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PERUSAHAAN UMUM LISTRIK NEGARA
JAKARTA INDONESIA

WEST JAVA
ELECTRIC TRANSMISSION PROJECT

MONTHLY REPORT

FEBRUARY 1980

WEST JAVA I AND II PROJECTS
CONTRACTS

Pj. 013/PST/74 and Pj. 023/PST/75

USAID LOANS 497-H-028 & 497-W-032



CHAS. T. MAIN INTERNATIONAL, INC.

BOSTON MASSACHUSETTS U.S.A.

BANDUNG, INDONESIA

MAIN
Engineers

PERUSAHAAN UMUM LISTRIK NEGARA CONSULTANT
CHAS. T. MAIN INTERNATIONAL, INC.

BANDUNG - TROMOLPOS 69. TEL. 56869 JL. PROGO 32
JAKARTA - P.O. BOX 100, KDT KEBAYORAN TIMUR, TEL. 776925 JL. WIJAYA 1/61
SEMARANG - P.O. BOX 26, TEL. 311702 JL. SLAMET 1

21 March 1980

Letter No. B - 1714

Ir. R. Semiawan
Perusahaan Umum Listrik Negara
Proyek Induk Jaringan Jawa Barat & Jakarta Raya
Jl. Cililitan Besar 1
Jakarta.

Subject : West Java I and II Projects
Monthly Reports

Dear Ir. Semiawan :

In accordance with Article 7.2 of the West Java I Contract
No. Pj.013/PST/74 and Appendix V of the West Java II Contract
No. Pj.023/PST/75, enclosed are six (6) copies of our Report
for the month of February 1980.

Very truly yours,
CHAS. T. MAIN INTERNATIONAL INC.

R.W. Malchow

R.W. Malchow

Project Manager

RWM/ns.-

cc. : DIRBANG - PLN PST (Encl.1)
USAID - JKT (Encl.4) ✓
MAIN - BSN (Encl.1)

WEST JAVA I AND II PROJECTS

MONTHLY REPORT

FEBRUARY 1980

A. PERSONNEL

1. ENGINEER

- a. On 12 January, MAIN requested from PLN the approval of Mr. D.L. Hawks as Transmission Line Inspector for the West Java II Project to replace Mr. J.F. Christensen who departed Indonesia on 17 January. On 28 January, PLN approved Mr. Hawks and he joined the Project on 29 February.
- b. End of the month strength was as follows :

<u>NAME</u>	<u>TITLE</u>	<u>ARRIVAL DATE</u>
<u>West Java I and II</u>		
R.W. Malchow	Project Manager	24 October 1978
C.J. Whitby	Manager of Administration	10 September 1974
J.C. Harkey	Substation Engineer	15 October 1977
C.L. Crume	Substation Constr. Eng.	3 June 1979
H.C. Radford	Supervisor of Equip. Maint.	8 July 1979
H. Gunawan	Administrative Assistant	13 August 1979
<u>West Java I</u>		
Zainal Saur	Construction Supervisor	16 March 1978
C.V. Silman	Construction Supervisor	1 June 1978
P.V. Wilson	Construction Supervisor	15 December 1978
<u>West Java II</u>		
D.L. Hawks	Transmission Inspector	29 February 1980

2. PLN

a. End of the month strength was as follows :

<u>JOB TITLE</u>	<u>NUMBER</u>
Transmission Liaison Engineer	1
Logistics Coordinator	1
Secretaries	3
Draftsmen	6
Accounting Clerks	2
Drivers	11

b. In addition to the above Staff, PLN has assigned numerous Counterpart and field personnel to the Projects.

B. ADMINISTRATION AND GENERAL

1. ADMINISTRATION

a. West Java I Contract Data

(1) No. Pj.013/PST/74

16 February 1974

US \$ 1,366,452.00

Rp. 81.308.525,-

Amendment No. 1

2 September 1975

US -

Rp. 14.575.975,-

Amendment No. 2

12 March 1977

US \$ 1,589,996.00

Rp. 49.916.408,-

Amendment No. 3

10 January 1979

US \$ 867,561.00

C.T. Main - Engineering
Services

Rp. 92.358.466,-

(2) No. Pj.153/PST/77 5 September '77

US \$ 2,531,335.58

Amendment No. 1 10 July '78

-

Amendment No. 2 17 September '79

US \$ 202,682.67

Irby Construction Company

Tower Steel, Insulators and Accessories

(3)	No.Pj.202/PST/77	28 November '77	US \$	284,289.50
	Amendment No. 1	30 November '78	US \$	10,449.56
	Copperweld Industries Shield Wire			
(4)	No.Pj.203/PST/77	28 November '77	US \$	1,906,391.70
	Amendment No. 1	10 July '78	US \$	54,615.55
	Amendment No. 2	30 March '79	US \$	30,914.45
	Southwire Company Conductor			
(5)	No.Pj.050/PST/78	10 March '78	US \$	368,473.98
	Amendment No. 1	13 December '78	US \$	35,669.44
	Tension Stringing Equipment Co. Wire Stringing Equipment			
(6)	No.Pj.051/PST/78	10 March '78	US \$	87,852.00
	Ohio Brass Company Lightning Arresters			
(7)	No.Pj.052/PST/78	11 March '78	US \$	4,499,800.74
	Amendment No. 1	17 September '79	US \$	47,613.72
	Irby Construction Company Substation Equipment Maintenance Tools and Equipment			
(8)	No.Pj.053/PST/78	11 March '78	US \$	2,452,391.40
	Amendment No. 1	7 January '80	US \$	80,409.19
	General Electric Company Substation Equipment			
(9)	No.Pj.087/PST/78	11 May '78	US \$	395,819.20
	Amendment No. 1	22 December '79		-
	Motorola Radio Equipment			
(10)	No.Spj.022/PLN/PI RING/77	27 Oct.'77	Rp.	199.278.000,-
	Tikon Abadi Foundations - Section I			

- (11) No.Spj.023/PLN/PI RING/77 27 Oct. '77 Rp. 153.445.000,-
Gunung Kencana
Foundations - Section IIA
- (12) No.Spj.024/PLN/PI RING/77 27 Oct. '77 Rp. 164.789.000,-
Dharma Niaga
Foundations - Section IIB
- (13) No.Spj.010/PLN/PI RING/78-79 8 Dec.'78 Rp. 132.894.300,-
P.T. Perfect Circle
Tower Erection
- (14) No.Spj.065A/SPP/PI RING JATENG/78-79 Rp. 50.278.000,-
Santraco Raya 21 April '79
Tegal Substation Civil Work
- (15) No.Spj.072/SPP/PI RING JATENG/78-79 Rp. 25.966.000,-
Sigma Tirta 17 Oct. '79
Tegal Substation Structure Erection
- (16) No.Spj.017/PLN/PI RING/79-80 Rp. 127.790.850,-
Silkar National 22 January'80
Conductor Stringing - Section I
- (17) No.Spj.019/PLN/PI RING/79-80 Rp. 164.364.000,-
Citac Ltd. 2 February'80
Conductor Stringing - Section III

b. West Java II Contract Data

- (1) No. Pj.023/PST/75 25 January '75 US \$ 1,541,729.00
Rp. 90.598.149,-
Amendment No. 1 12 May '75 US \$ -
Rp. -
Amendment No. 1 12 March '77 US \$ 856,064.00
Rp. 15.239.504,-
Amendment No. 3 10 January '79 US \$ 112,000.00
C.T. Main - Engineering Services Rp. 97.708.072,-

(2)	No. Pj.152/PST/77	5 September '77	Rp. 452.526.908,-
			US \$ 7,744,165.78
	Amendment No. 1 & 2	10 July '78	Rp. 13.137.605,-
			US \$ 311,400.72
	Amendment No. 3	17 September '79	Rp. 3.560.229,-
			US \$ 140,881.33
	Irby Construction Company		
	Transmission Line Construction		
(3)	No.Pj.051/PST/78 .	10 March '78	US \$ 87,852.00
	Ohio Brass Company		
	Lightning Arresters		
(4)	No.Pj.052/PST/78	11 March '78	US \$ 4,981,321.52
	Amendment No. 1	17 September '79	Funded under Loan 497-H-028 West Java I
	Irby Construction Company		
	Substation Equipment		
(5)	No.Pj.053/PST/78	11 March '78	US \$ 3,974,100.16
	Amendment No. 1	7 January '80	Funded under Loan 497-H-028 West Java I
(6)	No.Spj.001/PLN/PI RING/77-78	5 June '78	Rp. 329.553.000,-
	Citac Ltd.		
	Foundations - Section II and III		
(7)	No.Spj.002/PLN/PI RING/78-79	8 Aug. '79	Rp. 175.128.000,-
	Citac Ltd.		
	Foundations - Ujungberung - Cigereleng		
(8)	No.Spj.022/PLN/PI RING/79-80		Rp. 10.618.000,-
	P.T. Sahabat Agung	4 December '79	
	Cibinong - Gandul Stub Angles		
(9)	No.Spj.009/PLN/PI RING/79-80		Rp. 62.441.000,-
	Citac Ltd.	30 November '79	
	Foundations - Section IVA		

- | | |
|---|------------------|
| (10) No.Spj.010/PLN/PI RING/79-80
Citac Ltd. 30 November'79
Foundations - Section IVC | Rp. 36.029.000,- |
| (11) No.Spj.018/PLN/PI RING/79-80
Amarta Karya 24 January '80
Foundations - Section IVB | Rp. 64.630.000,- |
- c. West Java I and II Contract Data
- | | |
|---|--|
| (1) No.Spj.016/PLN/PI, RING/77
Sumber Jaya
Grounding Material | 4 July'77 Rp. 54.245.000,-
For Both Projects |
| (2) No.Spj.017/PLN/PI RING/77
P.T. Arcon
Stub Angles | 13 Aug.'77 Rp. 40.100.000,-
For Both Projects |

2. GENERAL

- a. Extensions of Terminal Disbursements Date Authorization (TDDA) and Terminal Disbursements Date (TDD) for USAID Loans.
- (1) Two items remain to be resolved before USAID will agree to the requested extensions for the TDDA and TDD of the Loans.
- (a) PLN Policy re Connection Charges cited in the recent USAID Audit Report. PLN and USAID will meet next month and expect to complete this item.
- (b) Substation Construction Contracts. Civil work and erection Contracts should be signed or at least officially approved by Letters of Intent.
- b. Amendments to PLN/MAIN Engineering Services contracts
- (1) The proposed Manpower Schedule has been approved by PLN/Project.
- (2) Amendment drafts are being prepared.

C. CONFERENCES AND EVENTS

1. Project Meeting No. 29 was held 2 February in PLN's Bandung offices. Transmission and Substation construction status and progress were discussed. Current Material Delivery Schedules and Work Progress Schedules were distributed.

2. Visitors from the MAIN Home Office this month were:
 - A.W. Huseby - Assistant Director of International Projects and Officer-in-Charge of Indonesian Projects.
 - A.J. Curran - former Rural Electrification Lead Engineer in Semarang and presently Indonesian Projects Coordinator in MAIN's Home Office.
3. Mr. J.W. Brower, MAIN's Projects Director in Indonesia departed Jakarta for MAIN Management Meetings in Boston.
4. Construction Meetings
 - a. Ujungberung Substation Civil Work. Contractor P.T. Erses.
27 February
 - b. Ujungberung to Bandung Utara Foundations. Contractor P.T. Dharma Niaga.
11 February
25 February
 - c. Ujungberung to Cigereleng to Bogor Line Construction. Contractor Irby Construction Company.
11 February
25 February

d. Cibinong - Gandul Foundation Construction. Contractor
P.T. Amarta Karya.

14 February

28 February

e. Cirebon - Ujungberung Conductor Installation. Contractor
P.T. Citac.

5 February

19 February

f. Tegal - Cirebon Conductor Installation. Contractor
P.T. Silkar National.

5 February

19 February

D. PROBLEM AREAS

1. All tower sites and ROW have not been acquired.
2. Tower steel shipments are still not complete.
3. Substation contracts have not been awarded.

E. TRANSMISSION - WEST JAVA I

1. CONSTRUCTION

a. Tower Site Procurement - Ujungberung to Bandung Utara

One (1) site remains to be acquired. The property owner has requested that the tower be moved a few meters.

This will be surveyed and should present few problems.

b. Foundations - Ujungberung to Bandung Utara

Five (5) foundations remain to be constructed, including the one cited above. All should be completed by the end of March.

c. Tower Erection

Tegal to Ujungberung. All 409 towers have been erected and accepted. Ujungberung to Bandung Utara. Of the 51 total towers, 34 have been erected and 11 accepted. Progress has been slow due to the problems cited above. All towers should be erected within one month.

d. ROW Procurement and Clearing

Tegal Area. Negotiations have been completed and payment should be made next month. Clearing will begin 1 April so as not to delay Conductor stringing.

Ujungberung to Bandung Utara. Negotiations are still underway. Prices should be resolved next month.

e. Conductor and Shieldwire

Section I - Tegal to Sunyaragi - Silkar National.

No progress because of inadequate equipment.

This Section may be done by PLN forces and Contractor Citac.

Section IA - Sunyaragi to Tower 229 - Completed by PLN forces.

Section II - Tower 229 to Ujungberung - Citac Ltd.

Progress has been very good. Some 25.4 out of 80 Km have been completed. Completion is scheduled in April.

Section IIA - Ujungberung to Bandung Utara.

Tower 1 to 21 - Citac Ltd.

Tower 21 to 51 - PLN

Stringing should begin by PLN late in March.

2. MATERIAL SUPPLY

- a. More tower steel is in port in Jakarta and is being cleared. Some line hardware is being cleared in Cirebon. Some steel is being fabricated locally. PLN is still awaiting the approval of the Department of Trade for permanent licensing of the trucks. Presently temporary licenses are being renewed monthly and the vehicles are being used to good advantage.

3. OTHER

- a. The foundation of Tower 278 near Sumedang is being washed out by unanticipated action by the river.

At one time, this tower was sited some 200 meters from the river but now is in danger of collapsing. A cassion may be required to solve this problem.

- b. One Stub angle and leg on Tower 387 were damaged but repairs are underway.

F. TRANSMISSION - WEST JAVA II

1. CONSTRUCTION

a. Tower Site Procurement - Cibinong to Gandul.

Nine (9) sites remain to be acquired. This matter is urgent as Irby tower erection crews are fast approaching this area.

b. Foundations - Cibinong to Gandul.

Ten (10) foundations remain to be constructed - the nine (9) cited above and one (1) in the Gandul substation which is underway.

c. Tower Erection.

Ujungberung to Cigereleng. Total 39. Erected and accepted.

Cigereleng to Cibinong. Total 319. Erected 319 and 300 accepted.

Cibinong to Gandul. Total 58. Erected 35 and 25 accepted.

d. ROW Procurement and Clearing.

Bogor to Cibinong. ROW paid and clearing scheduled to start next month.

Cibinong to Gandul. Negotiations are underway. Completion is scheduled next month.

e. Conductor and Shieldwire - Irby

Ujungberung to Cigereleng. Bundled Conductor

Total of 14.5 Km strung and accepted.

Cigereleng to Cibinong.

Total of 148 Km. 89 Km strung and 35 Km. accepted.

Cibinong to Gandul.

Not started as yet.

Should finish all conductor stringing by 1 June.

2. MATERIAL SUPPLY

- a. PLN will provide conductor to Irby to replace that conductor submerged in seawater in Singapore. Irby will replace the conductor probably around the end of August.

- b. Remaining tower steel and hardware is now being cleared through Customs or fabricated locally. Construction delays are not anticipated.

G. SUBSTATIONS

1. CONSTRUCTION

- a. Tegal Substation. The remaining cable should be received next month. All work is complete with the exception of testing of the CCVT's and relays.
- b. Ujungberung Substation. Contract for Civil Work and Erection has been agreed upon with P.T. Erses. The Contractor will install foundations as soon as possible to permit direct placement of the Transformers and CCVT's.
- c. Bogor and Bandung Utara Substations. Still awaiting the awards of Contracts for Civil Work and Structure Erection. Contractors have been decided upon for the access roads and negotiations are underway with the property owners. Construction can begin, however, in advance of completed access roads.

2. MATERIAL SUPPLY

- a. Water proof covers are still needed for substation equipment stored out of doors at Cigereleng.
- b. All shipments from Ohio Brass have been received.
- c. General Electric will ship remaining spare parts and replacement equipment.
- d. Irby will ship miscellaneous material, replacement equipment and relay panels.

H. MOBILE RADIO

- 1. The Puncak repeater station is complete and in operation.
- 2. The Sumedang repeater station should be completed next month; all that remains is the installation of electric power.
- 3. Base and/or Fixed Stations have been completed at PLN/Cawang, MAIN/Jakarta and MAIN/Bandung.

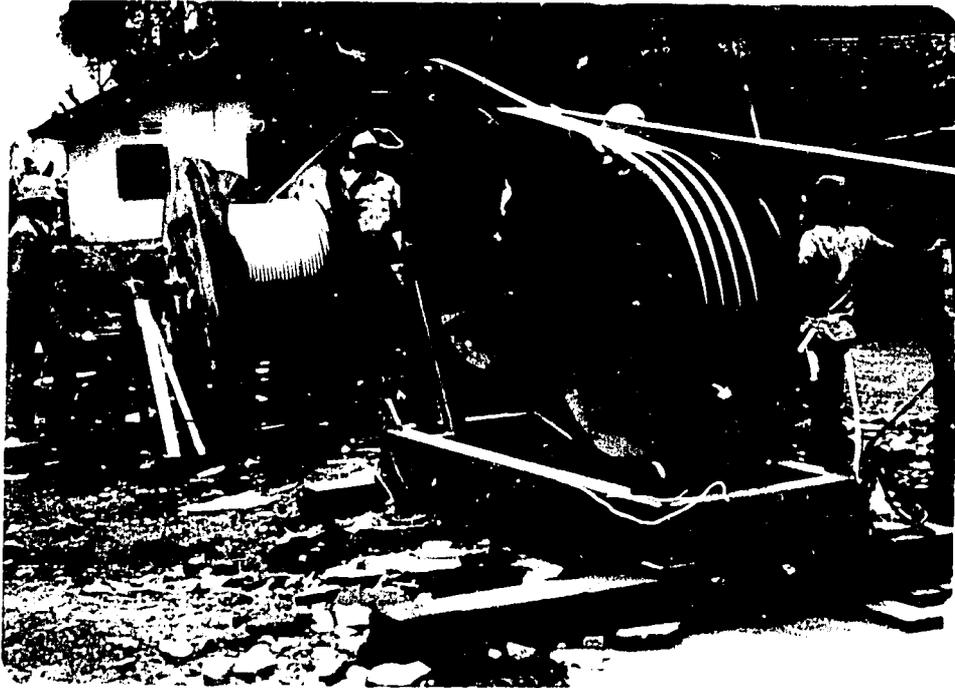
West Java I and II Projects
 Construction Progress
 as of 29 February 1980

Work Item	Weight Percent of Project	Percent of Construction to Date		Percent of Project Completed to Date	
		Scheduled	Actual	Scheduled	Actual
<u>West Java I Project</u>					
Transmission Line					
Foundations	28.9	100.0	98.9	28.9	28.6
Tower Erection	13.5	97.5	96.0	13.2	13.0
Conductor Stringing	11.7	72.0	40.7	8.4	4.8
Substation					
Switchyard Civil Work	17.2	42.0	24.5	7.2	4.2
Control House	11.5	36.5	20.1	4.2	2.3
Erecting and Wiring	11.5	23.7	24.0	2.7	2.8
Radio System	5.7	100.0	98.0	5.7	5.6
Total	<u>100.0</u> =====		-	<u>70.3</u> =====	<u>61.3</u> =====
<u>West Java II Project</u>					
Transmission Line					
Foundations	28.1	100.0	97.6	28.1	27.4
Tower Erection	13.1	100.0	92.0	13.1	12.1
Conductor Stringing	11.1	64.0	55.7	7.1	6.2
Substations					
Switchyard Civil Work	17.9	29.0	11.9	5.2	2.1
Control House	11.9	29.0	11.9	3.5	1.4
Erecting and Wiring	11.9	11.4	11.9	1.4	1.4
Radio System	6.0	100.0	98.0	6.0	5.9
Total	<u>100.0</u> =====			<u>64.4</u> =====	<u>56.5</u> =====

CONDUCTOR STRINGING OPERATIONS

BY PLN CREWS

WEST JAVA I TRANSMISSION LINE



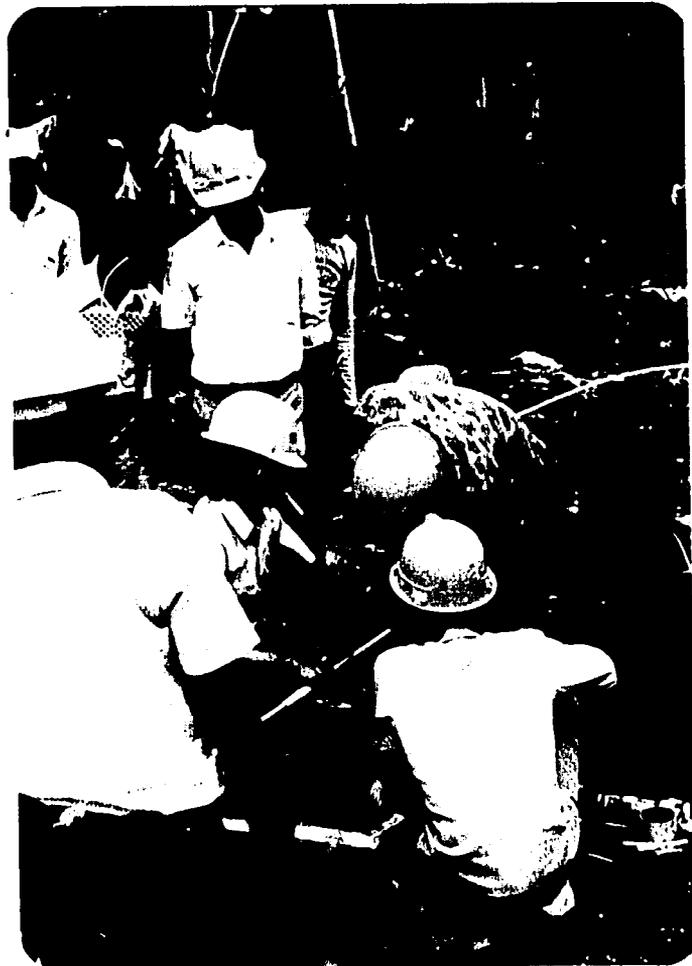
Pulling Conductor from Reel through Tensioner



Pilot Line Rewinder in Operation



Crane Truck supporting
Conductor to clear Road.



Splicing
Conductor

Tension Site in relation
to Tower



Tower Top showing
Insulators tied-in to
prevent Conductor
tangling with Pulling Line.

