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

33p.

THE CITANDUY RIVER BASIN
DEVELOPMENT PROJECT

MONTHLY REPORT FOR THE PERIOD
Ending : 31 December 1973

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

December 31, 1973

Director General of
Water Resources Development
Ministry of Public Works
and Electric Power
Jalan Pattimura 7/20. Kebayoran Baru
Jakarta, Republic of Indonesia

Attn : Ir. Sarbini

Our file : 1138/53
Mr 5/73
Subject : Monthly report
Citanduy River
Basin Development
Project

Dear Sir :

We are pleased to submit herewith our fifth Monthly Report, which covers the calender month of December 1973. We hope that you will find this report both interesting and useful.

Yours truly,

Encl : Thirty (30) copies of
Progress Report No. 5

Engineering Consultants, Inc.

A handwritten signature in cursive script that reads 'Gifford E. Rogers'.

Gifford E. Rogers
Resident Manager

CC :

1. USAID/Indonesia, American Embassy
Jakarta, Republic of Indonesia
Attn : Mr. M-Aleer, Engineering Section
Six (6) enclosures.
2. Directorate of River and Swamps. Banjar Office.
Attn : Ir. Soebandi Wirosocmarto, Project Manager Citanduy
Project. Five (5) enclosures.
3. P.T. Indah Karya. Bandung.
Attn : Ir. Sahat T.P. Siagian, Counterpart Team Leader
Five (5) enclosures.
4. ECI/Denver.
Attn : Mr. C.M. Langford, Project Sponsor
Three (3) enclosures.
5. ECI Staff/Banjar. Five (5) enclosures.

MONTHLY REPORT NO. 5
Period Ending 31/12/1973

I. GENERAL

Several important events took place during the month of December, all of which occupied their proportionate share of the Consultant's attention. These events varied from formal conferences to project inspection trips.

We are particularly pleased to report that on December 7, 1973 we held our first general meeting with the Counterpart Team. Since one of the principal objectives of this meeting was the sharing of knowledge, a forty-page document was prepared so that the counterparts could follow our discussions as they were presented. An outline of the notes of that meeting will be found in the Appendix.

Another important event was the visit to the project area by USAID Officials from both Jakarta and Washington. We prepared a briefing document for the orientation of the visitors and then accompanied them on tours of both the Wanareja Swamp and the Segara Anakan.

Four of the consultants were privileged to attend the monthly Steering Committee meeting held in Jakarta on December 18, 1973. This was a very significant meeting, for several items of important business were discussed and firm decisions made.

Following a prolonged question and answer period covering both our first priority recommendation report and our plans for the second priority recommendation report, several important conclusions were advanced by the Committee :

1. The First Priority Recommendation Report was approved with one reservation - should the Banjar Damsite prove to be not feasible, then ECI must look for alternatives. This we would do in any case, so the reservation poses no restrictions for us.
2. ECI can proceed with work on Segara Anakan as a second priority study. Because the results of the soil tests now being performed are so critical for the final feasibility of the Segara Anakan scheme, the deadline for submission of the second priority feasibility study was set back from December 30, 1973 to January 30, 1974. This decision was necessary because the soil laboratory would not commit itself to return the laboratory results before January 15, 1974.
3. February 19, 1974 was set as the date for the next meeting of the Steering Committee. At that time the final decision on both the first and second feasibility studies will be made known to the consultant.

II. PERSONNEL

A. Present at last report :

1. Gifford E. Rogers - Resident Manager
2. Wallace J. Schoenleber - Civil Engineer
3. David E. Bogan - Irrig. & Drain. Engineer
4. Robert E. Struthers - Economist
5. Roydon T. Edwards - Agriculturist
6. Donald P. Scott - Geologist
7. Robert A. Gardner - Soil Scientist
8. M.A. Stevens - River Management Specialist

B. Arrivals subsequent to last report :

1. None

C. Departures subsequent to last report :

1. M.A. Stevens - River Management Specialist

D. Scheduled to arrive next month :

1. Herbert C. Fletcher - Land Management Specialist
2. Cecil M. Langford - Project Sponsor

E. Scheduled to arrive at a later date :

1. Michael Saunders - Planning Engineer - February 1974
2. Churchil - Environmentalist - February 1974
3. Eric Will - Chief Planner - March 1974
4. Yin Au Yeung - Hydrologist - March 1974

III. IMPORTANT EVENTS

A. Meetings

<u>No.</u>	<u>Date</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
1.	7-12-1973	Banjar	First general meeting between Consultants, Counterpart Team and Directorate Personnel.	Ir. Soebandi, Project Manager; All Consultants; All Counterpart.
2.	10-12-1973	Bogor	Meeting with Soil Institute officials and deliver soil samples for testing	Gardner, Edi and Subagyo.
3.	11-12-1973	Banjar	Briefing session for USAID Officials	All Consultants, Messrs. Smith, Griffel, Kimball from USAID
4.	18-12-1973	Jakarta	Steering Committee Meeting Discuss First Priority Report	Rogers, Bogan, Struthers, Edwards.
5.	20-12-1973	Yogyakarta	Discuss soil mapping with University Officials	Gardner, Edi and Subagyo.
6.	26-12-1973 - 29-12-1973	Jakarta	Arrange reduction 1:5,000 Scale maps to 1:20,000	Schoenleber, Scott.

B. Field Trips

<u>No.</u>	<u>Date</u>	<u>Location</u>	<u>Purpose</u>	<u>Personnel</u>
1.	1-12 - 5-12-1973	Segara Anakan (Cilacap)	Soils investigations	Gardner, Suparmo, Edi Subagyo.
2.	3-12-1973	Wanareja Swamp	Check water levels following heavy rainstorm	Edwards, Struthers, Bogan.
3.	11-12-1973	Wanareja Swamp	Orientation trip for USAID Officials	Bogan, Schoenleber, Smith Griffel, Kimball.
4.	12-12-1973	Segara Anakan	Orientation trip for USAID Officials	Rogers, Edwards, Smith, Griffel, Kimball, Soebandi.
5.	27-12-1973	Rawa Onom	Survey of current crop conditions	Edwards and Counterpart.*
6.	28-12-1973	North Lakbok	Survey of current crop conditions	Edwards and Counterpart.

IV. MAJOR PROBLEM AREAS

A. Vehicles and Transportation.

Vehicles dispatch continues to be satisfactory, but gasoline allocation is still a problem. As during the month of November, only the timely intervention by the Consultants themselves on several occasions presented the Jeep and passengers from becoming stranded for lack of gasoline. Transportation is a responsibility of the client, not the consultant.

The consultant feels that the policy of requiring every technician to get a signed confirmation of actual presence on each field trip is superfluous and restrictive. We feel that our autonomous position is defined by Article 4.08 of the Contract :

"Nothing contained in this Contract shall be construed as establishing or creating a relationship of master and servant or principal and agent it being understood that the position of the Consultant and its employees including the Special Consultants is that of an independent Consulting Engineer."

We feel that approval for leaving the Project area, as established in Article 4.09 is sufficient control. It is demeaning and often time - consuming for a consultant to seek out some minor official merely to obtain his signed confirmation that the Consultant was indeed physically present.

B. Office Facilities.

After five months of occupancy the Consultants office still has no satisfactory sanitary facilities. The odor from the facilities which cannot be satisfactorily flushed permeates the office and is offensive to the staff who must endure it.

C. Housing Facilities.

1. No action has yet been taken to solve the problem of burned out refrigerators and fans caused by voltage fluctuations from as low as 80 volts to as high as 160 volts. Some of the Consultants have paid for repairs to burned out equipment, while others have purchased expensive voltages regulators. The individual Consultant should not be responsible for this type of maintenance and repair costs to household furnishings supplied by the Directorate.
2. The housing unit designated for occupancy by Dr. Gardner was promised for delivery by September 15, 1973. This date was later revised to October 15th, November 15th, and then December 15th. It is now the end of the year and the unit still is not complete and ready for occupancy. Naturally, such dilatory tactics do not improve the morale of the affected consultants.

D. Finances.

On direct orders from the client, the Consultant doubled the number of reports to be presented by the consultant to the client. The client agreed that the Project should reimburse the consultant for all additional reproduction costs occasioned by this increase in publications. On our first bill, 6% was unilaterally deducted for "taxes". We do not understand this position, for the amounts submitted for reimbursement represented actual expenditures by the Consultant. Our second bill, submitted in November still has not been paid. The consultant simply does not have enough budgeted funds to carry such obligations over a long period of time.

E. Technical.

At the Steering Committee meeting held in Jakarta on December 18th, we advised the Committee that the soil samples from the Segara Anakan area, which had been submitted to the soils laboratory in Bogor, would have to be completed before a final decision could be taken on the feasibility of reclaiming the area in question. Originally the results had been promised for January 15, 1974. Now we understand that results may not become available until late February or even March 1974. Such an unnecessary delay will throw over schedule completely out of gear. We again appeal to the Directorate to use its influence to accelerate the delivery of our soil analyses results.

V. PROGRESS

A. Technical.

As mentioned previously, the publication date for Report No. 4, "Recommendations For Second Priority Feasibility Study", was set back from December 30, 1973 to January 30, 1974. This was due to the delay in obtaining soil analyses results from the soils laboratory in Bogor. We are confident that the laboratory will cooperate to the extent that we can submit our report as now scheduled.

B. Administrative.

We are pleased to report that we have been advised that our US \$ Letter of Credit was deposited on December 19, 1973.

The following tables show the financial standings of both the Rupiah and the US \$ accounts. The Rupiah account is current to the end of this report period. It indicates that about 27 % of the time has elapsed and about 27 % of the Rupiah funds have been expended.

Records have not yet been received from the Denver Office for US \$ expenditures during the months of November and December 1973. It was, therefore, necessary to estimate total expenditures to the end of the period of the report. For reimbursable costs only, about 25% of budgeted funds have been disbursed to date.

Budget Status - Rupiah Account

I T E M	AMOUNTS (Rp.)		
	Authorized	Spent	Remaining
Per Diem	12,040,000	3,015,500	9,024,500
Cables	1,100,000	170,300	929,700
Postage	1,100,000	90,500	1,009,500
Reproduction & Printing	2,000,000	808,200	1,191,800
Supplies and Materials	1,100,000	568,800	531,200
Other Minor Items	700,000	260,500	439,500
Administrative Staff	6,300,000	1,219,000	5,081,000
	24,340,000	6,732,800	18,207,200

Budget Status - Dollar Account
(Reimbursable Costs Only)

I T E M	AMOUNTS (US \$)		
	Authorized	Spent *	Remaining
Overseas Salary	153,680	35,000	118,680
Overseas Differential	39,920	9,500	30,420
Overhead (Overseas)	95,278	21,000	74,278
Denver office salaries	82,050	15,000	67,050
Denver office overhead	57,435	10,000	47,435
Special Consultants	10,000	3,000	7,000
Per Diem	2,838	1,000	1,838
Transportation, Baggage, Household Effects	20,800	18,000	2,800
Other Direct Costs	28,500	10,000	18,500
	490,501	122,500	368,001

* Estimated through December 31, 1973

VI. PROGRAM

A. Financial.

Subsequent to the payment of the stamp tax by ECI, we submitted a formal request for exemption from this tax. We hope that the exemption will be granted and our money returned.

B. Technical.

1. We intend to concentrate on our fourth major report during the month of January 1974 so that it can be published as presently scheduled (January 30, 1974).
2. We are expecting the Project Sponsor, Mr. C.M. Langford, to visit the Project Area during the latter part of January, or early in February.

VII. APPENDICES

PART A

- Fig. 1 - Manpower Strength (for end of period)
- Fig. 2 - Actual vs. Scheduled Progress
- Table 1 - Manpower Schedule - cumulative totals U.S.
- Table 2 - Manpower Schedule - cumulative totals
Indonesian (Counterpart)
- Table 2 A - Manpower Schedule - cumulative totals
Indonesian (Direct Hire)
- Table 3 - Arrivals and Departures U.S. Nationals
- Table 4 - Arrivals and Departures Indonesian
- Table 5 - Schedule of Submissions

PART B

Minutes of first general meeting Consultant - Counterpart
"Planning Process on 1st Priority Report"

LEGEND

- U.S. NATIONALS
- 3rd. COUNTRY NATIONALS
- x— INDONESIA COUNTERPART
- INDONESIA DIRECT. HIRE

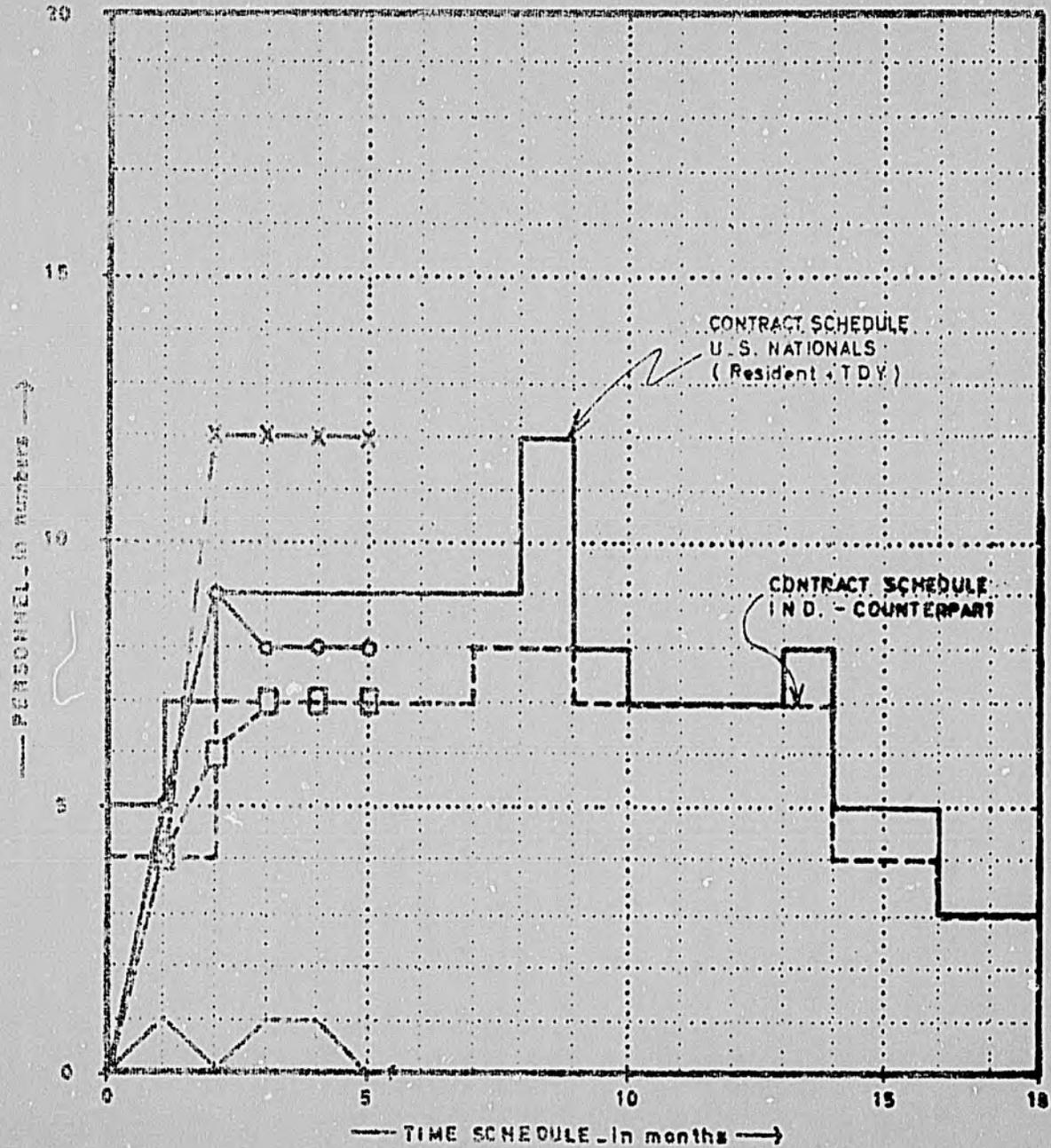


figure No.1. MANPOWER STRENGTH (for end of period)

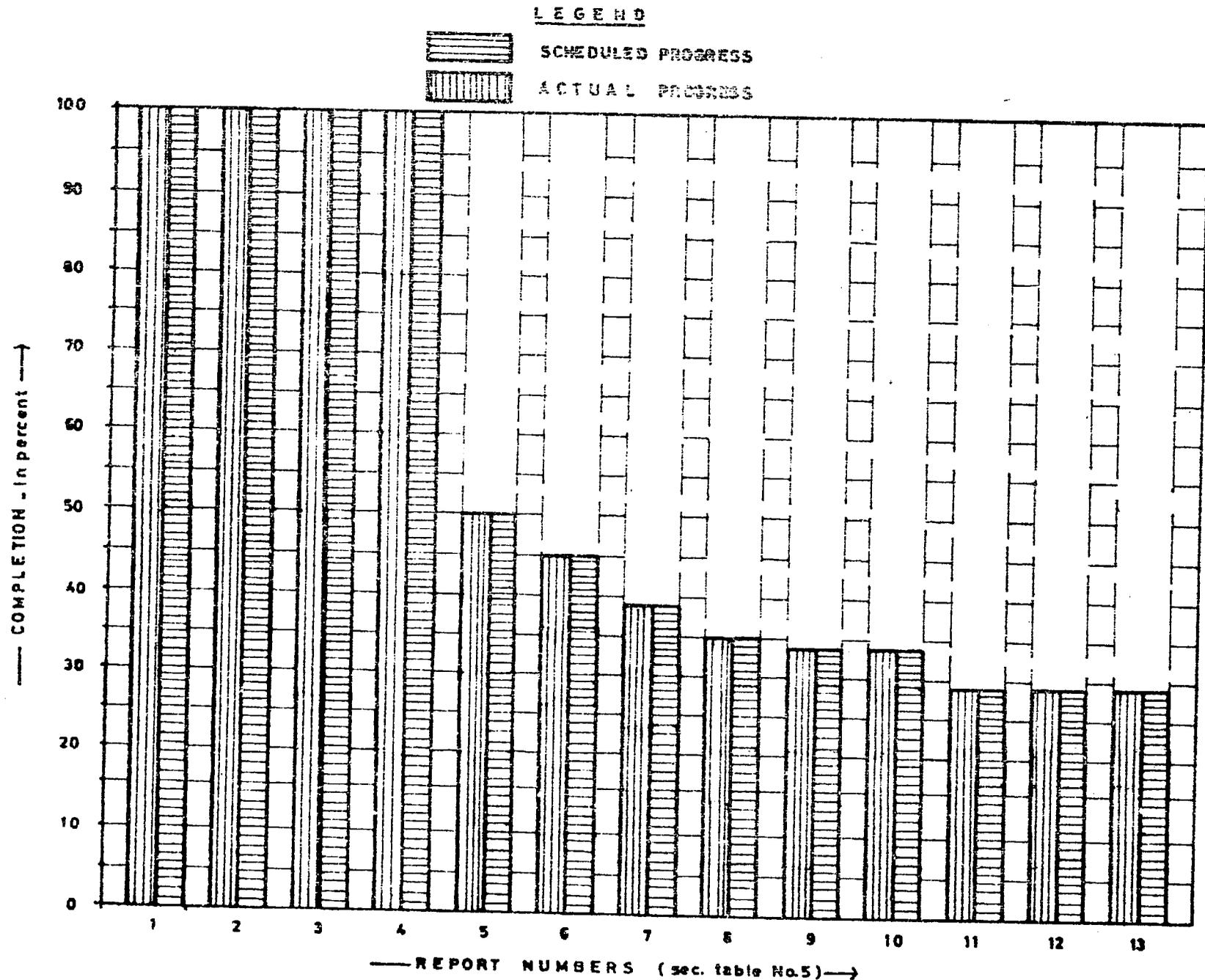


figure No. 2 - ACTUAL VS. SCHEDULED PROGRESS (End of Report Period)

table No.2A - MANPOWER SCHEDULE - cumulative totals in man months

INDONESIAN	1973					1974												1975	TOTALS		
	DIRECT HIRE	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	JAN.	ACTUAL	CONTRACT
1. NUNGKI S.W. - SECR.	062	1.62	2.62	3.62	4.62																18.00
2. SRI Z. OEHAR - CLERK	062	1.62	2.62	3.62	4.62																18.00
3. SUPIARTI - CLERK	029	1.29	2.29	3.29	4.29																18.00
4. ETJIM SUHARI - TYPIST	013	1.13	2.13	3.13	4.13																18.00
5. DJOELIANDI - INTER.	-	0.94	1.94	2.94	3.94																18.00
6. SULIANTI - INTER.	-	0.10	1.10	2.10	3.10																18.00
7. DASIRAN - MESS.	-	1.00	2.00	3.00	4.00																18.00
8.																					
9.																					
10.																					
11.																					
12.																					
SUBTOTALS	1.66	7.60	14.70	21.70	26.70																126.00
MISC. SUPPORT																					
1. DRAFTSMEN	4.00	6.00	8.00	10.00	12.00																*
2. MESSENGER	2.00	2.00	4.00	6.00	8.00																*
3. DRIVERS	4.00	15.00	26.00	32.00	38.00																*
4. CUSTODIANS	4.00	2.00	4.00	6.00	8.00																*
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
SUBTOTALS	14.00	25.00	42.00	54.00	66.00																*
TOTALS	15.66	32.60	56.70	75.70	94.70																126.00

* Not specified in contract

TABLE NO. 3 - ARRIVALS AND DEPARTURES

A. U.S. NATIONALS

<u>NAME</u>	<u>POSITION</u>	<u>ARRIVED</u>	<u>DEPARTED</u>
1. LANGFORD, C.M.	Project Sponsor	23-7-73	4- 8-73
2. ROGERS, G.E.	Resident Manager	30-7-73	—
3. SCHOENLEBER, W.J.	Civil Engineer	1-8-73	—
4. BOGAN, D.E.	Irrig. Eng.	12-8-73	—
5. AU-YEUNG, YING	Hydrologist	25-8-73	13-10-73
6. WILL, ERIC	Chief Planner	15-9-73	15-10-73
7. EDWARDS, R.T.	Agriculturist	16-9-73	—
8. STRUTHERS, R.E.	Ag. Economics	15-9-73	—
9. GARDNER, R.A.	Soil Scientist	15-9-73	—
10. SCOTT, D.P.	Geologist	15-9-73	—

B. THIRD COUNTRY NATIONALS

<u>NAME</u>	<u>POSITION</u>	<u>ARRIVED</u>	<u>DEPARTED</u>
1. KUEHL, M.K.	Chief Eng.	26- 8-73	18- 9-73
2. STEVENS, M.A.	Flood Control	27-10-73	1-12-73

TABLE NO. 4 - ARRIVALS AND DEPARTURES

A. INDONESIAN - COUNTERPART

<u>NAME</u>	<u>POSITION</u>	<u>ARRIVED</u>	<u>DEPARTED</u>
1. Sahat T.P. Siagian	Team Leader	25- 7-73	—
2. Yasin Umar K.	Civil Engineer	1- 8-73	7-12-73
3. Amirudin	Plan. Engineer	15- 8-73	—
4. Tossin	Agriculturist	17- 9-73	—
5. Imam Hidayat	Economist	19- 9-73	—
6. Yusron Lubis	Hydrologist	25- 8-73	13-10-73
7. Achmad Djojoadinoto	Irr. & Drain.	12- 9-73	—
8. Subagjo	Soils	2-10-73	—
9. Iing	Geology	6-11-73	—

B. INDONESIAN - COUNTERPART ASSISTANTS

<u>NAME</u>	<u>POSITION</u>	<u>ARRIVED</u>	<u>DEPARTED</u>
1. Krevet Suryondadari	Planner	1- 8-73	—
2. T. Maruly Nadapdap	Hydrologist	29- 8-73	—
3. Wildan Arifin	Economist	8-10-73	—
4. E. Sumardi A.S.	Soil & Rec.	24- 9-73	—
5. Rahmat Adiwidjaya	Agriculture	24- 9-73	—

C. INDONESIAN - DIRECT HIRE

<u>NAME</u>	<u>POSITION</u>	<u>ARRIVED</u>	<u>DEPARTED</u>
1. Nungki S.W.	Secretary	13- 8-73	—
2. Sri Z. Oemar	Clerk	13- 8-73	—
3. Supiarti	Clerk	23- 8-73	—
4. Etjih Suhari	Clerk	29- 8-73	—
5. Sylvia Djoeliandi	Interpreter	3- 9-73	—
6. Pauline Sulianti	Interpreter	28- 9-73	—
7. Dasiran Tapawira	Messenger	1- 9-73	—

TABLE NO. 5 - SCHEDULE OF SUBMISSIONS

<u>REPORT NO.</u>	<u>CONTRACT PARAGRAPH</u>	<u>SUBJECT</u>	<u>DATE DUE</u>	<u>DATE SUBMITTED</u>	<u>MONTHS</u>
1.	2. 3. 1.	Mapping requirement	30- 9-73	30- 9-73	2
2.	2. 3. 2.	Basic data collection	30- 9-73	30- 9-73	2
2a.	2. 3. 2.	Addendum No. 1	—	15-11-73	3.5
3.	2. 5. 1.	1 st Priority Project			
		Evaluation	30-11-73	30-11-73	4
4.	2. 5. 1.	2 nd Priority Project			
		Evaluation	30-12-73	*	5
5.	2. 5. 1.	1 st Feasibility Study			
		(Draft Form)	31- 5-74		10
6.	2. 5. 1.	2 nd Feasibility Study			
		(Draft)	30- 6-74		11
7.	2. 5. 1.	1 st Feasibility Study			
		(Final)	31- 8-74		13
8.	2. 5. 1.	2 nd Feasibility Study			
		(Final)	30- 9-74		14
9.	2. 3.	Comprehensive Study			
		(Draft)	15-10-74		14.5
10.	2. 4.	Master Plan (Draft)	15-10-74		14.5
11.	2. 3.	Comprehensive Study			
		(Final)	31- 1-75		18
12.	2. 4.	Master Plan (Final)	31- 1-75		18
13.	2. 6. 4.	Completion Report	31- 1-75		18

30 day extension recommended by Steering Committee in order to await soils analysis.

PART B

MINUTES OF FIRST GENERAL MEETING

CONSULTANT -- COUNTERPART

" PLANNING PROCESS ON FIRST PRIORITY REPORT "

MINUTES OF FIRST GENERAL MEETING
CONSULTANT-COUNTERPART
"PLANNING PROCESS ON 1st PRIORITY REPORT"

Date : 7 December 1973
Time : 09:30 hours
Place : Project Office Banjar

I. ATTENDANCE :

Project Officials :

1. Ir. Soebandi Wirasemarto	- Project Manager
2. Ir. Sriyono	- Assistant I
3. Ir. Darmadi	- " II
4. Otton Sibarani B.I.E.	- " III
5. Drs. Soepardijono	- " IV
6. Drs. Sugijarto	- " V

Consultants :

1. Mr. G.E. Rogers	- Resident Manager
2. Mr. W.J. Schoenleber	- Civil Engineer
3. Mr. D.E. Bogan	- Irrigation and Drainage Engineer
4. Mr. R.T. Edwards	- Agriculturist
5. Mr. D.P. Scott	- Geologist
6. Mr. R.A. Gardner	- Chief Soil Scientist
7. Mr. R.E. Struthers	- Economist

Back up service :

1. Ir. Abdullah Angoedi
2. Prof. Ir. Urip Iman Sudjono

Counterparts:

1. Ir. Sahat T.P.Siagian	- Counterpart Team Leader
2. Ir. Yasin	- Civil Engineer
3. Ir. Tossin	- Agriculturist
4. Ir. Imam Hidayat	- Economist
5. Achmad Dj.	- Irr. & Drainage
6. Drs. Sibagyo	- Soil & Rec.
7. Ling Sugandi	- Geologist
8. Krobot Suryo'ndadari	- Representative Planner

II. PROGRAM :

Mr. Soebandi opened the meeting by saying that this was the first general meeting between Consultants and Counterpart Teams to comply with the wishes of the Director General that these meetings should be held every month or bi-monthly. Perhaps the agenda of this and future meetings should be discussed. Mr. Rogers stated that we had the agenda prepared for this meeting and with permission we would proceed according to the prepared schedule. The agenda of future meetings could be done at the end of this meeting.

Mr. Rogers led off the presentation with general remarks concerning contract requirements and team efforts in proposing the First Priority Recommendation Studies Report. He was followed in succession by the following Consultants and the subject each team member covered.

- Schoenleber - Flood Control and Sedimentation.
- Scott - Geologic Investigations of Damsites.
- Bogan - Irrigation, Drainage and Damsite Evaluation.
- Edwards - Agriculture.
- Gardner - Land Reclamation in Segara Anakan.
- Struthers - Economic Evaluation of Potential Projects or Sub-projects.

III. QUESTIONS AND ANSWERS :

- Mr. Rogers : Our hope is that this session is interesting and useful in the future. Are there any questions ?
- Mr. Angoedi : The point of transfer of knowledge should not be done only in speeches, but also in the fields with the counterparts, so they can learn a lot.
- Mr. Rogers : Replied by saying that this transfer of knowledge was a two-way street and we would also gain by the transfer of knowledge.

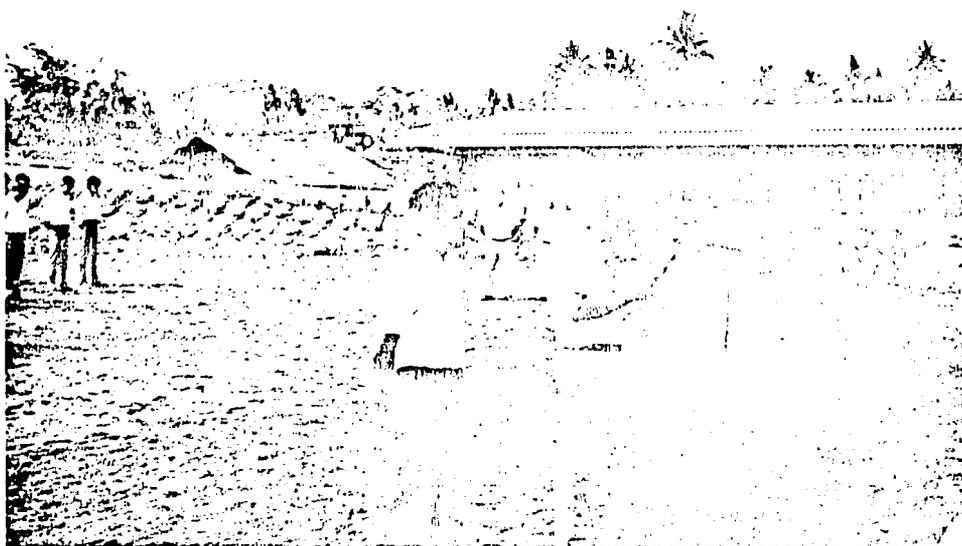
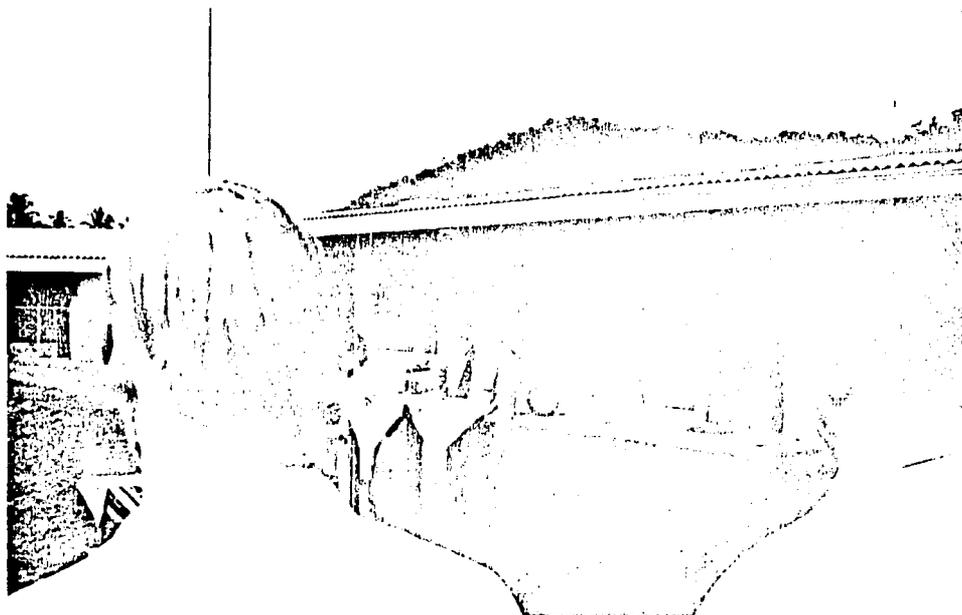
- Mr. Achmad : Asked about hydrologic data analysis for the Citanduy Project.
- Mr. Rogers : Said that hydrologic information was indeed left out and suggested the March meeting be dedicated entirely to hydrologic and meteorological information relative to this Project.
- Mr. Soebandi : Noted that Nusa Kambangan island is a prison island and maybe there would be political implications in reclamation efforts as proposed by ECI.
- Dr. Gardner : Replied that certain social impacts could be expected and this is not within our immediate scope.
- Mr. Angoedi : Expressed an opinion as an Indonesian citizen not as a technician, when he said that transmigration is a national policy - is it not better to spend the money on other islands rather than develop the Segara Anakan ?
- Dr. Gardner : Replied that this is a national policy problem.
- Mr. Rogers : Commented that economists and engineers will plan a Project, but politicians will build them.
- Mr. Struthers : Reiterated the fact that our job was to present cost figures - others on the national level would decide policy.
- Mr. Kriebet : Is the annual or real benefit with or without the project ?
- Mr. Struthers : One must compute the returns both with and without the project to derive the real benefit value.
- Mr. Angoedi : The increase of the flood flow capacity there are regulations of no allowance of tree planting, only seasonal crops between the dikes in flood plain areas.

- Mr. Bogan : Possibly this would increase the flow capacity of the main streams.
- Mr. Rogers : Low vegetation could be acceptable.
- Mr. Angoedi : Again stated that preliminary studies indicated a low benefit-cost ratio in regard to irrigation therefore, a proposal to lift water from the Manganti weir to command a larger area east of the Cibeureum river was being considered.
- Mr. Bogan : Indicated that this was a possibility to be looked into.
- Mr. Rogers : Asked comments from Gardner and Struthers concerning soils capabilities and economics about pumping water for rice production.
- Dr. Gardner : Replied that drainage is a problem and should be considered. Rainfed rice production could be utilized for two crops. Again maybe small low lift pumps could be used to irrigate from the newly created fresh-water lake (Segara Anakan).
- Mr. Struthers : Indicated that all the proposals could be put to the economic test to determine feasibility.
- Mr. Angoedi : The high sediment content (60,000 tons/day) of the Ciseel. Has this been taken into consideration ?
- Mr. Bogan : 150 MCM was allocated for dead storage in the Binangun No. 2 reservoir site because of this high sediment content.
- Ir. Sahat : Asked about following : Dead storage, live storage, flood storage volumes and firm water yield.

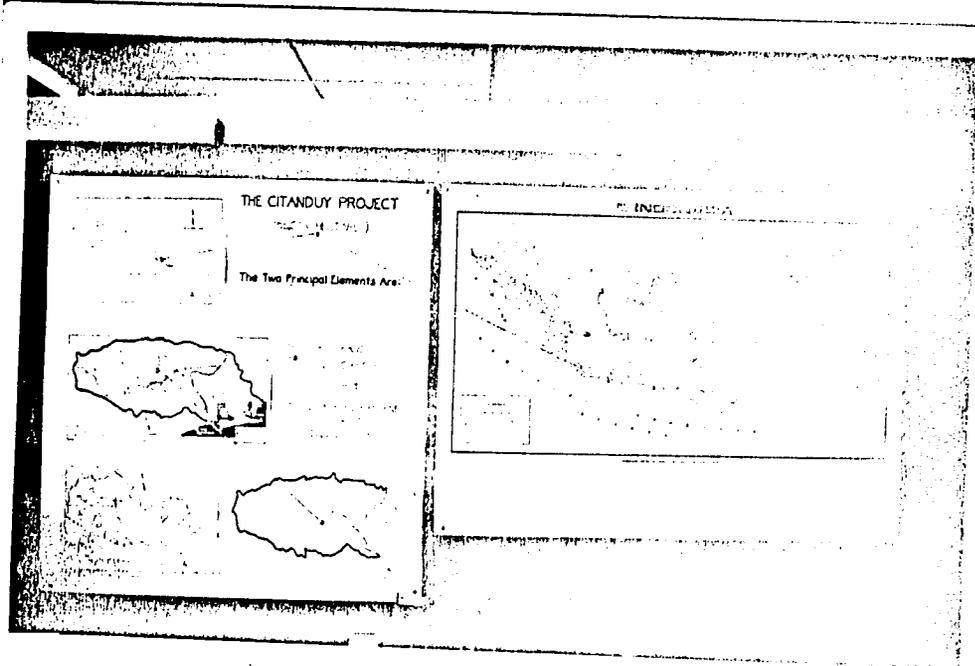
- Mr. Bogan : Explained the terms thusly :
- Dead storage - allocated volume to silt deposition.
 - Live storage - that volume allocated to storage for power production.
 - Flood storage - that volume allocated to storing flood peaks.
 - Firm water yield - maximum outflow that can be delivered 100% of the time based on dry year inflows.
- Mr. Soebandi : Asked about the date of the next meeting
- Mr. Rogers : Replied that the December calendar is filled up possibly the 3rd week of January would be suitable for Mr. Langford's participation at that time.
- Mr. Soebandi : Expressed his thanks for the participants and declared the meeting adjourned at 11:50 hours.

VIII. PROJECT PHOTOS

FUNCTION CELEBRATING ANNIVERSARY OF FOUNDING
OF MINISTRY OF PUBLIC WORKS AND ELECTRIC POWER



VISIT BY USAID MISSION (JAKARTA/WASHINGTON)

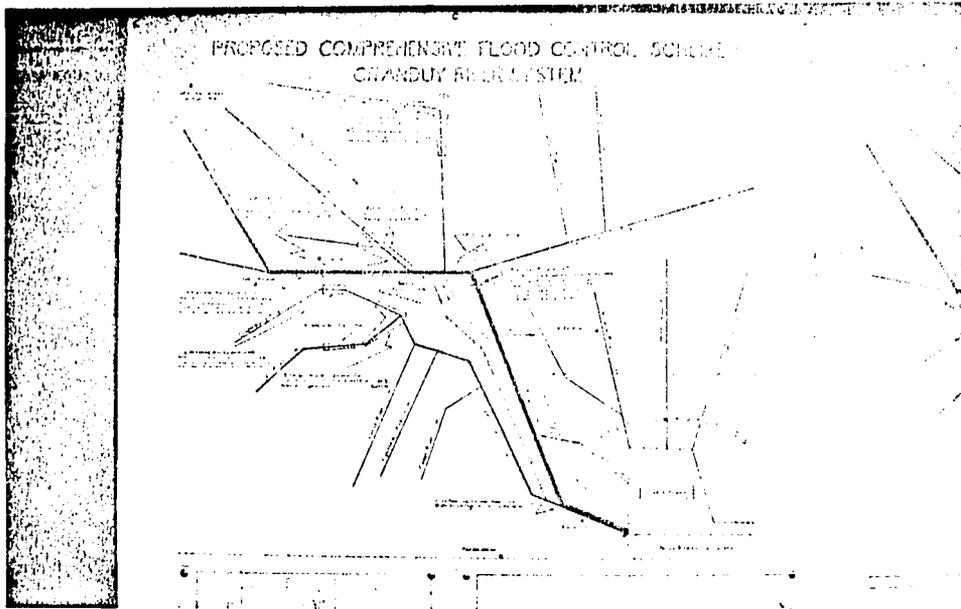


WALL DISPLAYS - BRIEFING SESSION

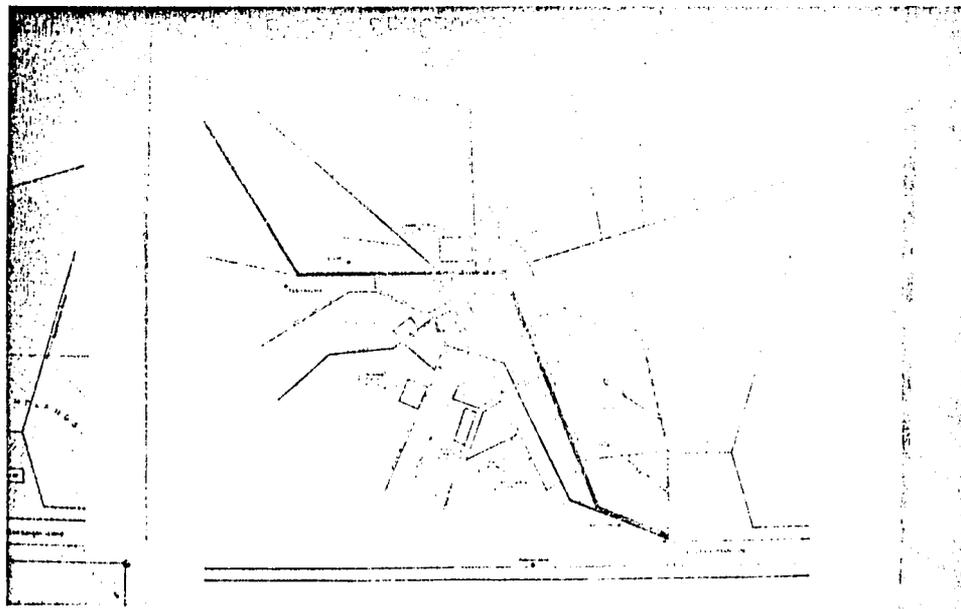


USAID AND E.C.I. PERSONNEL READY
FOR SEGARA ANAKAN EXCURSION

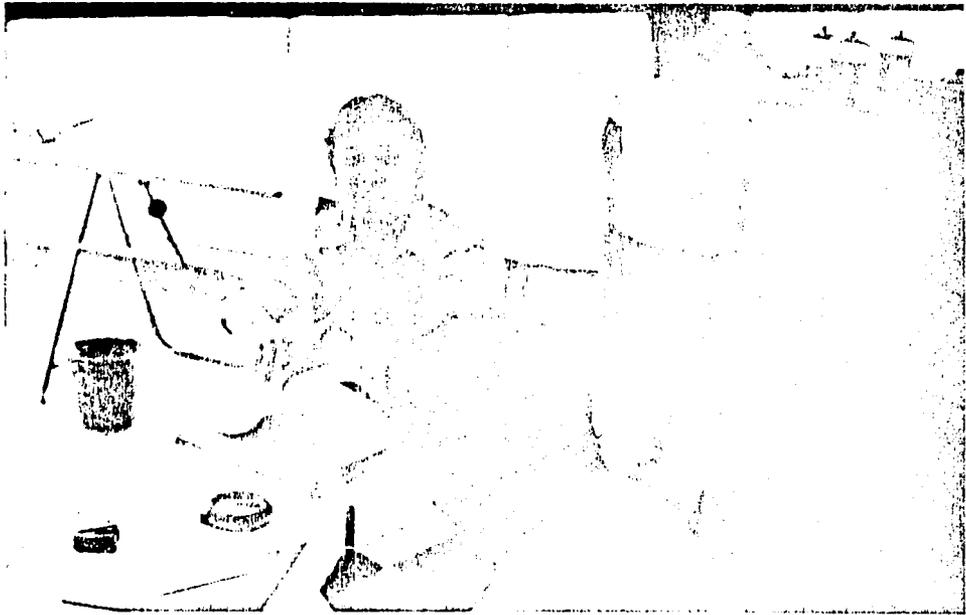
WALL DISPLAYS - USAID MISSION BRIEFING SESSION



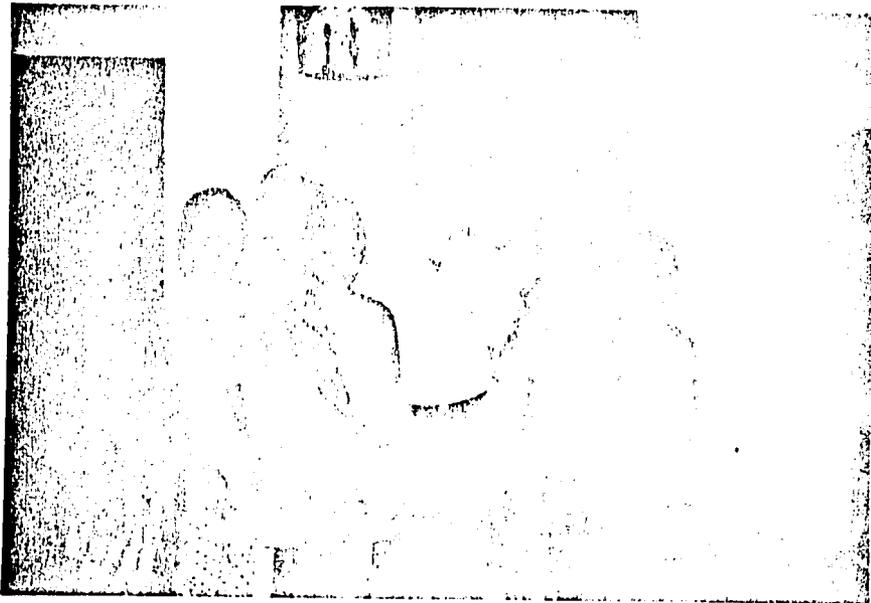
PROPOSED COMPREHENSIVE FLOOD CONTROL SCHEME



EXISTING AND PROPOSED IRRIGATION AREAS



COUNTERPART STAFF AND DRAFTSMAN



E.C.I. OFFICE PERSONNEL