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

25p.

THE CITANDUY RIVER BASIN
DEVELOPMENT PROJECT

MONTHLY REPORT FOR THE PERIOD

Ending: 30 April 1976

SUBMITTED BY:

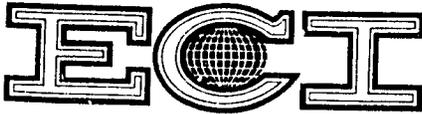
ENGINEERING CONSULTANTS, INC.

DENVER, COLORADO USA

BANJAR, INDONESIA

HOME OFFICE

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ENGINEERING CONSULTANTS, INC.

REPLY TO:

PROYEK CITANDUY, JL. CIMARAGAS NO. 1
BANJAR, WEST JAVA, INDONESIA
CABLE: "ECIBANJAR"

April 30, 1976

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

Attn: Ir. Y. Sudaryoko
Directorate of Rivers.

Our file: 1163/152

MR 4/76

Subject : Monthly Report
Citanduy River Basin
Development Project.

Dear Sir:

We are herewith submitting our thirty-third monthly report, which covers the month of April 1976. We hope that these reports continue to be of assistance in your evaluation of contract progress.

Encl: Thirty copies (30) of
Progress Report No. 33

Yours truly,

Engineering Consultants, Inc.

Gifford E. Rogers
Resident Manager

CC:

1. USAID/Jakarta, American Embassy
Jakarta, Republic of Indonesia
Attn: Dr. Gerritt Argento
Program 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

It gives us great pleasure to report that at long last our sedimentation and hydrological equipment have been cleared through Customs. Unfortunately, we are now entering the dry season, so the equipment may have arrived too late to be useful this year. However, it is on hand to be used in case we should have some unexpected high river stages in May or June.

We now hope that our electronic distance measuring equipment and alidade will soon be released from Customs so that the Segara Anakan mapping program can be expedited. We are now very short on time, so that any thing that will speed up the work will be greatly appreciated.

Project soil sampling and testing equipment and foundation drilling equipment are expected to arrive about mid-year. Copies of all purchase orders have been sent to the client and copies of all shipping documents will be sent as quickly as the suppliers make them available. This should enable the client to get all necessary clearance from BAPPENAS and other interested Government agencies before the equipment arrives in the country.

It is sincerely hoped that lengthy custom delays can be avoided in the future. Such delays are costly both in terms of time and money. The most unfortunate result of such delays is the delay caused to the Consultant in the conduct of the work program.

Another important item that occurred during the month was the Steering Committee meeting, which was held on April 10, 1976. The meeting was well attended and the Consultant feels that the results of the meeting were substantial. In subsequent portions of this report we will discuss some of the items in more detail.

During the month we were also officially notified that Mr. Walter MacAleer, USAID Engineer, was being replaced as Citanduy Project Monitoring Officer by Dr. Gerritt Argento, USAID Economist. We take this opportunity to wish Mr. MacAleer good luck in his new assignments and to welcome Dr. Argento to the Citanduy Project.

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 |
| 9. H.C. Fletcher | - Land Management |
| 10. M. Sabir Mirza | - Irrigation & Drainage |
| 11. John P. Jeffers | - Soil Scientist |

B. Arrivals subsequent to last report:

- | | |
|------------------|-----------------------|
| 1. J.C. Ismert | - Mechanical Engineer |
| 2. C.M. Langford | - Project Sponsor |

C. Departures subsequent to last report:

- | | |
|------------------|-------------------|
| 1. C.M. Langford | - Project Sponsor |
|------------------|-------------------|

D. Scheduled to arrive in May 1976:

- | | |
|----------------|--------------------------------|
| 1. Jack Farmer | - Resident Manager Replacement |
|----------------|--------------------------------|

E. Scheduled to depart in May 1976:

- | | |
|------------------|-------------------|
| 1. H.C. Fletcher | - Land Management |
|------------------|-------------------|

F. Scheduled to arrive at a later date:

1. H.N. Cole - Chief Civil Engineer

G. Scheduled to depart at a later date:

1. J.C. Ismert - Mechanical Engineer

2. Gifford E. Rogers - Resident Manager

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.	1 - 2	Ciputrahaji	Land classification of Project areas.	Jeffers, Sambudhi Rachman.
2.	1 - 5	Jakarta	Deliver visa renewal documents to client, confer with KLM concerning air-photo availability.	Howard,
3.	2	Citanduy R.	Inspect existing sluice gates.	Kerr, Rana, Siswoko.
4.	2	Langensari	Visit demonstration plot and meet with PTD Chief.	Russell, Bambang
5.	6	Panawangan	Visit upper watershed areas to review soils, topography, and conservation practices.	Jeffers; Sambudhi Rachman, Rianto, Bambang.
6.	6	Langensari	Inspect construction in Pilot area.	Russell
7.	6	Wanareja	Visit overflow locations.	Kerr, Rana, Imam.
8.	8 - 9	Bandung	Conference with Tri Tunggal and PENAS.	Goss, Subagyo
9.	8 - 9	Citalahab	Outline field procedures.	Jeffers, Sambudhi, Rachman.
10.	9	Jakarta	Attend meeting with USAID Officials.	Russell, Fletcher.

III. IMPORTANT EVENTS AND FIELD TRIPS

(Continued)

<u>No.</u>	<u>Day of month</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
11.	9 - 10	Jakarta	Steering Committee meeting	Rogers, Rana, Kerr, Russell, Dennis, Howard, Fletcher, Mirza.
12.	12	Jakarta	Arrange documents for Mirza family.	Rogers, Mirza.
13.	12	Langensari	Visit Pilot Project	Russell, Crawford.
14.	13 - 14	Cilacap	Meet Tri Tunggal and indicate survey program	Goss, Subagyo.
15.	13 - 14	Citalahab	Work in field land classification	Jeffers, Sambudhi, Rachman.
16.	14	Langensari	Visit Pilot Project	Russell, Crawford.
17.	14 - 15	Langensari	Visit Pilot Project	Crawford, Mirza, Karno, Djoko.
18.	16 - 18	Solo	Visit hydraulic laboratory	Kerr, Satriyo.
19.	18	Langensari	Visit Pilot Project	Russell, Crawford.
20.	19	Langensari	Visit Pilot Project	Crawford, Russell, Bambang.
21.	19	Ciseel River.	Check river location upstream of cut-off	Kerr, Goss, Imam Subagyo.
22.	20	Padaringan	Visit Pilot Project	Crawford, Russell, Bambang, Karno.
23.	21 - 22	Bandung	Arrange construction of infiltration equipment	Jeffers.
24.	21 - 23	Jebara	Visit UN Fisheries Project	Rogers.

III. IMPORTANT EVENTS AND FIELD TRIPS
(Continued)

<u>No.</u>	<u>Day of month</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
25.	22	Segara Anakan	Locate wave-height recorder	Kerr, Imam.
26.	22 - 23	Padaringan Langansari.	Visit Pilot Project	Crawford, Russell, Mirza, Karno.
27.	23	Cilacap	Meet with harbor master	Howard, Soedaryanto, Martono.
28.	23 - 26	Jakarta	Deliver upper watershed report	Fletcher.
29.	26	Padaringan Langensari	Visit Pilot Projects	Crawford, Russell, Rianto, Bambang.
30.	27	Padaringan	Visit Pilot Project	Russell, Crawford, Rianto, Bambang.
31.	28 - 29	Gunung Putri II.	Review progress in land classification	Jeffers, Sambudhi, Rachman.
32.	29	Padaringan Langensari	Visit Pilot Projects	Russell, Bambang.
33.	29 - 30	Bandung	Check suppliers of small equipment for Soils laboratory	Howard, Sitanggang, Soedaryanto.

IV. MAJOR PROBLEM AREAS

The bottleneck in Customs clearance seems to have been partially broken. We now have received our hydrological and sedimentation equipment. We hope that we can have at least one more high river stage before the dry season really is upon us. Otherwise, we will have to wait until September to obtain any high-stage data.

Our electronic distance measuring equipments and our alidade are all still in Customs, and have been there since December. We hope that this will soon be cleared so that progress of our mapping program will not be impeded.

Drilling work still has not been resumed on the Cilisung syphon area. As a result, all design work on this structure has come to a halt. If we are to remain on schedule, this drilling work must be resumed quickly.

We are still awaiting comments and/or approval of the following draft reports:

1. Flood Control Design Criteria
2. Irrigation Design Criteria
3. Padaringan Pilot Project
4. Langensari Pilot Project.

Until comments are in our hands, we cannot proceed to issue the revised final editions. This has led to some minor problems in the construction of the Langensari turnouts. Fortunately the errors can be corrected with a minimum of difficulty.

V. PROGRESS

A. TECHNICAL

Surveying and mapping is lagging behind schedule, principally in the Segara Anakan area where our start was delayed by indecision as to whether the sub-project should proceed or not. Quick release from Customs of our survey equipment will alleviate the delay considerably.

We now foresee the completion of the survey and mapping work on the lower Citanduy/Ciseel River system by June. The Segara Anakan work will be complete by August.

Except for the drilling of the Cilisung Syphon structure location previously mentioned, all geological work is on schedule and will be complete by August.

Engineering materials investigations proceed on schedule. The soils laboratory is now functioning relatively smoothly. The additional laboratory and field equipment has all been ordered and will be expected to arrive in June.

Additional drilling equipment has been purchased and will be shipped by the end of June. Since it is coming by surface freight it is not expected to arrive before August or September.

With respect to the new equipment on order, copies of all invoices have been supplied to the client so that proper clearance documents can be obtained long before the arrival of the equipment. Copies of all shipping documents will be supplied as quickly as they become available.

Hydraulic structure design work is on schedule. Both design and Hydrology specialists have been concentrating on reconciling differences in Ciseel and Citanduy channel locations between the aerial photographs and the planimetric maps. This will enhance the accuracy of the Ciseel cut-off model now being constructed in Solo.

Hydrological work is on schedule. The lower Citanduy/Ciseel work should be complete by mid-year. Emphasis will then be switched to the Segara Anakan.

Land classification work is progressing. Fieldwork on the lower Citanduy/Ciseel Project will be complete in June. Segara Anakan work will be complete in late August.

The upstream land management pilot project proposal was completed on schedule during the month and submitted to the client in draft form. If comments are returned quickly, the draft can be revised and final copy submitted before Dr. Fletcher leaves in the later part of May.

The draft of the irrigation and drainage O & M manual for the pilot projects is now complete and will be submitted early in May. Work is proceeding on the preparation of the Master O & M manuals. The draft irrigation and drainage manual should be ready by mid-year, while the draft flood control manual should be ready in August.

Irrigation and drainage design is behind schedule and will require some help. We have requested permission to bring over an additional irrigation and drainage technician for a period of four months to help get us back on schedule.

Mr. Ismert, Chief Mechanical Engineer, has arrived from the Denver office to assist in finalizing the equipment and construction specifications. The first draft of the equipment specification will be ready by the end of May. It is hoped that the client and USAID can make a quick review of soil specifications so that final copy can be produced before mid-year.

The first set of flood control construction specifications will be ready in draft form by the end of May. Irrigation and drainage specifications and hydraulic structures specifications will follow at a later date.

B. ADMINISTRATIVE

The following tables show the status of both the Rupiah and the U.S. dollar accounts. A total of 33 months (82%) of the allotted 40 months has now elapsed. During this time we have expended 60% of our Rupiah funds and 70% of our US dollar funds. It does not appear that there will be any budget 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	320,000	150,020
2. Overseas Differential	125,105	80,000	45,105
3. Overseas Overhead	332,533	202,000	130,533
4. TDY and Denver Personnel, Base Pay.	206,350	155,000	51,350
5. TDY and Denver Overhead	175,520	115,000	60,520
6. Special Consultants	20,000	10,000	10,000
7. Travel	153,000	122,000	31,000
8. Per Diem	6,726	6,000	726
9. Transportation	45,800	26,000	19,800
10. Other Direct Costs	55,400	45,000	10,400
11. Ministry Personnel in Denver	76,000	69,000	7,000
12. Special Equipment	99,500	60,000	39,500
13. Fixed Fee	185,760	146,000	39,760
Total	1,951,714	1,356,000	595,714

I T E M	Cost (Rupiahs)		
	Budgeted	Actual	Balance
1. Local Per Diem	28,515,000	17,225,000	11,290,000
2. Cables and Telephone	2,600,000	1,865,324	734,676
3. Postage	2,600,000	1,219,338	1,380,662
4. Reproduction and Printing	10,500,000	8,510,956	1,989,044
5. Supplies and Materials	5,600,000	3,958,125	1,641,875
6. Miscellaneous	3,200,000	2,486,801	713,199
7. In-Country Shipping	1,500,000	446,617	1,053,383
8. Personnel	20,300,000	9,623,801	10,676,199
9. Withdrawn	-	(400,295)	400,295
Total	74,815,000	44,935,667	29,879,333

VI. PROGRAM

1. Completion of the Lower Citanduy/Ciseel Water Management Scheme still occupies top priority in our work plan. Target date remains the end of August. However, this cannot be attained unless Irrigation and Drainage receives help. We have requested that a member of the Denver Office Staff be sent out to help for a period of four months. If this request is approved so that the technician can arrive by June 1st, then we can finish as programmed.
2. Work on the Segara Anakan will be undertaken at a constantly accelerating rate so that by July maximum attention will be focused on this sub-project.
3. Mapping of the Lower Citanduy/Ciseel Subproject Area is scheduled for completion by late June.
4. Mapping of the Segara Anakan will be scheduled for completion by late July.
5. All foundation and other geologic investigation work is scheduled for completion by mid-year.
6. Work on hydraulic structures will proceed as scheduled.
7. Mechanical soil testing of both existing levees and proposed borrow material will continue. All of the new soils laboratory equipment is expected to arrive by July.
8. Our Denver Staff Soils Engineer is expected on the project in early June for a short stay. He is expected to help organize laboratory procedures and to see that all new equipment is properly understood and is being handled correctly.

9. Citanduy/Ciseel Subproject will be gradually phased out and emphasis will be on a recheck of Segara Anakan Subproject hydrology and sedimentation.
10. The proposed for the upstream water management plots was submitted on schedule. It is scheduled to be discussed in detail early in May. It is hoped that at that meeting accord can be reached so that this important field activity can be launched as quickly as possible.
11. Work will continue on the activation of the two Lower Citanduy/Ciseel Subproject Water Management plots.
12. We expect to have our salt water fishery expert on hand sometime in June. He will devote full time to the Segara Anakan reclamation problem.
13. Our heavy equipment specifications engineer has arrived and is working diligently to turn out a first draft on all equipment specification by the end of May. As quickly as they are reviewed and approved by the client, they will be issued in final form for equipment purchasing.
14. First draft of levee construction specifications will issued by the end of May. Final form of the first construction reach will be issued following approval of the draft specifications.
15. The Irrigation & Drainage O & M manual for the pilot water management plots will be issued in draft form in May.
16. Agricultural soils work progresses nicely. Field work on the Lower Citanduy/Ciseel Subproject is nearly complete and emphasis is shifting to the preparation of the maps. Field work on the Segara Anakan will be undertaken shortly.
17. Our Land Management expert will depart in May. Responsibility for the initiation of the upper watershed projects will be taken over by our farm management expert.

VII. APPENDICES

Table I	-- Manpower Schedule (Expatriate Specialists-Cumulative Man-Months)	A-1
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TABLE I - MANPOWER SCHEDULE
(Expatriate Specialists - Cumulative Man - Months)

DESCRIPTION		TOTALS		1 9 7 6												TOTALS	
POSITION TITLE	NAME	31/1/75	31/12/75	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	18.00	29.00	1.00	2.00	3.00	4.00									40.00	
CIVIL ENGINEER	SCHOENLEBER	13.20	13.20	-	-	-	-	-	-	-	-	-	-	-	13.20	16.00	
CIVIL ENGINEER	DENNIS	-	1.90	1.00	2.00	3.00	4.00									13.00	
SURVEYOR	GOSS	-	7.50	1.00	2.00	3.00	4.00									18.00	
HYDROLOGIST	SAUNDERS	10.30	13.80	-	-	-	-	-	-	-	-	-	-	-	13.80	14.00	
HYDROLOGIST	KERR		6.30	1.00	2.00	3.00	4.00									18.00	
IRRIG. & DRAIN.	BOGAN	16.50	19.00	-	-	-	-	-	-	-	-	-	-	-	19.00	17.00	
IRRIG. & DRAIN.	MIRZA	-	-	-	-	1.00	2.00									11.00	
IRRIG. O. & M.	CRAWFORD	-	7.70	1.00	2.00	3.00	4.00									18.00	
HYDRAULIC DESIGN	RANA	-	7.70	1.00	2.00	3.00	4.00									18.00	
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	2.00	3.00	4.00									17.00	
AGRICULTURIST	EDWARDS	12.00	-	-	-	-	-	-	-	-	-	-	-	-	12.00	12.00	
FARM MANAGER	BURKE	-	1.60	-	-	-	-	-	-	-	-	-	-	-	1.60	2.00	
FARM MANAGER	RUSSELL	-	0.50	1.00	2.00	3.00	4.00								-	12.00	
SOIL SCIENTIST	GARDNER	12.00	-	-	-	-	-	-	-	-	-	-	-	-	12.00	12.00	
SOIL SCIENTIST	BOULTER	-	7.50	-	-	-	-	-	-	-	-	-	-	-	7.50	8.00	
SOIL SCIENTIST	JEFFERS	-	-	-	-	0.70	1.70									6.00	
ECONOMIST	STRUTHERS	16.50	-	-	-	-	-	-	-	-	-	-	-	-	16.50	16.00	
SUB-TOTAL		108.60	181.70	8.00	16.00	25.70	35.70										
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	0.60	0.60	0.60									4.00	
PLAN ENGINEER	WILL	1.00	1.00	-	-	-	-	-	-	-	-	-	-	-	1.00	1.00	
PLAN ENGINEER	OTTER	-	1.10	-	-	0.20	0.20									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	1.60	2.60	3.60									8.00	
MECH. ENGINEER	ISMERT	-	-	-	-	-	0.50									5.00	
ENVIRONMENT.	CHURCHILL	1.90	1.90	-	-	-	-									1.50	
FISH EXPERT	TU BE NAMED	-	-	-	-	-	-									3.00	
SPECIALIST		-	-	-	-	-	-									20.00	
SUB-TOTAL		17.60	21.30	1.10	2.20	3.4	4.90										
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	18.20	29.1	40.60										

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	2.00	3.00	4.00									
INTERPRETER	SULIANTI.P	16.10	27.10	1.00	2.00	3.00	4.00									
INTERPRETER	DJOELIANDI	8.90	8.90	-	-	-	-	-	-	-	-	-	-	-	-	-
CLERK	SUPIARTI	17.30	23.30	-	-	-	-	-	-	-	-	-	-	-	-	-
CLERK	SRI Z.O.	17.60	17.60	-	-	-	-	-	-	-	-	-	-	-	-	-
TYPIST	ETJIH. S.	17.10	19.10	-	-	-	-	-	-	-	-	-	-	-	-	-
TYPIST	SUSANTI	-	7.00	1.00	2.00	3.00	4.00									
TYPIST	IRAWATI	-	2.10	-	-	-	-	-	-	-	-	-	-	-	-	-
TYPIST	SETIANI	-	4.70	1.00	2.00	3.00	4.00									
MESSENGER	DASIRAM	17.00	17.00	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		111.60	155.40	4.00	8.00	12.00	16.00									

TABLE III ARRIVALS AND DEPARTURES

(ECI)

<u>Name</u>	<u>Position</u>	<u>Arrived</u>	<u>Departed</u>
Expatriate Specialists			
1. G.E. Rockwell	President, ECI	14/10/73 18/10/75	19/10/73 22/10/75
2. C.M. Langford	Project Sponsor	23/ 7/73 27/ 1/74 7/ 7/74 5/ 1/75 10/ 7/75 21/ 1/76 28/ 4/76	4/ 8/73 8/ 2/74 23/ 7/74 18/ 1/75 22/ 7/75 31/ 1/76 29/ 4/76
3. G.E. Rogers	Resident Manager	30/ 7/73 8/ 7/75	1/ 6/75 -
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 7/ 2/75	15/12/74 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 19/ 6/74	17/ 4/74 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 1/ 3/76	25/ 4/75 5/ 3/76
20. M.K. Kuehl	Chief Engineer	26/ 8/73 29/ 3/74 6/12/75	18/ 9/73 21/ 4/74 15/12/75

<u>Name</u>	<u>Position</u>	<u>Arrived</u>	<u>Departed</u>
<u>Expatriate Specialists</u>			
21. H.N. Cole	Chief Civil Engineer	22/ 6/74 16/ 8/75	18/ 8/74 10/ 9/75
22. Yin Au Yeung	Hydrologist	25/ 8/73 9/ 3/74	13/10/73 12/ 4/75
23. M.A. Stevens	River Morph.	27/10/73 6/ 7/74 30/ 3/75	1/12/73 5/ 9/74 2/ 5/75
24. H.C. Fletcher	Land Management	13/ 1/74 15/ 1/76	12/ 5/74 -
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 10/ 8/75	25/ 6/75 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	-
31. M. Sabir Mirza	Irr. & Drainage	29/ 2/76	-
32. John C. Ismert	Mech. Engineer	17/ 4/76	-
<u>Administrative Staff</u>			
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	31/1/76
7. Drs. Subagyo	Surveying/Mapping	1/4/75	-
8. Ir. M. Djihad	Const. Material Eng. Chief Engineer	1/5/75	31/3/76
9. Drs. Sitanggang	Const. Material Eng.	1/5/75	-
10. Ir. Sambudhi Sudibyo	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	-
17. Ir. Sukrisno Ramelan	General Affairs/ Finance	1/2/76	Part Time

Assistant Counterparts

1. Djoko Subarkah	Irrigation/Drainage	1/6/75	1/12/75
2. Tristiyar D.S.	Irrigation/Drainage	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	1/2/76
10. Ir. Bambang Sudibyo	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	-
21.	Proposed Demonstration Pilot Watershed Management Program (Draft)	**	24/4/76	-

** Not included in Amendment I