBMITTED</u>	<u>MONTHS</u>
18.	Updated Cost Estimate, Lower Citanduy/Ciseel	1/10/75**	29/ 9/75	-
19.	Design Report, Padaringan Pilot Demonstration Farm	**	Nov.1975	-
20.	Design Report, Langensari Pilot Demonstration Farm	**	Dec.1975	-

** Not included in Amendment I

TABLE VI - MAN MONTH ANALYSIS

August 1973-November 1976

POSITION	Man Months				
	Contract*	Total to Date	Remaining	Difference	Denver
Resident Manager	40	30	10	-	-
Civil Engineer	16	16.5	10	-10.5	-
Surveyor	21	8.5	10	+ 2.5	-
Hydrologist	33	21.5	10	+ 1.5	-
Irrig. & Drain Engr.	36	19	10	+ 7	-
Hydraulic Design	19	9	10	-	-
Materials Engineer	21	7	10	+ 4	-
Geologist	24	20	7	- 3	-
Agriculturist	12	12	-	-	-
Farm Management	17	4	10	+ 3	-
Soil Scientist	32	20	10	+ 2	-
Economist	16	16.5	-	0.5	-
Project Sponsor	4	3	1	-	1
Planning Engineer	10	2.5	1	+ 6.5	5
Chief Engineer	3.5	2	0.5	+ 1	2
Chief Civil Engr.	2	3	1	- 2	1
Hydrologist	4	2.5	-	+ 1.5	6
Flood Control Engr.	9	4.5	0.5	+ 4	2
Land Management	8	5	3	-	1.5
Mechanical Engineer	9	-	4	+ 5	8
Environmentalist	1.5	2	-	-0.5	1
Fisheries	3	-	3	-	-
Specialist Required	20	-	9	+11	7
Sub Total	380	217.5	130	+32.5	34.5
Senior Engineers	-	-	-	-	9
Engr. Technicians	-	-	-	-	7
Staff Review	-	-	-	-	2
Foundations	2	1	-	+ 1	0.5
Marine Biologist	2	1.5	-	+0.5	-
Total	384	220	130	+34	53

* Includes vacation

1. This analysis is based on the assumption that the present scope of work will remain unchanged
2. It is assumed that all available Denver time will be used.
3. This does not take into account any possible over-run of Denver man months.