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ISN-32934



REPUBLIC OF INDONESIA  
MINISTRY OF PUBLIC WORKS  
DIRECTORATE GENERAL CIPTA KARYA  
DIRECTORATE OF SANITARY ENGINEERING

CONTRACT FOR CONSULTANT SERVICES  
FOR  
SURAKARTA WATER SYSTEM  
NO. 01/WS-S/1/AID/78  
AID LOAN 497-U-044

MONTHLY PROGRESS

**REPORT NO. 17**  
**FEBRUARY 1980**

BURNS & McDONNELL ENGINEERING COMPANY  
AND  
TRANS-ASIA ENGINEERING ASSOCIATES, INC.  
A JOINT VENTURE

USAID/Indonesia  
Information Center



PDAAW 680

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BURNS & McDONNELL Engineering Co.

Architect - Engineers

A JOINT VENTURE

Consultants - Planners

TRANS-ASIA Engineering Associates, Inc.

Please Reply to: P.O. Box 105  
Surakarta

No. 87/BM/TAE/SKA/80  
5 March 1980

Mr. Soesanto Mertodiningrat  
Director of Sanitary Engineering  
Directorate General Cipta Karya  
Jl. Pattimura no. 20  
Jakarta Selatan

Subject : Contract for the Consultant Services for  
Surakarta Water System, No.01/WS-S/I/AID/78  
dated 26 October 1978.

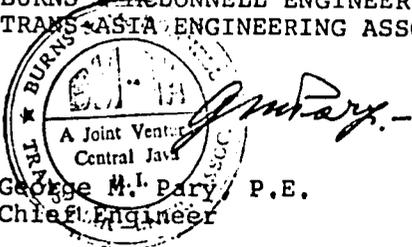
Dear Sir :

In accordance with Section 4.12 and Appendix I of the  
subject Contract, we are pleased to submit fifteen  
copies of Monthly Report No. 17 for the month of  
February 1980.

We hope, that this report will meet with your approval.

Very truly yours,

BURNS & MCDONNELL ENGINEERING CO./  
TRANS-ASIA ENGINEERING ASSOC. INC.

  
George M. Pary, P.E.  
Chief Engineer

cc.	CJWSP	Semarang	(10 copies)
	USAID	Jakarta	( 8 " )
	BM/TAE	Jakarta	( 2 " )
	Burns & McDonnell	Kansas City	( 1 Copy )
	CJWSP - I	Surakarta	( 1 " )
	SWE	Surakarta	( 1 " )
	Mayor of Surakarta	Surakarta	( 1 " )
	File		

GMP/sh

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LIST OF ABBREVIATIONS

a.m.	Before noon
App	Appendix
AWWA	American Water Works Association
BM/TAE	Burns & McDonnell/Trans-Asia Engineering Associates
°C	Degrees Celcius (Centigrade)
CIF	Cost-insurance-freight
CJWS	Central Java Water Supply (Management)
CK	Cipta Karya
FOB	Free-on-board
kg	Kilogram (s)
L/C	Letter of Credit
lpcd	Liters per capita day
lps	Liters per second
m	Meters (lineal)
m <sup>3</sup>	Cubic meters (Note: due to negligible difference in case of water, M <sup>3</sup> and MT are used interchangeably)
Mfg	Manufacturer
M/M	Man/month (s)
msl	mean sea level
MT	Metric tons
MTD	Metric tons per day
mm	Millimeter
No.	Number
O & M	Operation and Maintenance
p.m.	After noon (afternoon)
Rp	Rupiah
SWE	Surakarta Water Enterprise
SWS	Surakarta Water System Project
TAE	Trans-Asia Engineering Associates, Inc.
US	United States (Government)
USA	United States of America
USAID	United States Agency for International Developmnet

## SECTION 1

### NARRATIVE SUMMARY

#### 1A GENERAL

The Contractors working on Sections A and B of the pipeline received Notices to Proceed on Sections C and D. Tukad Mas is to work on Section C and Ipen Kencana Utama on Section D. Both Contractors started work, however the formal contracts have not as yet been finalized.

The Consultant has not been able to hire the additional necessary personnel due to the lack of funds. Therefore the supervision of the construction of all four sections of the pipeline can only be accomplished on a part-time basis.

The gaskets necessary for construction of the transmission line had been received on the jobsite early in February.

No comments on the specifications for the test-production well drilling have been received as yet from Cipta Karya. Other than that, the Consultant is ready to proceed with the work.

Management Assistance Program to SWE has been satisfactorily completed. The Management Specialist will leave the Project early in March. However, it is expected, that the Specialist will return in a few months on additional contract in order to make a short (2-3 months) review of the progress at the Surakarta Water Enterprise.

The O & M Specialist has started the second and final session of training of technical personnel from several water enterprises. The total enrollment for the course is 29 students. The session started on 25 February and will last four weeks, until 22nd of March. The student level, as well as their interest in the course is good.

Meter Repair Specialist is finalizing the setup of the Meter Repair Shop. As soon as the test bench is cleared through the customs, he will proceed with water meter maintenance and repair course.

The scope of the work for the extension and addition to the Consultant's contract has not been finalized as yet. Considering, that the present contract expires on 25 of April, the time for finalizing and negotiations is getting rather short.

#### 1B MAJOR PROBLEMS

The clearance of water meter repair bench through the customs is needed urgently. The Meter Repair Specialist is ready to start training course as soon as the bench is received.

Additional personnel is needed by the Consultant in order to supervise construction of all sections of the transmission pipeline running concurrently. To date however, no funds have been allocated for this effort.

SECTION 2  
ADMINISTRATION

2A SUBMISSIONS/APPROVALS

Consultant's Invoice No. 16 for January 1980 U.S. Dollar reimbursible expenses was submitted to Cipta Karya on February 10, 1980 and was approved by CK on February 20, 1980. Consultant's Rupiah Invoice No. 8 was submitted to Cipta Karya on January 20, 1980 and has been approved on 22 February, '80. These submittals are in accordance with the Contract Appendix II, page II-15.

2B PERSONNEL

The Surakarta office personnel in February were as follows :

E x p a t r i a t e s

- George M. Pary, P.E., Chief Engineer  
arrived 17 August 1979
  
- Thomas G. Fodor, O & M Specialist  
arrived 25 December 1978
  
- James F. Baucom, Pipeline Engineer  
arrived 26 September 1979
  
- Bernardo B. Bayongan, Management Specialist  
arrived 5 November 1978, to depart 10 March 1980
  
- George R. Pike, Meter Specialist  
arrived 26 September 1979

## I n d o n e s i a n

### Professional and Technical :

- A.F. Dengah, Counterpart Chief Engineer  
arrived 8 November 1978
  
- Djoko Imbarno, Construction Supervisor  
arrived 3 September 1979  
resigned as of 28 February 1980
  
- Suyatno Yuwono, Counterpart Hydrogeologist  
arrived 5 January 1979
  
- Mohamad Khalil, Material Coordinator  
arrived 2 October 1978
  
- Abdul Kadir, Senior Inspector  
arrived 9 October 1979
  
- Bambang Agus Salan, Inspector  
arrived 1 May 1979
  
- Mohamad Syarif Lembah, Inspector  
arrived 1 May 1979
  
- Gatot Bramono, Inspector  
arrived 19 November 1979
  
- Akhmad Aries, Draftsman  
arrived 13 April 1979
  
- Translator - Vacancy
  
- Yonathan Jowie, Accountant  
arrived 2 December 1978

Administrative :

- Dradjat Atmardjo, Office Manager  
arrived 2 October 1978
- Sri Hartati, Secretary  
hired 1 June 1979
- Dewi Yuliati, Typist  
hired 7 February 1979
- Rubiyo, Clerk  
hired 1 November 1978
- Chaiz Hidayati, Administrative Clerk  
hired 8 October 1979
- Pamudji Rahardjo, Driver  
hired 2 October 1978
- Soedarno, Driver  
hired 1 December 1979
- Sutrisno, Driver  
hired 2 April 1979
- Djoni Santosa, Driver  
hired 1 May 1979
- Ermita Taher, Supply Clerk/Labor  
hired 19 March 1979
- Arum Munawar, Copy Machine Operator/Labor  
hired 8 March 1979

- Djumhan Hardi, Expeditor/Labor  
hired 2 January 1979
- Endang Tri Siwi D.M., Receptionist/Labor  
hired 1 October 1979
- Suwarno Hadi, Office Boy/Labor  
hired 1 November 1978
- Mulyatmono, Watchman/Labor  
hired 9 October 1978
- E.M. Suprpto, Field Assistant/Labor  
hired 23 November 1979

2C CONTRACT STATUS

Appendix I shows the contract status in man/months expended versus man/months authorized for the project. As can be seen the Materials Coordinator's time has already been expended, although his work is necessary for the duration of the construction.

The Consultant requested Cipta Karya at the December monthly meeting for the permission to extend his time. Verbal approval has been granted.

Appendix II shows billings and balances of approved expenditures on the contract to date. As can be seen, the vehicle/gasoline/maintenance costs have run over the allotted amount. The reason for this overexpenditure is, that soon after the allotments on the contract were made, the devaluation of Rupiah has been announced. Therefore the original costs of the vehicles and maintenance has risen considerably. There was no adjustment made to compensate for the additional costs.

The Consultant requested Cipta Karya at the December monthly meeting to increase the allowance for local transportation from contingency allowance.

This question has been raised again, during the meeting of January 10, 1980. Cipta Karya approved these expenses. The Consultant has been informed, that single line items may run over the allotted amount, provided, that the gross Rupiah expense is kept within the approved allocation.

SECTION 3  
SCHEDULES

3A PROGRESS

3A1 TRANSPORTING OFF-SHORE PURCHASED MATERIALS

Some shortages and damage were discovered in off-shore shipments. Full report is enclosed in Appendix III-B.

AMERICAN CAST IRON PIPE COMPANY :

The gaskets missing from the original shipment have been delivered to the jobsite. The Consultant has recommended to Cipta Karya the release of the 10% retention. As of now this contract is considered satisfactorily fulfilled.

THE ROHAN COMPANY :

The following shipment has arrived from the U.S. to port of Semarang on August 7, 1979

Flush Model Hydrants

Self Closing Hydrants

Ford Meter Box Test Bench

Misc. tools and portable pump equipment

These materials have not been cleared through the Customs as yet.

The Consultant is awaiting the underlined equipment which is urgently required for the SWE's Meter Repair Shop.

CLOW CORPORATION :

47.141 of misc. size valves have arrived to port of Semarang on August 6, 1979, and transported to the Surakarta storage area in January 1980. It was discovered that several items are missing and some damage was done to a few minor parts. The Consultant has contacted the local representative of Clow Corp., however their response was negative. The Consultant will have to contact the Clow Corporation directly.

COLCORINDO RAYA :

The missing parts problem is becoming acute. Colcorindo Raya appears unwilling to pursue this matter and suggested in their letter that the Consultant take up the matter directly with their supplier. Since this contract was signed directly with Colcorindo Raya, the Consultant cannot contact anybody else.

3A2 CONSTRUCTION OF THE TRANSMISSION PIPELINE, PHASE I, SECTIONS A & B

The Contractors have fallen further behind the schedule. Timely completion of the two sections cannot be realistically expected. Although the Consultant has advised the contractors on ways and means to modernise their construction management methods, whereby the construction time could be shortened and even some savings in expenses realized, little if any response was evoked.

Furthermore, the land acquisition for rights of way in Section A has not been completed and is slowing down the construction even more.

3A3 CONSTRUCTION OF THE TRANSMISSION PIPELINE PHASE II,  
SECTIONS C & D

The Contractors on Sections A and B have received from Cipta Karya Notices to Proceed on Sections C and D. However the contracts have not as yet been signed and little progress in field was achieved.

3A4 GROUNDWATER EXPLORATION PROGRAM

Hydrogeological data taking and resistivity survey work is 100% complete. The Consultant has submitted the final Groundwater and Well Development Report for the Ministry's and USAID's approval and is awaiting their response.

3A5 WELL DRILLING PROGRAM

The Consultant has submitted in December the final draft of Bidding Documents including the list of Contractors Prequalification Questionnaire for the Ministry's and USAID's review and approval.

A meeting was held in Cipta Karya's office on February 1, to discuss well drilling program and a new scope of work was suggested. However, no final decision on the number of wells nor their location (north or west of the City) has yet been made.

3A6 MANAGEMENT ASSISTANCE PROGRAM

Management Assistance Specialist has completed his contractual obligations and expected to leave the Project early in March.

3A7 O & M ASSISTANCE PROGRAM

Second session of Classroom Training Program started on 25 February. It is expected to be completed by the 22nd of March.

3A8 METER REPAIR PROGRAM

Meter Repair Program is being slowed down due to the lack of meter repair bench, which is still being held by the Customs at Semarang.

3B WORK SCHEDULED FOR NEXT MONTH

Continue supervise the Transmission Pipeline Construction Sections A & B and the new contracts @ C & D.

Continue working on the drilling program and all related documentation as soon as comments from Cipta Karya are received.

Continue Part II and Part III Classroom and On-Site Training Program.

Continue Meter Repair Advisory services to Surakarta Water Enterprise.

Continue coordination of loading, transporting and unloading shipments of the off-shore purchased materials.

SECTION 4  
ENGINEERING AND MANAGEMENT

4A TRANSPORTING OFF-SHORE PURCHASED MATERIALS

Rohan Company's shipment which arrived on 7 August 1979 is still awaiting the Customs clearance. It will be transported as soon as the clearance is obtained.

One more shipment is expected from the Rohan Company and a shipment from the Ford Meter Box Company is not expected until mid-year.

4B CONSTRUCTION OF THE TRANSMISSION PIPELINE

Appendix III shows the PERT diagram of the pipeline construction. Appendix III-A gives a full report on construction status, quality and any problems encountered or expected. The Contractors, instead of making up belatedness in work, have fallen further behind the time schedule. It appears, that they will not be able to complete the job on time.

4C GROUNDWATER EXPLORATION AND WELL DEVELOPMENT PROGRAM

The scope of work for the well drilling program has not been finalized to date. The job is behind schedule.

4D MANAGEMENT ASSISTANCE PROGRAM

Management Assistance Program has been completed. Final Report by Management Assistant Specialist is being distributed under separate cover with this report.

4E O & M ASSISTANCE PROGRAM

Appendix VI shows the revised pert diagram of the O & M Program. The program is proceeding as rescheduled.

4F METER REPAIR TRAINING PROGRAM

Meter Repair training program has been delayed due to the lack of equipment. In the meantime the Meter Repair Specialist has prepared the Meter Repair Training schedule for training the SWE personnel.

4G STATUS OF WORK ON THE PROJECT

Bar chart shown in Appendix VII shows the status of work up to date. Due to the fact, that several work items extend beyond theoretical end of the Consultant's contract, it is expected, that a time expansion will be granted by Cipta Karya.

4H CONFERENCES :

Reports on conferences are enclosed in Appendix VIII.

SUPAKARTA WATER PROJECT  
 REPORT OF MAN-MONTHS EXPENDED BY CONSULTANT  
 BURNS & McDONNELL / TRANS-ASIA ENGINEERING ASSOCIATES

CONTRACT NUMBER 01/5-5/AID/78 AID LOAN 497-U-044	MAN-MONTHS			
	FOR	CUMULATIVE	% OF TOTAL	TOTAL IN
	February 1980	THROUGH 29 February	SCHEDULE	CONTRACT SCHEDULE
<b>EXPATRIATES</b>				
Principal Liaison Engineer	0.	0.45	22.5	2
Procurement Engineer	0.09	2.34	78	3
Chief Engineer	0	6.5	100	6.5
Pipeline Engineer	1	13.5	67.5	20
Hydrogeologist	1	5.1	31.8	16
Drilling Specialist	0	5.7	47.5	12
Management Specialist	1	2.8	23.3	12
O & M Specialist	1	15.6	97.5	16
Meter Specialist	1	14.4	68.5	21
	1	5.1	63.7	8
<b>EXPATRIATE TOTAL</b>	<b>5.09</b>	<b>71.5</b>	<b>61.3</b>	<b>116.5</b>
<b>INDONESIAN PROFESSIONAL &amp; TECHNICAL</b>				
Counterpart Chief Engineer	1	15.6	78	20
Construction Supervisor	1	5.9	42.1	14
Hydrogeologist	1	13.8	92	15
Materials Coordinator	1	17	121.4	14
Inspectors	4	27.8	57.9	45
Draftsman	1	12	75	16
Translator	0	11.7	97.5	12
Accountant	1	15	68.1	22
<b>INDON. PROF. &amp; TECH.</b>	<b>10</b>	<b>117.9</b>	<b>73.2</b>	<b>161</b>
<b>INDONESIAN ADMINISTRATIVE</b>				
Office Manager	1	17	85	20
Secretary	1	16	75	20
Typist	1	12.6	57.2	22
Clerks	3	48	109.0	44
Drivers	4	54	67.5	10
Laborers	6	69.9	43.6	160
<b>ADMINISTRATIVE TOTAL</b>	<b>16</b>	<b>217.5</b>	<b>62.8</b>	<b>345</b>

APPENDIX 1

Best Available Document

15.

SIBAKARTA WATER PROJECT  
REPORT OF ENGINEERING COSTS  
BURNS & MCDONNELL/TRANS-ASIA ENGINEERING ASSOC.

CONTRACT NO. 01/WS-S/AID/73 SIGNED 26 OCT. 1973 START 1 JAN. 1973 END 31 JAN. 1981 REIMBURSABLE EXPENDITURES	COSTS FOR  FEBRUARY 1980	CUMULATIVE COSTS THROUGH FEBRUARY 1980		CUMULATIVE PAYMENTS THROUGH FEBRUARY 1980			TOTAL BUDGET ESTIMATE FOR CONTRACT
		AMOUNT	% OF TOTAL BUDGET ESTIMATE	AMOUNT RECEIVED IN ✓	TOTAL AMOUNT RECEIVED THROUGH	% OF TOTAL BUDGET ESTIMATE	
U.S. DOLLARS							
Salaries and Related Costs	27,004,98	401,694,36	65,5	26,554,54	374,689,38	61,1	561,992
Transportation	-	16,259,43	28,8	-	16,259,43	16,8	61,513
Equipment	-	-	-	-	-	-	35,033
Miscellaneous	-	30,678,32	92,4	-	30,678,32	92,4	33,181
Training	-	-	-	-	-	-	14,534
Contingencies	-	-	-	-	-	-	75,729
TOTAL DOLLARS	27,004,98	448,632,11	54,0	26,554,54	421,627,13	50,6	5331,014
INDONESIAN RUPIAH							
Salaries	6,652,133	46,498,299	65,3	-	36,846,166	51,7	71,150,000
Transportation	2,776,506	19,550,953	69,3	-	16,784,447	49,3	23,195,000
Housing	2,800,000	27,400,000	85,7	-	24,600,000	76,9	31,950,000
Vehicle Costs	685,000	27,324,770	109,0	-	26,639,770	106,3	25,050,000
Equipment Costs	928,125	10,600,135	80,5	-	9,672,010	73,5	13,153,000
Miscellaneous	1,870,140	16,987,375	68,8	-	15,117,235	61,2	24,670,000
Contingencies	-	8,805,825	45,3	-	8,805,825	45,3	19,416,960
TOTAL RUPIAH	18,701,904	151,167,357	73,6	-	138,465,153	64,8	213,586,560



SURAKARTA WATER PROJECT  
TRANSMISSION MAIN  
PROGRESS REPORT NO. 5  
01 MARCH 1980

I. GENERAL :

At the first of the month the Consultant was advised the material had cleared customs and the Pipeline Construction Specialist made a personal inspection of the  $\varnothing$  450 mm mechanical joint gaskets and fasteners which were air freighted into Jakarta 04 December 1979 by American Cast Iron Pipe Co. After verification of count and size the goods were sent to Surakarta and received there for the start of business on 04 February 1980. As of this writing the only other item(s) of material which could have a delaying factor on completion of the transmission main construction concerns flow meter stops and brass corporation stops for use at high point vents, low point drains (within each reservoir), sample and gauge ports (also within each reservoir). During a meeting on 26 February 1980, the representative of U.S.A.I.D. offered to investigate the use of APO mail to bring in such items from the manufacturer and/or consultant's office in Kansas City.

It had been anticipated the land acquisition for easements in Boyolali Regency would be completed by the Project during this period but such was not the case. Parts of Sections A and C are affected north of the Brambang River and is keeping the Contractor from proceeding through same.

The Consultant was advised during the meeting 26 February that a special representative of Cipta Karya was to be assigned to this Project in Surakarta to enhance communications between the Ministry and the Consultant. It is anticipated such an individual will help to point out deficiencies to the Contractors regarding their progress which in turn will expedite completion of the construction.

## II. WORK IN PROGRESS :

- A. Contractor Tukadmas has now connected the piping along the highway from approximately Sta. 76+00 to the Wonosobo stream crossing and is in the process of completing the south wing walls of both Wonosobo and Brambang River crossings. Work is continuing where possible (not involved in Boyolali Regency land acquisition) along the highway towards Tempel Village. The Kartasura Reservoir piping within the pipe gallery is nearing completion. Overall Section A completion is 55.85%.
- B. Contractor Lepen Kencana Utama has installed the  $\varnothing$  450 mm pipe from Sta 50+00 through the increaser and is continuing with the  $\varnothing$  500 mm pipe installation. The shop drawing was submitted to the Consultant for stream crossing No. III on 27 February and returned the following day to the Contractor "approved subject to corrections". The  $\varnothing$  500 mm pipe has been connected to the existing pipe at the division chamber and south of tunnel No.1. Work is continuing south of the second stream crossing and northward from Sta. 4+00+ . . . Certain rework mentioned in the previous report has been continued with the addition of having to lower some pipe that was installed too high in relation to the gradient. Overall Section B completion is 43.4%.

- C. Contractor Tukadmas received a notice to proceed from the Project dated 11 February 1980 based upon 150 calendar days to completion of Section C. During this period the contractor is laying out the work, delivering materials and initiated excavation operations at approximate Sta. 200+00. Overall Section C completion is 0.28%.
- D. Contractor Lepen Kencana Utama received notice to proceed from the Project dated 11 February 1980 based upon 150 calendar days to completion of Section D. During this period the contractor is laying out the work, delivering materials and initiating excavation operation at approximate Sta. 209+00. Overall Section D completion is 1.02%.

### III. PROBLEMS :

- A. Delay in construction is being experienced due to not having all required land acquisition completed in Section A. Section C is also involved but just having started the delay is not so eminent.
- B. Lack of proper equipment is still causing slow activity, especially pumps not sized for the job required.
- C. Temporary measures are being taken until new inspectors arrive on site, anticipated to be first two weeks in March.
- D. Brass goods under normal delivery will be beyond completion date of the construction.

IV. FUTURE PLANNING :

The Contractors and Surakarta Water Enterprise should now coordinate with each other to establish a date to make the crossties between new and existing mains at Sta. 76+25 and the Kartasura Reservoir (Tukadmas) and to do the work within the Division and Grit Chambers (Lepen Kencana Utama) as it will require a complete shutdown to Surakarta. There is also the possibility the crosstic at Sta. 191+50 can also be made at that time which will then make all remaining crossties require shutting down areas of the city rather than the whole. Various avenues will be investigated to find a way to obtain a partial shipment of those items required by May 1980 from Ford Meter Box Co.

V. PIPELINE CONSTRUCTION SPECIALIST COMMENTS :

As the second phase of the transmission main has now been awarded and construction started, an overall progress can be monitored based upon a time frame from 08 October 1979 to the close of business 09 July 1980 (276 calendar days) and the original contract value (before tax) for the four sections combined (309.059.935,- Rupiahs). Using this criteria we find Phase I completion to be 48.95%, Phase II completion to be 0.559% and the over all completion of the entire transmission main to be 16.55% at the end of February. During the meeting of 26 February 1980, the contractors were again advised of their completion status and the need for proper and sufficient equipment and manpower was emphasized. Both for continuing Phase I to completion and for commencing work on Phase II. Also, the contractors agreed to give their site managers authority to act for the contractors as called for by the Contract Documents which should help to speed up action in the field.

----- END OF REPORT -----

STATUS OF OFFSHORE PURCHASED MATERIALSSHIPMENT FROM CLOW CORPORATION

SHIPMENT NO. 1 OF 1

Parts missing :

- |  |               |
|--|---------------|
| 1. 4" MJ x MJ Gate Valve   | - 2 pcs       |
| 2. Bolts & Nuts  | -             |
| 1 1/8" x 4 3/4"  | - 6 sets      |
| 3/4" x 3 1/2"  | - 1 set       |
| 3. Air Release Valve's accessories   |               |
| All elements of inlet air release valves have not been received included the 1" corporation stops and 1" gate valves | - 31 pcs./ea. |
| 4. Hand wheel pin  | - 6 pcs.      |

Parts damaged :

1. Indicator rod from one of the 18" Butterfly Valves has broken - 1 pc.
2. One of the gate-valve stems of 4" MJ x MJ Gate Valve is bent - 1 pc.
3. 3/4" brass nipple of 10" Altitude Valve is broken - 1 pc.

SHIPMENT FROM THE COLCORINDO RAYA COMPANY

SHIPMENT NO: 1 OF 1

Parts missing :

All connection fittings for flow meters including the bleed valve have not been received. Required : 4 sets.

Parts damaged : None

SHIPMENT FROM THE ROHAN COMPANY

SHIPMENT NO: 1 OF 3

This 1st shipment from the Rohan Company which came to Semarang Port on August 7, 1979 has not been inspected as yet. The Documents accompanying this shipment were incomplete and the Exporter should provide new documents.

SHIPMENT FROM THE ROHAN COMPANY

SHIPMENT NO: 2 OF 3

Parts missing :

1. Service Clamps :

- |                  |   |
|------------------|---|
| List I item #3,  | - Pipe O.D. Range 1.90" - 20"<br>outlet 1" - 25 pcs     |
| List I item #11, | - Pipe O.D. Range 3.18" - 3.50"<br>outlet 3/4" - 25 pcs |
| List I item #12, | - Pipe O.D. Range 3.18" - 3.50"<br>outlet 1" - 25 pcs   |
| List I item 20   | - Pipe O.D. Range 4.80" - 5.31"<br>outlet 3/4" - 25 pcs |

- List I item 21, - Pipe O.D. Range 4.80" - 5.31"  
outlet 1" - 25 pcs
- List I item 26, - Pipe O.D. Range 6.25" - 6.75"  
outlet 3/4" - 25 pcs
- List I item #27, - Pipe O.D. Range 6.25" - 6.75"  
outlet 1" - 25 pcs.

Received in incomplete condition:

- List I item # 19, - Pipe O.D. Range 4.80" - 5.31"  
outlet 1/2"  
Received 24 pcs of 25 pcs
- List I item # 25, - Pipe O.D. Range 6.25" - 6.75"  
outlet 1/2"  
Received 3 pcs of 25 pcs
- List K item # 16, - Trucks, 1 1/2 ton with swivel crane.  
No tools and spare wheel for  
these trucks.

Parts damaged :

- List K item # 16, - One windshield, one right hand  
door and one rear view mirror  
have been broken.

SHIPMENT FROM THE ROHAN COMPANY

SHIPMENT NO; 3 OF 3

Parts missing :

PVC strainer for SPX water meter - 137 pcs

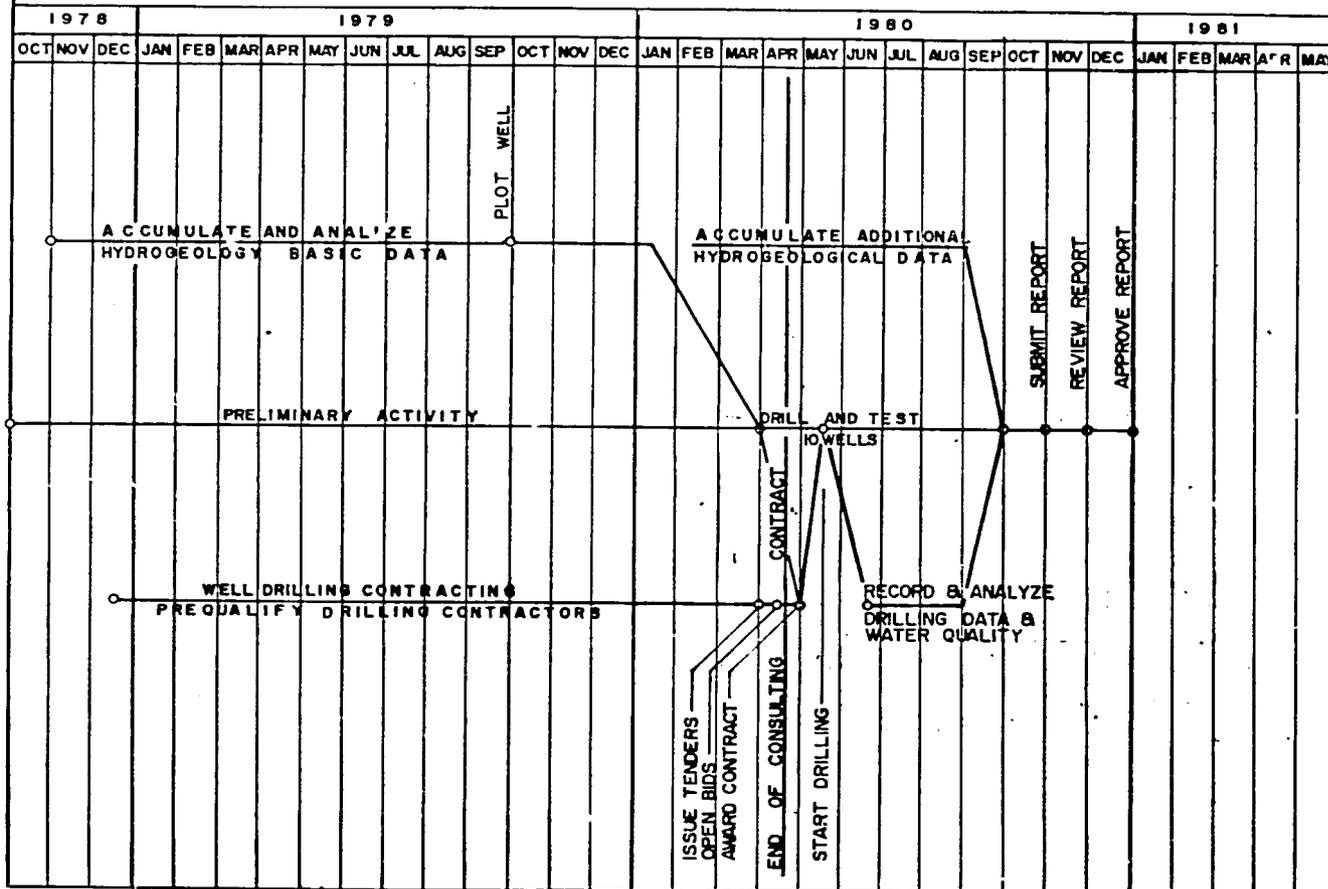
Received in incomplete condition :

- List J item # 1, - The pump was not bolted to a  
heavy wooded base.
- 1" water suction hose with coupling  
missing
- 3/4" brass gate valve missing
- 3/4" brass test gate valve missing
- pressure test gauge missing

Parts damaged : None.

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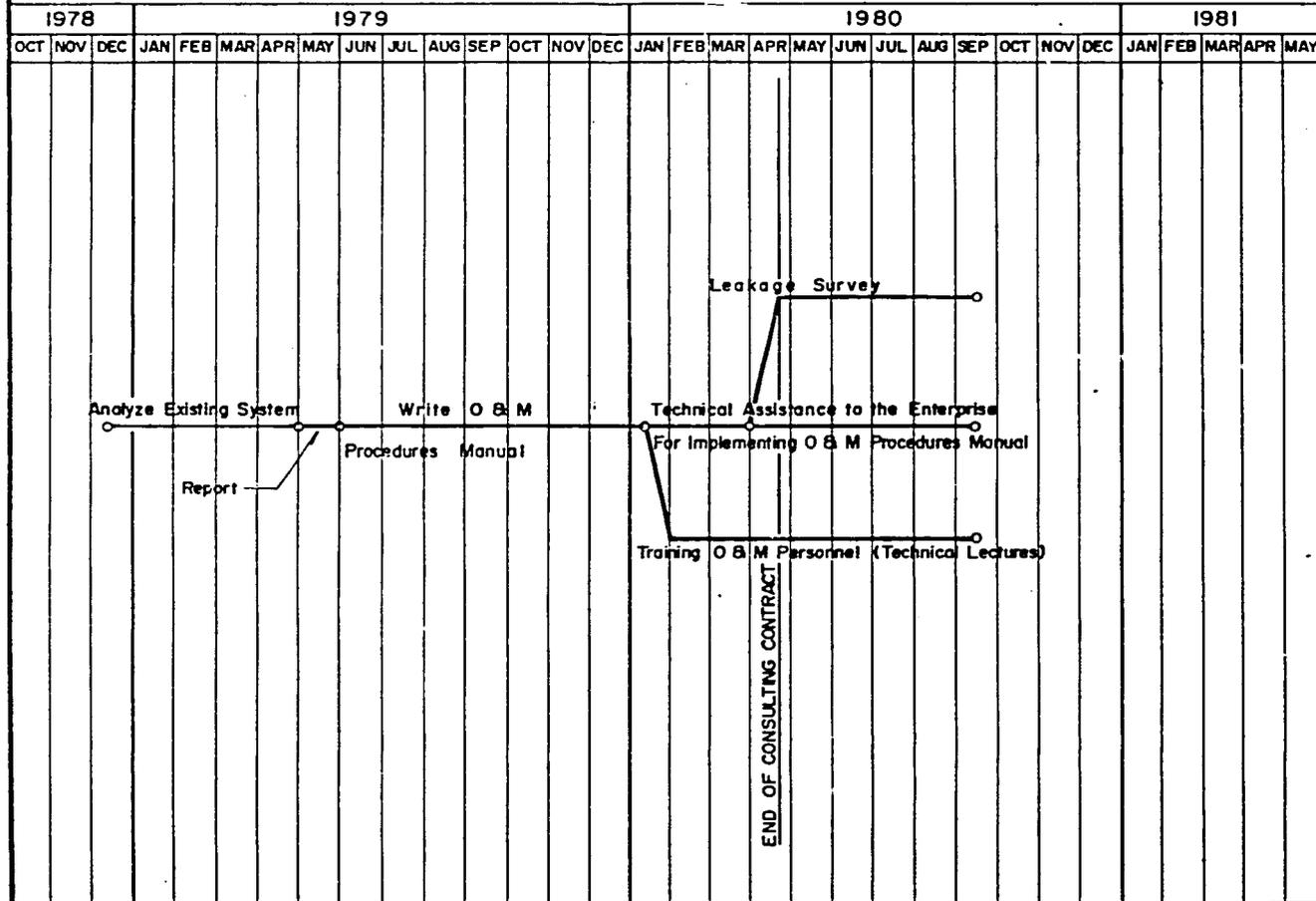
**SURAKARTA WATER PROJECT  
ACTIVITY FLOW DIAGRAM (PERT)  
GROUND WATER EXPLORATION AND DEVELOPMENT**



BURNS & MCDONNELL ENGINEERING CO  
TRANS-ASIA ENGINEERING ASSOCIATES INC.

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SURAKARTA WATER PROJECT  
ACTIVITY FLOW DIAGRAM (PERT)  
OPERATION AND MAINTENANCE ASSISTANCE PROGRAM



BURNS & McDONNELL ENGINEERING CO  
TRANS ASIA ENGINEERING ASSOCIATES INC

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WATER METER PROGRAM MONTHLY PROGRESS REPORT

FEBRUARY 1980

This report covers the period from February 1 to 29, 1980.

WORK DONE :

In the first week the Meter Specialist was busy in supervising the work at the Meter Shop. There were some changes in the height of the drill press and the grinder wheel tables. Some electrical installations that were put in the wrong area have been taken out and put in the right location. When the electrical system had been installed, the Meter Specialist had the pump connected to power. The water installation for the Meter Repair Shop was complete by the end of the second week. After all tables were in place, the whole shop was washed out with water, and as the doors have been put to the Meter Repair Shop, it can be locked any time when there is no one inside.

Meter Record Cards, Daily Work Sheets etc., have not been printed yet, so the Meter Specialist discusses it with Mr. Soedarto, the Director of the Water Enterprise, to print them as soon as possible as they will be necessary for the training and for the operation of the Meter Repair Shop.

The desk and the filing cabinets have been put in and the parts bin has been installed. The Meter Specialist had an additional meter rack placed in the right position.

The O & M and Meter Repair Classroom Studies Phase II has been commenced on February 25, 1980.

The Meter Specialist is responsible for the class on Water Meters until March 4, 1980, except the 26th of February as

was a special Monthly Progress Meeting at the Project's Office, Surakarta. The O & M Training Program and the Meter Shop for Water Meter Repair were some of the topics at the meeting.

The O & M and Meter Repair Classroom Studies covered the basic functions of a Water Meter, different types of measurements such as : (1) domestic, (2) compound, (3) fire service, (4) turbines, (5) detector checks fire line type with small meter attached, (6) Proportional type and (7) propeller type.

On February 28, the O & M and Meter Repair Classroom Studies covered the Meter Reading went completely through AWWA Specifications on Multi-jet Meters and reviewed previous lessons. It was ended with question/answer period.

On February 29, meter repair was continued and reasons were discussed why meters are important to a water system. Through the complete program of testing meters, the function of gauges on test bench and the function of test rate indicator. The end of the week was used to give a test to the participants with 30 questions. It seems that the whole week of the Classroom Studies ran very well.

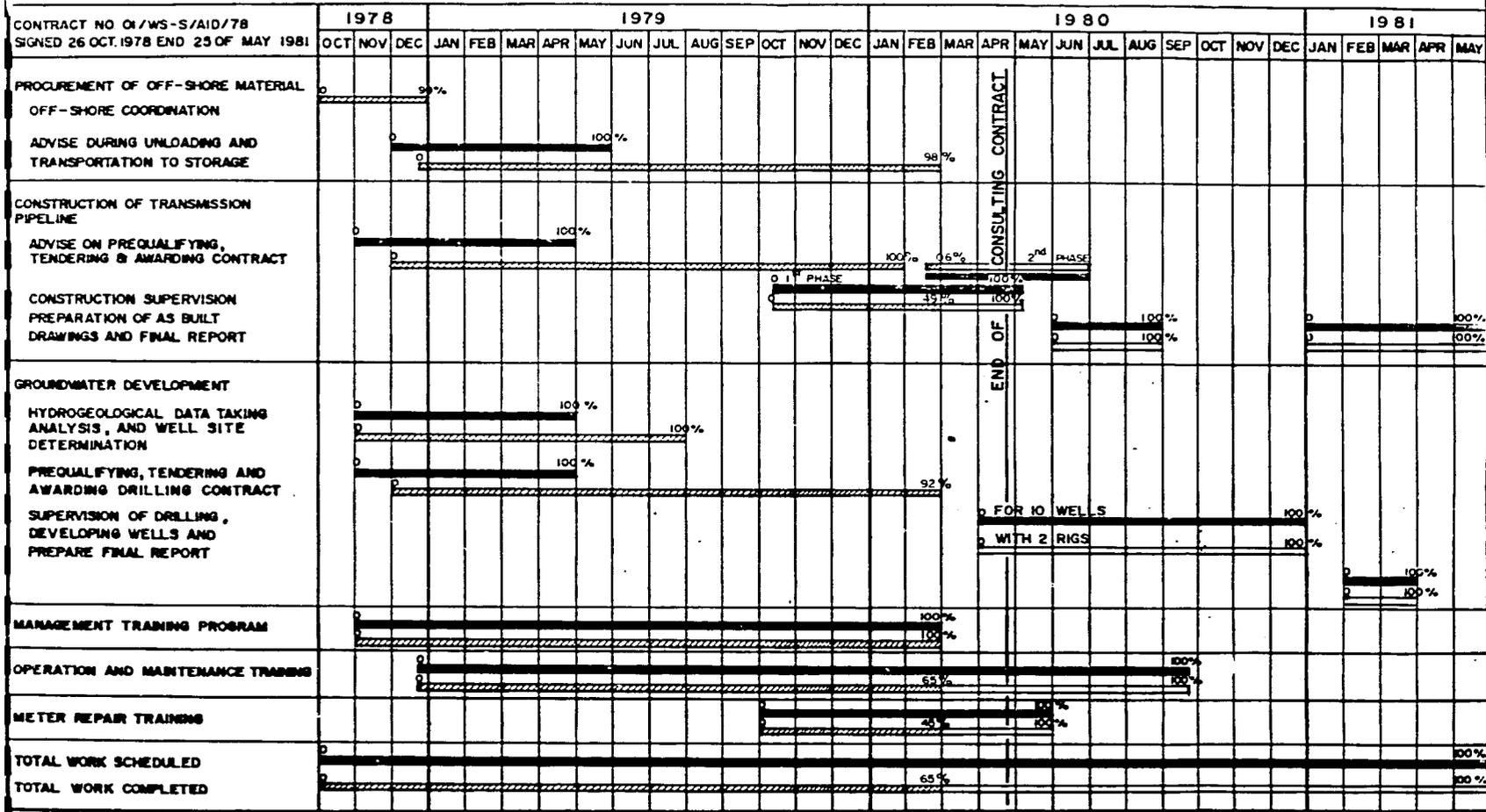
No information from Mr. Bobby Utomo when he will complete the delivery of equipment ordered, so the Meter Specialist would prefer to look for another supplier.

PLANS FOR NEXT MONTH :

1. Continue supervision on the completion of the Meter Shop.
2. Continue giving lectures to the participants of the Training Program on Water Meter.

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**SURAKARTA WATER PROJECT  
SCHEDULE OF ENGINEERING ACTIVITIES  
PERCENT COMPLETED AT END OF NOVEMBER 1979**



CONSULTING CONTRACT  
END OF

0 1<sup>st</sup> PHASE

2<sup>nd</sup> PHASE

FOR 10 WELLS

WITH 2 RIGS

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## MEMORANDUM OF MEETING

Subject : Monthly Project Progress

Place : Consultant's Office, Surakarta

Date : February 26, 1980

Time : 09:50 - 02:10 p.m.

Participants :

1. Mr. Azis A.S.	- DSE
2. Mr. Suwandi S.	- DSE
3. Mr. Paul Thorn	- USAID
4. Mr. Krisno Darusman	- CJWSP
5. Mr. Djoko Resmani	- CJWSP
6. Mr. Harsono	- SWSP
7. Mr. Soedarto	- SWE
8. Mr. Soelarno	- SWE
9. Mr. R. Robinson	- CK/USAID
10. Mr. Sihono	- CK/USAID
11. Mr. F. Midgett	- BM/TAE
12. Mr. George M. Pary	- BM/TAE
13. Mr. T.G. Fodor	- BM/TAE
14. Mr. B.B. Bayongan	- BM/TAE
15. Mr. George R. Pike	- BM/TAE
16. Mr. J.F. Baucom	- BM/TAE
17. Mr. A.F. Dengah	- BM/TAE
18. Mr. Suyatno Y.	- BM/TAE

## Results

## I. Transportation of off-shore purchased material :

1. BM/TAE to telex to U.S.A. about Rohan Company Shipment Documents
2. BM/TAE to telex Burns & McDonnell, U.S.A., to sent a.s.a.p. shop drawings of materials of latest awarded contract to Ford Meter Box Company .

3. BM/TAE to submit to CK and USAID : size and weight of Ford Meter Box Company's urgently needed material for the completion of the installation of Transmission Main. USAID to consider the possibility to transport it by air freight to APO Jakarta.
4. Installation of Transmission Main not to be dependent to unavailability of off-shore purchased material. Local purchases approved if really needed.

## II. Installation of Transmission Main :

1. Management of Program to be improved. CK will appoint an Engineer to this program to coordinate opinions of BM/TAE, SWE and CJWSP, with authority to make immediate decisions.
2. BM/TAE to work in close contact with SWE and CJWSP.
3. BM/TAE not to interpret contract too tightly, but to consider the situations and the conditions of the site to emphasize progress.
4. Stage II : Inspectors to be added.  
Completion time 5 months starting from February 11, 1980  
BM/TAE, SWE and CJWSP to eliminate any constraints.

## III. Groundwater Investigation Program :

1. Four (4) Test-Production Wells to start a.s.a.p. Two (2) in West of Solo, two (2) in North of Solo.
2. BM/TAE to prepare program on additional yield of wells to the existing design of Transmission Main.

3. Drilling Contract with DSE, without any AID conditions. Tender Document in Bahasa Indonesia.
4. USAID to provide pumps, generators and transmission pipeline material.
5. BM/TAE to investigate whether additional water from proposed six wells West of Solo can be transmitted by designed Transmission Main.

IV. Management Assistance Program :

1. SWE has appointed one (1) person to implement program.
2. BM/TAE has observed implementation of program during January and February 1980, and was satisfied with its improvements.
3. Call-back of Specialist three (3) months after the first additional water from Spring to Solo customers (approximately October 1980).

V. Operation and Maintenance Program :

1. BM/TAE satisfied with Training Program and will improve it.
2. Off-shore training just as observation by SWE; more inland training for SWE appointed personnel.
3. BM/TAE to prepare program, discuss with SWE and CJWSP, forward detail plan to DSE, for leak survey and rehabilitation of existing distribution lines for Rp. 40 million available budget, which should be absorbed before end June 1980.
4. Leak detector purchase, within BM/TAE contract, to be executed.

VI. Meter Repair Training Program :

1. BM/TAE still waiting for meter test bench within Rohan first shipment held at Semarang.

VII. Other Subjects :

1. BM/TAE to calculate how many percent of Surakarta population can be supplied with water from the Spring on four (4) wells, after completion of Transmission Main.

BM/TAE contract approved to be extended, including designing 15 to 17 kampongs outside KIP kampongs' distribution according to available water, without polling.

USAID will prepare a letter of intent to extend BM/TAE present contract.

2. BM/TAE to investigate size of laboratory after approval of equipments by SWE.
3. Off-shore purchased vehicles to be directly in SWE's name. (The vehicles have already been delivered to SWE).
4. Connection cost for new water services to be reduced to a minimum to enable poorer.
5. DSE to investigate how to finance SWE's audit cost.