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PD-AAN-681

ISN-32933



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. 16
JANUARI 1980

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

USAID/Indonesia
Information Center

PDAAN 681



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BURNS & McDONNELL Engineering Co.

Architect - Engineers

A JOINT VENTURE

Consultants - Planners

TRANS - ASIA Engineering Associates, Inc.

Please Reply to : Kotak Pos 105
Surakarta

No. 47/BM/TAE/SKA/80
5 February 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. 16 for the month of
January 1980.

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

Very truly yours,

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



P.E.

c.c :	CJWSP	Semarang	(10 copies)
	USAID	Jakarta	(8 ")
	BM/TAE	Jakarta	(2 ")
	Burns & McDonnell	Kansas City	(1 copy)
	CJWSP - I	Surakarta	(1 ")
	SWE	Surakarta	(1 ")
	Major 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 ³	Cubic meters (Note: due to negligible difference in case of water, M ³ 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

It is planned now to award Sections C and D of the transmission pipeline to the contractors. The funding of additional personnel for the Consultant has not been approved as yet. The Consultant feels, that he cannot perform a good supervision and administration of all the contracts with the present personnel and facilities.

Construction quality of the pipeline is satisfactory. Since the construction of bare pipe has been more than 50% completed, the fittings will be required very soon. Sleeve couplings arrived at the site on January 14 and are being installed. The gaskets were airlifted to Jakarta, arriving on December 4th 1979. This shipment has not cleared the customs as yet. Since the bid for brass goods from the Ford Meter Box Company has only been approved in November, there is little chance of their arriving on time and temporary measures will have to be taken. However no temporary measures can be taken for gaskets and therefore it is essential that they be delivered to the site as soon as possible.

Survey of the locations of water wells has been completed and the final form of specifications for drilling has been distributed for comments. The Consultant is ready to proceed with the work.

Management Assistance Program to SWE is proceeding on schedule. The Management Specialist has been monitoring and discussing with the management of the Surakarta Water Enterprise further streamlining of operations.

The O & M Specialist has conducted the first two-week training session for the personnel of water enterprises from many areas of Indonesia. A total of 32 students attended the session and took Part I Examination. Although the exact results are not known at this writing, it appears, that the session was successful.

Meter Repair Specialist has not started the training course as yet, due to delays in the completion of the meter shop and the lack of meter repair bench which has not cleared the customs in Semarang as yet.

The Liaison Officer and the Chief Engineer have discussed on January 11, 1980 the Joint Venture's proposal for the extension of contract and additional work, with Cipta Karya and USAID. The request of USAID to include specifics in the description of the Scope of Work has been completed during the month, however Cipta Karya informed the Consultant that some changes in the Scope of Work may be requested. The Consultant awaits Cipta Karya's final decision.

IB MAJOR PROBLEMS

The single major problem at present is timely delivery of gaskets. The gaskets have arrived two months ago in Jakarta, however to date they have not been cleared through the customs. Unless they can be delivered as soon as possible, the work on Phase I may come to a standstill.

SECTION 2
ADMINISTRATION

2A SUBMISSIONS/APPROVALS

Consultant's Invoice No. 15 for December 1979 U.S. Dollar reimbursible expenses was submitted to Cipta Karya on January 16, 1980 and was approved by CK on January 22, 1980. Consultant's Rupiah Invoice No. 8 was submitted to Cipta Karya on January 21, 1980 but has not been approved as yet. These submittals are in accordance with the Contract Appendix II , page II-15.

2B PERSONNEL

The Surakarta office personnel in January 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

- 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
- 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 Salam, 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
- Hendradi, Translator
arrived 3 September 1979 , resigned as of
January 31, 1980. The Consultant is looking for replacement.
- Yonathan Jowo, 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
- Djoni Santosa, Driver
hired 1 May 1979
- Sutrisno, Driver
hired 2 April 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
- Sri Sadono, Office Assistant/Labor
hired 20 November 1979
- E.M. Suprapto, 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 was much higher than expected. 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
S C H E D U L E S

3A PROGRESS

3A1 TRANSPORTING OFF-SHORE PURCHASED MATERIALS

AMERICAN CAST IRON PIPE COMPANY :

The missing 18" \varnothing gaskets have been delivered to Jakarta on December 1979. To this date however, they had not been cleared through the customs. It is essential, that the gaskets be delivered to the site as soon as possible, otherwise the construction work may have to be halted.

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.

The Contract for transportation has been awarded to P.T. V.T.P. All these materials have been transported from Semarang to the Surakarta storage area.

COLCORINDO RAYA :

36.32 kg of materials consisting of 4 annubar and flow meter were arrived to port of Semarang on June 20, 1979 and have been delivered by P.T. VTP to Surakarta on 1st December, 1979.

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

P.T. Tukad Mas responsible for Section A of the pipeline and P.T. Lepen Kencana responsible for Section B, continue their work on the pipeline. The overall progress 5% behind schedule. Both contractors are being urged by letters from the Consultant and Cipta Karya Project Manager to improve performance.

3A3 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.

3A4 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.

It is expected, that early in February a meeting will be held to discuss the submittal.

Location surveys for all ten wells have been completed and tied to national grid.

3A5 MANAGEMENT ASSISTANCE PROGRAM

Work is on schedule and is 93% complete.

3A6 O & M ASSISTANCE PROGRAM

Preparatory work for Classroom Training Program is continuing, and is on schedule. The Training Program started on January 14, 1980 and the first two-week session has been successfully completed.

3A7 METER REPAIR PROGRAM

Advisory work is on schedule and is 42% complete. Assistance and supervision for the proper purchase and installation of various equipment is continuing. The work is progressing.

3B WORK SCHEDULED FOR NEXT MONTH

Continue supervise the Transmission Pipeline Construction Sections A & B.

Continue working on the drilling program and all related documentation.

Continue Management Advisory services to the Surakarta Water Enterprise, supervise General Accounting and assist implementing the Organization Manual.

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

Transportation of that part of offshore procured materials which arrived in Semarang is nearly complete. The important part is to clear through the customs and transport to Surakarta the gaskets, which arrived in Jakarta in December and shipment from Rohan Company, which arrived in Semarang on August 7, 1979. Some of the shipments arrived incomplete or damaged.

Appendix III-B shows the situation in detail.

4B CONSTRUCTION OF THE TRANSMISSION PIPELINE

Appendix III shows the PERT diagram of the pipeline construction. Appendix II-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, unless they take firm measures to correct the situation.

4C GROUNDWATER EXPLORATION AND WELL DEVELOPMENT PROGRAM

Appendix IV shows the planned program which is falling behind schedule. It is hoped, that early in February a meeting will be held on the rescheduling of this part of the project.

4D MANAGEMENT ASSISTANCE PROGRAM

Management Assistance Program is shown on chart Appendix V. Appendix V-A provides narrative report and plans for February 1980.

4E O & M ASSISTANCE PROGRAM

Appendix VI shows the revised pert diagram of the O & M Program. The program is proceeding as rescheduled. Appendix VI-A shows the syllabus of Part I, concluded on 26 January 1980.

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. See Appendix VI-B.

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 extension will be granted by Cipta Karya.

4H CONFERENCES :

Two executive meetings were held during January in Jakarta. Since these meetings were mostly concerned with the extension of and additions to the Consultant's contract, no report is deemed necessary.

On January 18, 1980 a meeting on Right-of-Way for the transmission pipeline was held in the Surakarta Public Works Office Report on this meeting is enclosed as Appendix VIII.

On January 21, 1980 a meeting was held at the Project Office in Semarang on the construction of Sections C and D of the transmission pipeline. Report on this meeting is enclosed in Appendix IX.

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

CONTRACT NUMBER 01/S-S/AID/78 AID LOAN 497-U-044	MAN - MONTHS			
	FOR January 1980	CUMULATIVE THROUGH 31 January	% OF TOTAL SCHEDULE	TOTAL IN CONTRACT SCHEDULE
EXPATRIATES				
Principal Liaison Engineer	0	0.45	22.5	2
Procurement Engineer	0.09	2.25	75	3
Chief Engineer	0	6.5	100	6.5
Pipeline Engineer	1	12.5	62.5	20
Hydrogeologist	1	4.1	25.6	16
Drilling Specialist	0	5.7	47.5	12
Management Specialist	0	2.8	23.3	12
O & M Specialist	1	14.6	91.2	16
Meter Specialist	1	13.4	63.8	21
	1	4.1	51.2	8
EXPATRIATE TOTAL	5.09	66.4	57.0	116.5
INDONESIAN PROFESSIONAL & TECHNICAL				
Counterpart Chief Engineer	1	14.6	73	20
Construction Supervisor	1	4.9	35.0	14
Hydrogeologist	1	12.8	85.3	15
Materials Coordinator	1	16	114.2	14
Inspectors	4	23.8	49.5	48
Draftsman	1	11	68.7	16
Translator	1	11.7	97.5	12
Accountant	1	14	63.5	22
INDON. PROF. & TECH.	11.0	107.9	67.0	161
INDONESIAN ADMINISTRATIVE				
Office Manager	1	16	80	20
Secretary	1	15	75	20
Typist	1	11.6	52.7	22
Clerks	3	45	102.2	44
Drivers	4	50	62.5	80
Laborers	6	63.9	39.9	160
ADMINISTRATIVE TOTAL	16	201.5	58.2	346

APPENDIX I

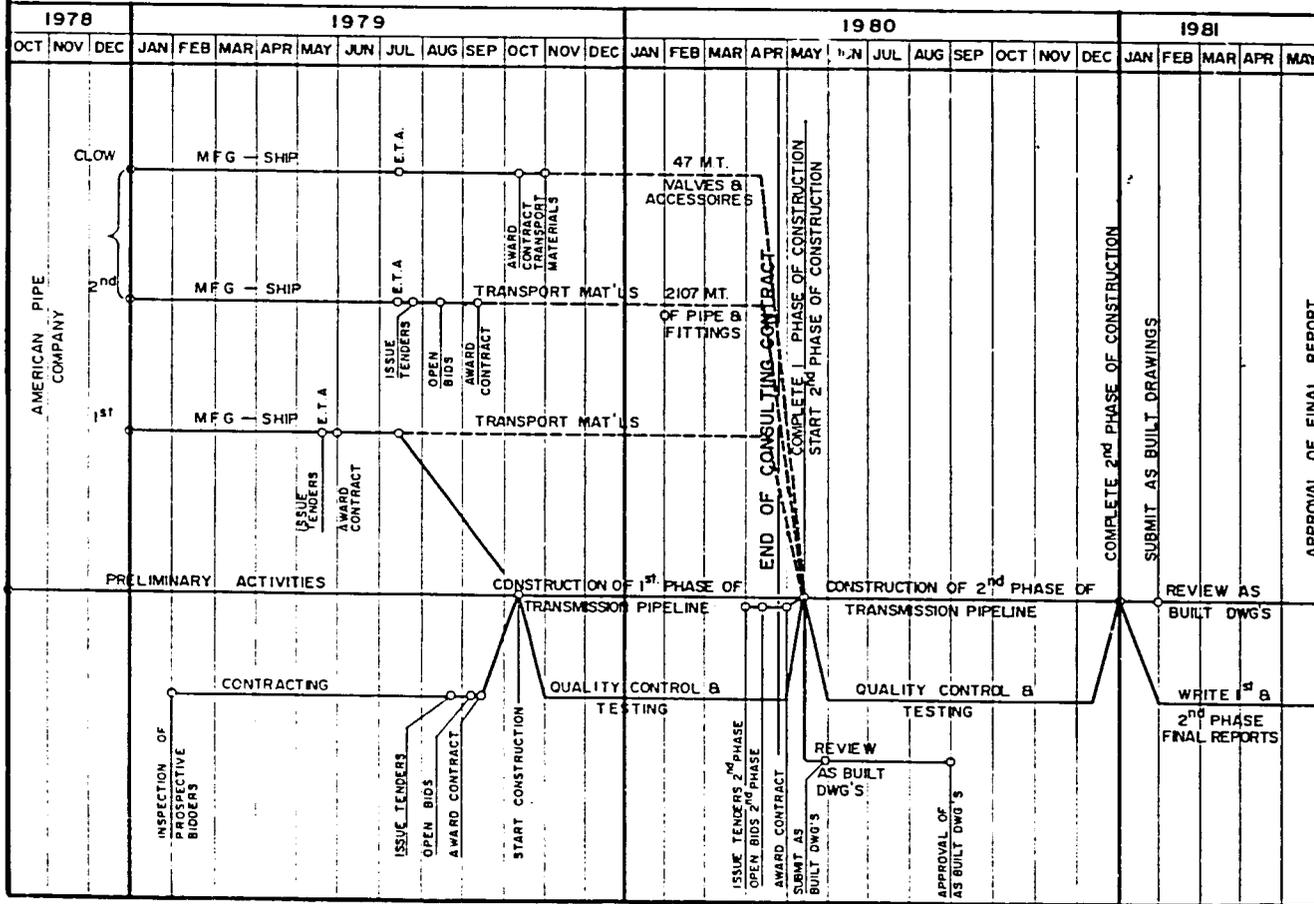
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SURAKARTA WATER PROJECT
REPORT OF ENGINEERING COSTS
BURNS & MCDONNELL/TRANS-ASIA ENGINEERING ASSOC.

APPENDIX II

CONTRACT NO. 01/WS-S/AID/78 SIGNED 26 OCT. 1978 START 1 JAN. 1978 END 31 JAN. 1981 REIMBURSABLE EXPENDITURES	COSTS FOR January 1980	CUMULATIVE COSTS THROUGH		CUMULATIVE PAYMENTS THROUGH			TOTAL BUDGET ESTIMATE FOR CONTRACT
		AMOUNT	% OF TOTAL BUDGET ESTIMATE	AMOUNT RECEIVED IN January	TOTAL AMOUNT RECEIVED THROUGH January	% OF TOTAL BUDGET ESTIMATE	
U.S. DOLLARS							
Salaries and Related Costs	26,554.54	374,689.38	61.1	27,455.14	348,134.84	56.7	5612.
Transportation	-	17,479.43	28.8	563.26	17,479.43	28.8	60
Equipment	-	-	-	-	-	-	36
Miscellaneous	-	30,678.32	92.4	-	30,678.32	92.4	33.
Training	-	-	-	-	-	-	14.
Contingencies	-	-	-	-	-	-	75.
TOTAL DOLLARS	26,554.54	422,847.13	50.7	28,018.40	396,292.59	47.5	\$833.
INDONESIAN RUPIAH							
Salaries	6,652,133	46,498,299	65.3	-	36,846,166	51.7	71,150.0
Transportation	2,776,506	19,550,953	69.3	-	16,784,447	49.3	28,195.0
Housing	2,800,000	27,400,000	85.7	-	24,600,000	76.9	31,950.0
Vehicle Costs	685,000	27,324,770	109.0	-	26,639,770	106.3	25,050.0
Equipment Costs	928,125	10,600,135	80.5	-	9,672,010	73.5	13,153.00
Miscellaneous	1,870,140	16,987,375	68.8	-	15,117,235	61.2	24,670.00
Contingencies	-	8,805,825	45.3	-	8,805,825	45.3	19,416.76
TOTAL RUPIAH	18,701,904	151,167,357	73.6	-	138,465,453	64.8	213,586,560

**SURAKARTA WATER PROJECT
ACTIVITY FLOW DIAGRAM (PERT)
CONSTRUCTION OF TRANSMISSION PIPELINE**



BURNS & MCDONNELL ENGINEERING CO
TRANS ASIA ENGINEERING ASSOCIATES INC

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SURAKARTA WATER PROJECT
TRANSMISSION MAIN
PROGRESS REPORT NO.4
31 JANUARY 1980

I. GENERAL :

Through the close of business today the \emptyset 450 mechanical joint gaskets were still in Jakarta although it appears only a matter of days until the gaskets can be moved to the Project for use in the construction. All Rohan shipments except one are now in Surakarta. It is necessary to turn over those items of tools, equipment, spare and repair parts to the Surakarta Water Enterprise so that (i) they will be responsible for the inventory (ii) will have the inventory to use in their day to day operations and (iii) clear the construction warehousing for a more efficient operation in supplying the Transmission Main Contractors.

A meeting was called 21 January 1980 in the office of the Project Manager, CJWSP-Semarang to discuss Phase II construction with the selected constructors and reach an understanding with them as to scope and duration of the work. Award and notice to proceed should be issued by the first part of February based upon a five month construction period.

II. WORK IN PROGRESS :

- A. Contractor Tukad Mas completed crossing the Grambang River and is in the process of installing the wing walls. On 18 January 1980, the land acquisition for easements in Klaten Regency was completed and the Contractor is now installing pipe parallel to the Yogyakarta-Surakarta highway. The Consultant obtained

SURAKARTA WATER PROJECT
TRANSMISSION MAIN
PROGRESS REPORT NO.4
31 JANUARY 1980

I. GENERAL :

Through the close of business today the Ø 450 mechanical joint gaskets were still in Jakarta although it appears only a matter of days until the gaskets can be moved to the Project for use in the construction. All Rohan shipments except one are now in Surakarta. It is necessary to turn over those items of tools, equipment, spare and repair parts to the Surakarta Water Enterprise so that (i) they will be responsible for the inventory (ii) will have the inventory to use in their day to day operations and (iii) clear the construction warehousing for a more efficient operation in supplying the Transmission Main Contractors.

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II. WORK IN PROGRESS :

- A. Contractor Tukad Mas completed crossing the Brambang River and is in the process of installing the wing walls. On 18 January 1980, the land acquisition for easements in Klaten Regency was completed and the Contractor is now installing pipe parallel to the Yogyakarta-Surakarta highway. The Consultant obtained

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permission from the Commandant in charge to install the \varnothing 600 inlet and outlet mains under the military owned property between the highway and pipe gallery at the Kartasura Reservoir. The Contractor is installing the prefabricated piping within the pipe gallery and when possible will extend the \varnothing 600 through the outside wall. From there the inlet and outlet pipes can be installed to the highway and connected to the existing water main. It has been found two \varnothing 450 pipes were installed some time back from the pipe gallery to the direction of the break tanks. A portion of those lines have been uncovered and removed under a change order in order to install the new \varnothing 600 piping. The Contractor completed his first sectional hydrostatic test from Sta. 50 + 12 to Sta. 59 + 50 during this period. He is presently restoring the roadway pavement along that same section. The next test will be made to include the Wonosobo River Stream Crossing. As of the end of the sixteenth week completion is slightly over 50%.

- B. Contractor Lepen Kencana Utama made a successful hydrostatic test of the deep deflected joints at approximately Sta. 48 + 12. The test covered two hundred meters back to Sta. 50 + 00 after which the Contractor was allowed to proceed with installation from Sta. 48 + 00. During this period he has almost completed installation of the \varnothing 450 sized portion of the transmission main and is working the second stream crossing. The Contractor has experienced difficulties in having to rework portions of his installed pipe and excavation because of the lack of pumping equipment and proper shoring. He has decided to make an open excavation in lieu of tunneling at Station 2 + 25 with the consent of the village chief and Consultant

provided he strictly abides by the Specifications with regard to protection of the public and work. Revised drawings have been issued to the Contractor to incorporate desired additions to his scope of work regarding the Division Chamber and the Intake Chamber at Cokrotulung Springs. Land acquisition for easements have been completed for all of the work from Sta. 0 + 00 to Sta. 50 + 00. As of the end of the sixteenth week the Contractor is almost 38% complete.

III. PROBLEMS :

- A. CJWSP has not completed land acquisition for easement north of the Brambang River which will affect Contract "A" and the pending Contract "C".
- B. Purchase Agreement and Letter of Credit must be expedited to complete Tender No. 03.04-M & E for all of the brass goods thereby assuring delivery prior to completion date of the construction.
- C. Unless \varnothing 450 gaskets are received first week of February, both Contractors will be unable to install necessary fittings.
- D. Shut down schedule cannot be established until proper materials are available.

V. FUTURE PLANNING :

Work will proceed through those areas where the land acquisition has been completed. Hydrostatic testing will be made current. All other present activities will continue and new Contracts "C" and "D" should be started during the month of February to commence a new count-down of 150 days for those sections.

V. PIPELINE CONSTRUCTION SPECIALIST COMMENTS :

It is considered that contractor effort from this point forward must be within projected rate of completion in order to be finished on time. It will require temporary installation of other materials until that included with the brass goods is received. Some " temporary" items will, due to location, actually become a permanent installation. The Contractors have agreed to completing Phase II Construction within 150 days which is considered by the Pipeline Construction Specialist to be very short. During the meeting mentioned hereinabove, both contractors were cautioned that each pipe laying crew must have pumps, tripods for hoists, safety barricades/lights, mechanical tampers and enough laborers to keep the open trenches at the end of each day to a minimum. Unless those conditions are met, the crews will not be allowed to start. The combined completion at the end of this period stands at almost forty four percent (44%) which is still under the planned completion.-END-.

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STATUS OF OFFSHORE PURCHASED MATERIALSSHIPMENT FROM AMERICAN CAST IRON PIPE COMPANY

Shipment accepted in full. Some negligible damage was done, which will not required repairs. The Consultant recommended the release of the retention money to ACIPCO.

SHIPMENT 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 whell 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.

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

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- 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 complete conditions :

- 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 :

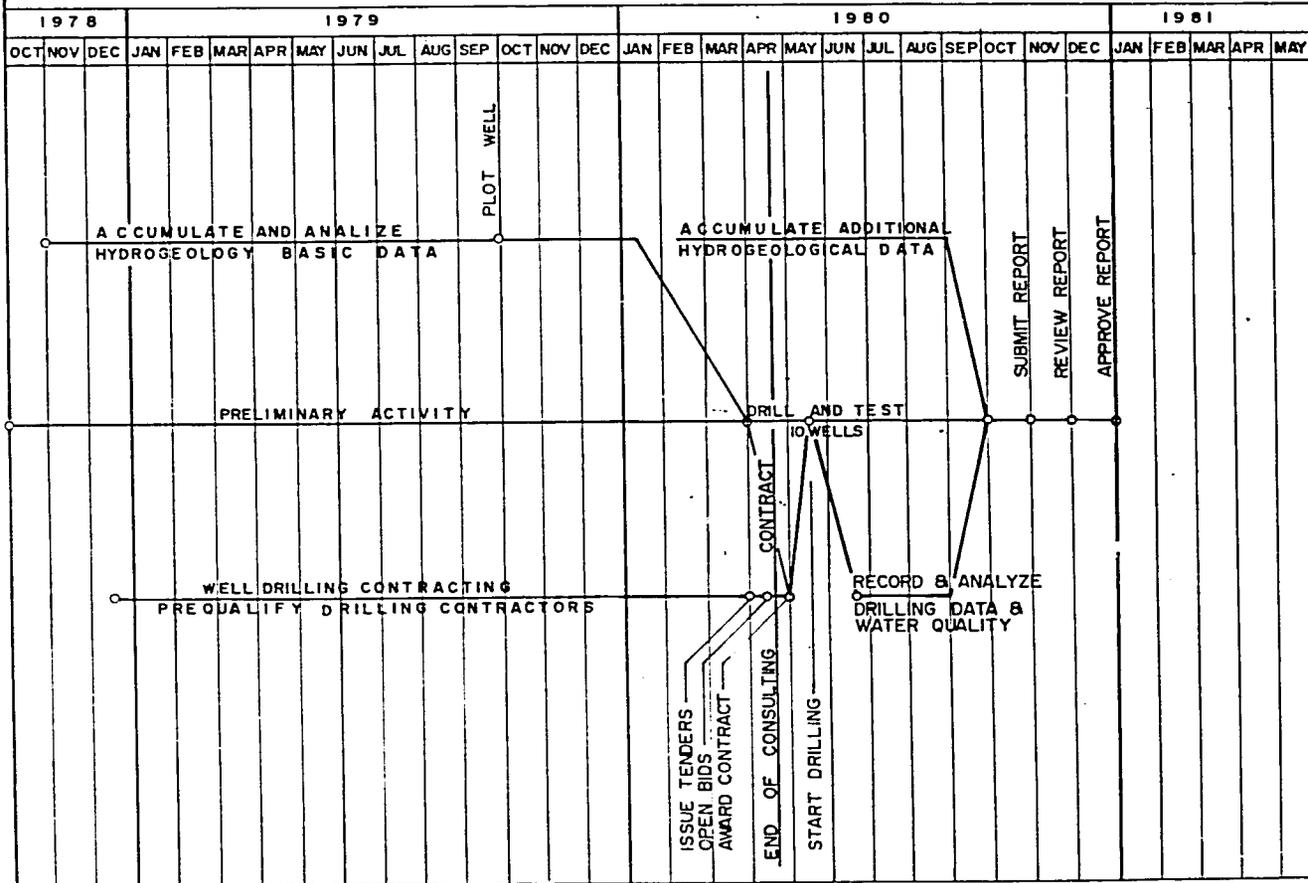
PVC strainer for SPX water meter - 137 pcs

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.

**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 ENTERPRISE
MANAGEMENT ASSISTANCE PROGRAM
PROGRESS REPORT NO. 16

I. PERIOD COVER

This report covers the period from January 1 to 31, 1980.

II. WORK DONE

A. General Accounting and Management Information System

Assisted the Accounting Staff in the preparation of the financial reports for the year ended December 31, 1979, such as proper presentation of the Balance Sheet, Income Statement, and Cash Flow Statement. The Balance Sheet and Income Statement for the year 1979 is presented in comparison with 1978 figures. Discussed with the Chief of the Finance and Administration Division and the Chief of the Finance Department adjustments to be made during the year, and various schedules to support the year-end financial statements. Some adjustments made during the year-end are bad debt provision for accounts receivable doubtful of collection, and adjustments to reflect the correct value of fixed assets and materials and supplies inventory based on the results of physical count conducted in December 1979. The supporting schedules prepared are water sales during the year by type of customer showing amount and volume sold; schedule of fixed assets by general classification showing acquisition cost, accumulated depreciation, depreciation during the year, and net book value as of Decem -

ber 31, 1979; schedule of receivables by year and by type of customer; and schedule of materials and supplies inventory. As of January 31, the preparation of the financial reports for the year ended December 31, 1979 was underway. These will be distributed to various recipients in February 1980.

Reviewed the recording procedures on the book of accounts maintained by the Accounting Section. Further improvements were recommended in the procedures of recording in the Cash Receipt Register and the Customer Receivable Ledger Card. They are as follows : 1) Use of only one line in the Cash Receipt Register for recording collection from each source each day such as water bills collected pertaining to the current year and previous years, inasmuch as the Cash Receipt Register is divided into columns where the breakdown of collection can be shown ; 2) Recording to the Customer Receivable Ledger Card of charges to and collection from customers should be done daily and not at the end of the month. These recommendations which were implemented immediately resulted into time and office supplies savings and timely generation of financial data.

B. Meter Reading

Reminded the Chief of the Meter Reading Section regarding the rotation of meter readers in their area of assignment. Consequently, the Chief of Meter Reading Section prepared a new assignment of meter readers and discussed it with the Management Specialist. This will be effected in February 1980. The latest rotation of assignment

of meter readers was in October 1979. The Director suggested that rotation of assignment of meter readers should be done once every three months. One problem encountered in the rotation of assignment of meter readers was the reluctance of the customer to let the new meter reader inside his premises. This can be solved by requiring every meter reader to wear his Surakarta Water Enterprise identification card while on duty. According to the Chief of the Administration and Personnel Section he already ordered the printing of identification cards for all employees of the Water Enterprise.

C. Control Over Cash Accountabilities

Discussed with the Director of the Water Enterprise and the Chief of the Finance and Administration Division some internal control procedures over cash accountabilities such as Petty Cash Fund, Cashier's collection, collectors collection of water bills, and collections from the swimming pool. These control procedures consists of :

- 1) Daily turnover to the Cashier of all collections such as collections from the swimming pool and collectors collection of water bills;
- 2) all collections during the day by the Cashier should be deposited intact to the bank on the same day or at the latest on the next banking day;
- 3) audit of cash accountabilities of all cash accountable employees at least once a year. In connection with item 3 above the Management Specialist prepared procedures on the audit of cash accountabilities of cash accountable employees. These were submitted to the management of the Water Enterprise to serve as their guide in performing the audit function.

D. Other Matters

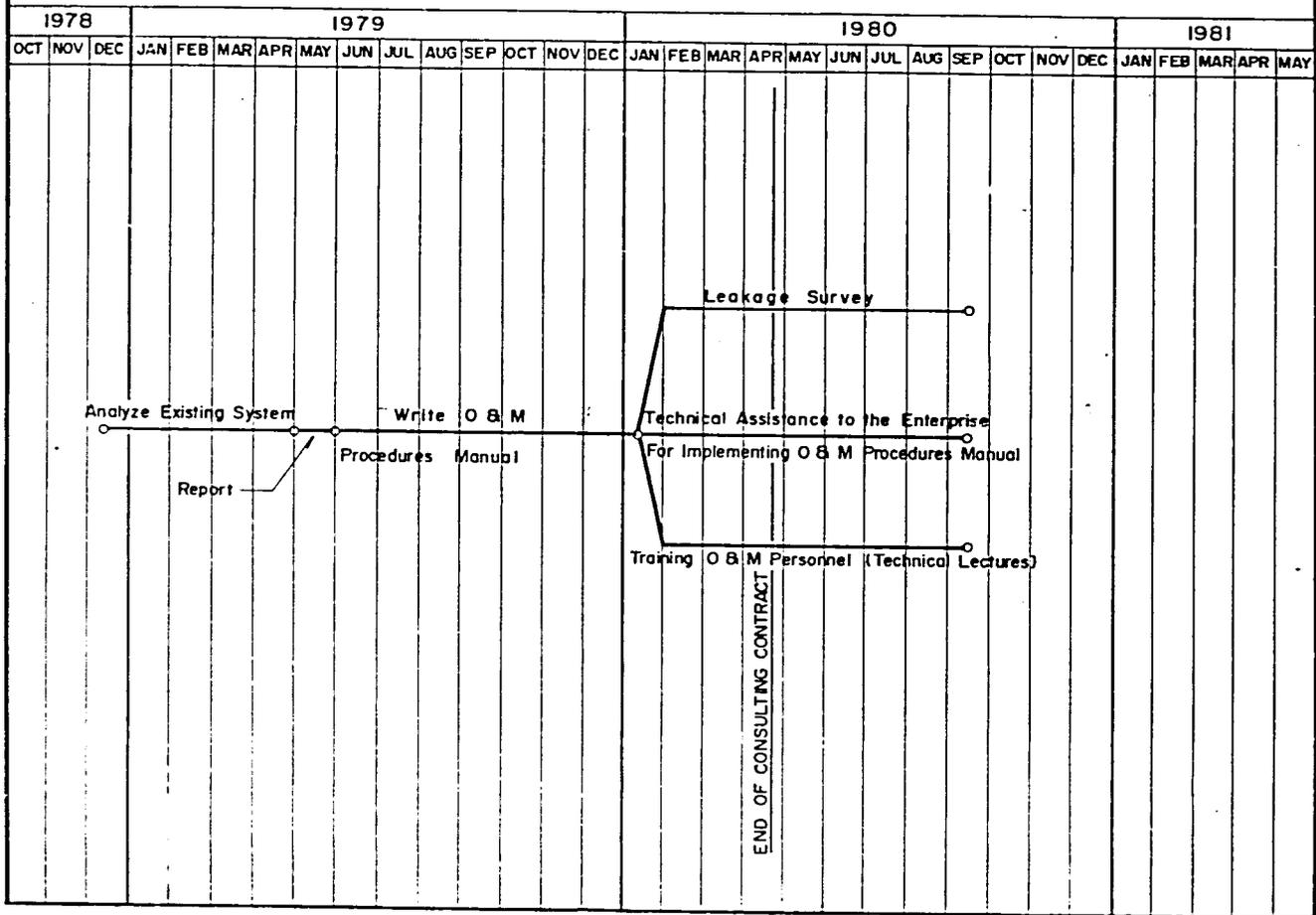
Discussed with the Director of the Water Enterprise the following :

1. Necessity of additional telephone line in the Customer Relation Section so that all inquiries and/or complaints of customers can be handled directly by that section. As of now inquiries or complaints pass through the Administration and Personnel Section where the main telephone line is connected. The Director said he will order the installation of a telephone line in the Customer Relation Section.
2. Transfer of the collection function of water bills of customers outside the city from Production Department to the Collection Section. Collection from customers outside the city is being done by the staff of the Production Department because he works in the Cokrotulung Spring which is near the area where outside city customers live. The Director said he will effect the necessary transfer of function as soon as possible.
3. Filling up of the vacant positions in the organization such as Chief of the Meter Shop Section and Leak Survey Section. The Director said they are in the process of selecting the personnel to head these sections.

III. PROGRAM FOR NEXT MONTH

- A. Continue assistance and supervision in the recording of daily transactions.
- B. Observe progress of work to determine adherence to recommended systems and procedures.

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



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SCHEDULE FOR TECHNICAL O & M AND METER REPAIR
PROGRAM FOR THE SURAKARTA WATER ENTERPRISE
(CLASSROOM STUDIES PART I)
CONCLUDED JANUARY 26, 1980

DATE	FROM	TO	SUBJECTS
1/14/80	8 am	9 am	OPENING CEREMONY
Monday	9 ¹⁵ am	12 noon	SOURCES OF WATER & THEIR CHARACTERISTICS
	1 pm	3 ³⁰ pm	WATER PRODUCTION, WATER TREATMENT
1/15/80	8 am	12 noon	WATER STORAGE AND DISTRIBUTION
Tuesday	1 pm	3 ³⁰ pm	RESERVOIRES
1/16/80	8 am	12 noon	HYDRAULICS & OPERATIONAL MATH.
Wednesday	1 pm	3 ³⁰ pm	HYDRAULICS & OPERATIONAL MATH.
1/17/80	8 am	12 noon	HYDRAULICS & OPERATIONAL MATH.
Thursday	1 pm	3 ³⁰ pm	APPLIED HYDRAULICS
1/18/80	8 am	12 noon	APPLIED HYDRAULICS
Friday			
1/19/80	8 am	12 noon	PIPE, TYPES, USES AND PROTECTION
Saturday			
1/21/80	8 am	12 noon	PIPE, TYPES, USES AND PROTECTION
Monday	1 pm	3 ³⁰ pm	PIPE, TYPES, USES AND PROTECTION
1/22/80	8 am	12 noon	PIPELINE INSTALLATION & MAINTENANCE
Tuesday	1 pm	3 ³⁰ pm	PIPELINE INSTALLATION & MAINTENANCE
1/23/80	8 am	12 noon	PIPELINE INSTALLATION & MAINTENANCE
Wednesday	1 pm	3 ³⁰ pm	PIPELINE INSTALLATION & MAINTENANCE
1/24/80	8 am	12 noon	PIPELINE APPURTENANCES
Thursday	1 pm	3 ³⁰ pm	PIPELINE APPURTENANCES
1/25/80	8 am	12 noon	(METERING) TYPES OF MEASUREMENTS
Friday			
1/26/80	8 am	12 noon	WRITTEN TEST FROM PART I
Saturday			

WATER METER PROGRAM MONTHLY PROGRESS REPORT
JANUARY 1980

This report covers the period from January 2 to 31, 1980.

WORK DONE :

In the first week the Meter Specialist went to Semarang to make necessary equipment purchases. All of the necessary equipment for the Meter Shop such as grinder, drill press, air compressor, vice, necessary tools and PVC pipe plus fittings and valves purchased from Mr. Bobby Utomo had been delivered to Surakarta.

Pressure pump and Ebara Multi-Stage 4 Pole Motor model M.S. were purchased from different supplier that is P.T. Semarang Jaya Teknik. They sent the pump at once plus service and installation at no cost. They also have parts stock for all areas of both pump and motor and they delivered them within two days and gave us one year guarantee on the complete unit.

Schedule has been made for the Special Personnel who plan to visit the Meter Shop. They will be given 4 days, 2 hours per day within the Meter Shop before regular classes given by the Meter Specialist get underway.

All equipment for the Meter Shop is ready except the parts bins, meter racks, storage drums, necessary tools, pressure pump, piping for circulating the meter test water, electric, water and air hook ups, two stands for the grinder, and drill press to be placed on. The Meter Specialist personally plans to install the PVC pipe and valves for the circulating test water.

A daily-work sheet for the coming repairmen has been made up.

The drum's platform has been completed and also the drum itself which will be used for the circulation of water are in position. The break-down bench with sink and the repair bench with the metal sink are complete. The plumber will install the sink drains with rubber hose so they will not be ridged. It was informed that the test bench will not be released as expected, therefore there will be a delay for several weeks.

The cement forms to be laid for the pressure pump and the test tank have been laid out. The length of the test bench which was very important in relation to the cement forms has also been laid out.

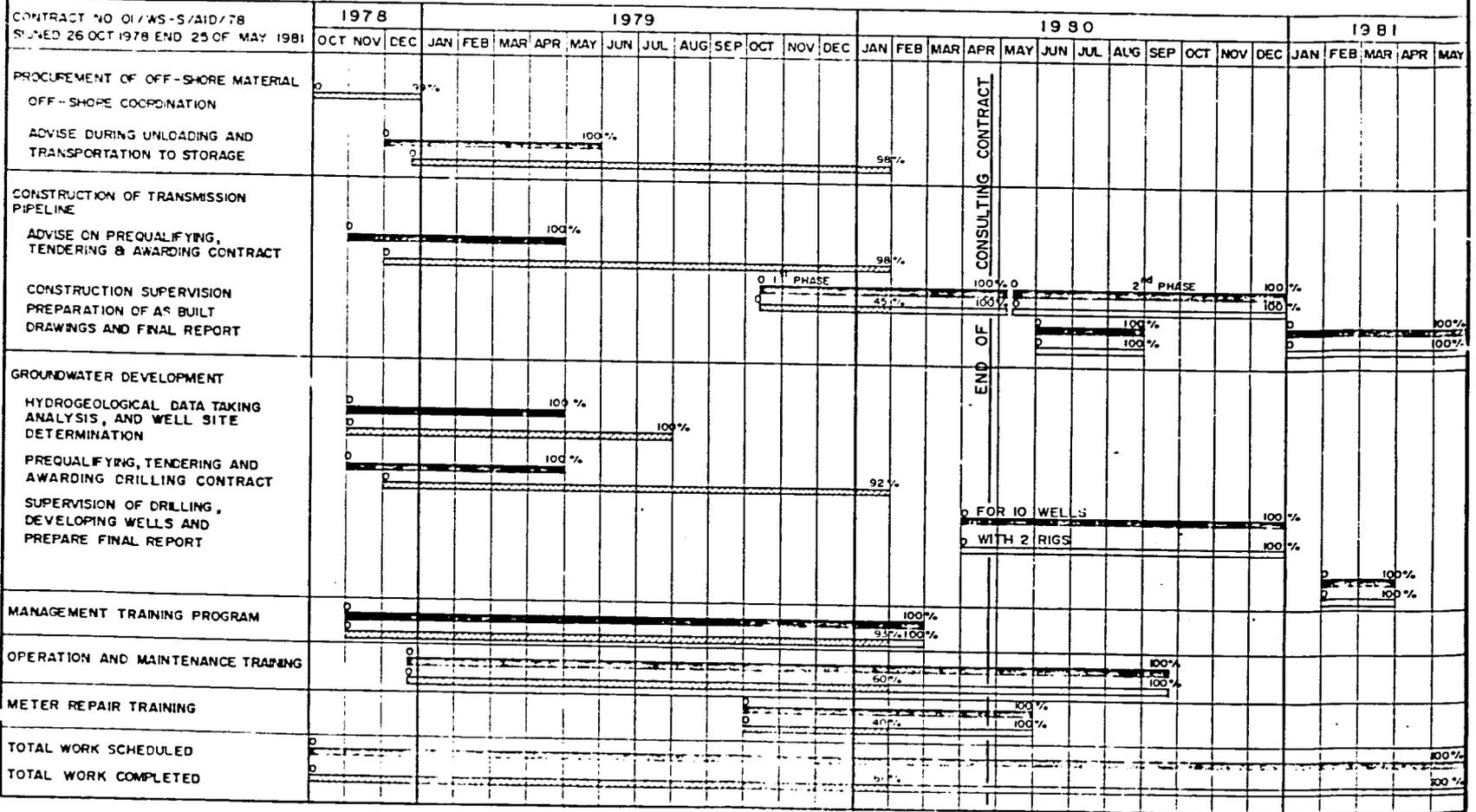
The grinding wheel table and the drill press table had been installed. However, they will have to be reinstalled as they should be 106.68 cm high instead of 60.0 cm as they are now. The areas for the lights which will be at each bench with sink plus the test bench and desk with necessary plugs have been marked. The pressure pump will be the only 3 phase power unit we have. The 220V electric system is expected to be in by the middle of next month.

On January 28 and 29, 1980 the Meter Specialist attended a pump-seminar at Sky Garden Hotel, Semarang. Speeches were given by Mr. Akio Ito and Mr. Talsuo Kato, representatives of the Ebara Multi-Stage Pump Company.

PLAN FOR NEXT MONTH :

1. Continue supervision on the completion of the Meter Shop.
2. Give lectures on Water Meter Training Program.

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



CONSULTING CONTRACT
END OF

FOR 10 WELLS
WITH 2 RIGS

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MEMORANDUM OF MEETING

Subject : Right-Of-Way of Transmission Main
in the City of Surakarta

Date : January 18, 1980 (Friday)

Hour : 09.00 a.m. - 10.40 a.m.

Place : Municipal Public Works Office
Jl. Urip Sumoharjo, Surakarta

Attended by: 1. Mr. Sudjarwo - Head of Municipal
Public Works of
Surakarta

2. Mr. J.F. Baucom - BM/TAE

3. Mr. A.F. Dengah - BM/TAE

4. Mr. Djoko Imbarno - BM/TAE

Results : 1. River-crossing at Sta. 191+00 ± approved
as designed.

2. Crosstie at Sta.191+50 approved as de-
signed.

3. New main from Sta.191+05± up to Sta.203+
85± to be on the south shoulder of the
highway, (the Consultant will receive
from the Municipal Public Works the cross-
section of designed slow traffic road
along the highway).
If possible not under the median.

4. The new main may be installed through/
under the foundation of the city gate or
deflect around it.

5. Connecting pipes to designed distribution
net work are approved to cross the high-
way (Sta. 194+82 and Sta. 197+85).

6. Wye designed at Sta. 203+87 to be moved
to the south shoulder of the highway.

7. New main of \emptyset 500 mm. along the A. Yani to be installed next to the newly normalized drainage ditch.
The Consultant to notify the Municipal Public Works if there will be trees to be uprooted, and the Municipal Public Works will be responsible of the uprooting of any tree.
8. On places where the houses are too close to the main road (such as approximately Sta. 212+00), it is approved to deflect the new main and install it under the pavement.
9. At Sta. 215 + 85 \pm the new main to be deflected west of the monument.
10. Along Haryono main road, it is approved to deflect partly of the new main under the pavement, in case there is no space available on the shoulder.
11. From Sta. 225+00 \pm to Sta. 233+00 it is approved to install the new main on the foot of the river-bank.
12. Coordination of new main disturbed by houses along S. Parman main road, will be done with the Municipal Public Works.
13. Design under the railway bridge is approved.
14. From Sta. 259+00 \pm the new main to cross the Panjaitan main road and install it on the North shoulder.
15. Fence of school at Sta. 262+00 \pm will be demolished (Municipal Public Works will issue the design of slow traffic road along Panjaitan main road to BM/TAE).

16. At Urip Sumoharjo main road no vertical deflection is needed.
17. Crosstie at Sta. 263+10 approved by reversing the new main on the North side of the existing main.
18. After the Jebres hospital at Sta. 269+25± the new main approved to cross the main road to the South shoulder.
19. All preparations to work, during execution of work and repavement of road surface to be done in close coordination with the Municipal Public Works.

MEMORANDUM OF MEETING

Subject : Installation of Transmission Main
 Date : Monday, January 21, 1980
 Hour : 11.00 a.m. - 01.45 p.m.
 Place : Central Java Water Supply Project
 Office, Semarang

Attended by : 1. Mr. Krisno Darusman , CJWSP, Smg.
 2. Mrs. Sumaryati , CJWSP, Smg.
 3. Mr. Harsono , CJWSP, Ska.
 4. Mr. J.F. Baucom , BM/TAE, Ska.
 5. Mr. A.F. Dengah , BM/TAE, Ska.
 6. Mr. Djoko Imbarno , BM/TAE, Ska.
 7. Mr. Johann's , Tukad Mas
 8. Mr. Amran Nur , Lepen Kencana

Results :

1. BM/TAE made sure that addenda # 1 up to # 3 has been received by the Contractors.
2. Items and quantities of cost breakdown checked and clarified, as shown on addendum # 3.
3. Issuance of Notice to Proceed of Section C and D will take place as soon as possible, after approved by the Director of Sanitary Engineering Directorate (at the latest : next week).
4. Completion time : Five (5) months after Issuance of Notice to Proceed.
5. Contractors to divide Sections in Sub-Sections between valves or mechanical joint fittings . Each Sub-Section to be equipped with a tamping rammer, tripod, pump and sufficient labours to prevent having a too long open trench.

6. Central Java Water Supply Project, Surakarta to approach Sukohardjo Regency to speed up easements of right-of-way (sketch to be submitted by BM/TAE).
7. Payments to Contractors arranged by Project's Finance Manager; BM/TAE to check accomplished percentage of progress.