




ROYAL IRRIGATION DEPARTMENT  
MINISTRY OF AGRICULTURE AND COOPERATIVE  
GOVERNMENT OF THE KINGDOM OF THAILAND

DOK KRAI - MAB TA PUD WATER PIPELINE PROJECT  
IN THE EAST COAST AREA  
BILL OF QUANTITIES

AUGUST 1982

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SDS

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国際協力事業団	
受入 月日 '84. 9. 27	L122
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## PREAMBLE

1. The Bill of Quantities shall be read in conjunction with the Instructions to Tenderers, Conditions of Contract, Specifications and Drawings.
2. All payments to the Contractor shall be made in accordance with the rates entered into this Bill of Quantities, provided always as follows:
  - a. The quantities given in the Bill of Quantities are approximate and provisional and are given to provide a common basis for tendering. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Engineer and valued at the rates and prices quoted in the Bill of Quantities where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
  - b. The classification of work is made by the Engineer's judgment.
  - c. The measurement is done to the actually executed work by the Contractor, except where otherwise specifically described in the Specifications or instructions or shown on the Drawings as pay-line.
  - d. The work, either whole or partly, which is not executed, by the Engineer's judgment, in accordance with the provisions of Contract is not subject to measurement or payment unless such work is reinstated by the Contractor according to the Engineer's instructions.
3. In the Tender a price or rate shall be entered against each Pay Item in the Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a price or rate shall be deemed to be covered by the Contract Price.
4. The whole cost of complying with the provisions of the Contract shall be included in the Pay Items provided in the Bill of Quantities, and where no Pay Items provided shall be deemed to be distributed amongst the rates and prices for the related Pay Items of Work.
5. The rates and prices in this Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all plant, labour, superintendence, materials, erection, maintenance, insurance, profit together with all general risks, liabilities and obligations set out or implied in the Contract. The rates and prices are also deemed to include all allowances for waste or surplus of any kind, which are not subject to the measurement.
6. The expression of each item of work in this Bill of Quantities shall be deemed only as abstract idea of the work, which consists many kinds of act as detailed in the relevant Sections and Clauses of the Conditions of Contract, Specifications and Drawings.

7. The application of all of rates entered into this Bill of Quantities is not obligation of the Engineer who has right to omit some of such work or rate if he judges as not necessary to complete the Works.
8. All payments to be done for monthly payment certificate are deemed as provisional payments, and the Engineer has power to reduce paid amount in proceeding payment certificates whensoever any defect is found in or on the said work or to replace the payment from one item to other item if such re-arrangement is judged as necessary.  
  
The final payment certificate which is provided after the Provisional Take-over of the Works is solely deemed as correct and definitive certificate in quantities and amounts to each item of work and whole of the Works.
9. No separate or additional payment shall be made for work for which there is (are) unit rate(s) if much work is deemed to be included in and is paid for under a lump sum item.
10. Numbers of the Pay Items of the Bill of Quantities do not always correspond to numbers of Sections or Clauses of the Specifications. The Pay Items in each Section of the Bill of Quantities shall be read in conjunction with the Measurement and Payment Clauses in the relevant Sections of the Particular Specifications.









DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2000	GENERAL								
2001	Allow for Temporary Works of Intake Facilities	L.S.							
2002	Exploratory Drilling at Intake Tower Foundation, etc.	m	60						
	SUB-TOTAL								
2100	INTAKE TOWER								
2101	Common Excavation under water at Tower Foundation	cu.m	3,200						
2102	Rock Excavation under water at Tower Foundation	cu.m	100						
2103	Concrete under water at Tower Foundation, Class B	cu.m	1,000						
2104	Base & Shoe Plates under water at Tower Foundation	No.	4						
2105	Reinforced Concrete of Caisson Tower including Reinforcing Bar, Formwork, etc., Class C	cu.m	3,100						
2106	Filling Concrete at Tower Base, Class E	cu.m	400						
2107	Base Concrete on Floor of Tower including Formworks, Reinforcing Bar, etc., Class D	cu.m	60						
2108	Cinder Concrete on Floor of Tower including Formworks, Class G	cu.m	70						



DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2200	INTAKE BRIDGE								
2201	Supply of Steel Pipe Pile for Bridge Pier, Ø508, L = 15 m	No.	24						
2202	Installation of Steel Pipe Pile for Item 2201	No.	24						
2203	Supply of Steel Pipe Pile for Bridge Pier, Ø508, L = 13 m	No.	18						
2204	Installation of Steel Pipe Pile for Item 2203	No.	18						
2205	Supply of Steel Pipe Pile for Bridge Pier, Ø508, L = 10 m	No.	18						
2206	Installation of Steel Pipe Pile for Item 2205	No.	18						
2207	Supply & Installation of R.C. Pile for Anchor Block, 300 x 300, L = 8.0 m	No.	6						
2208	Supply & Installation of R.C. Pile for Anchor Blocks, 300 x 300, L = 5.0 m	No.	8						
2209	Reinforced Concrete for Footing & Abutment Retaining Wall & Anchor Block, Class D	cu.m	250						
2210	Formwork to Concrete for Item 2209	sq.m	550						
2211	Reinforcing Bar to Concrete for Item 2209	ton	25						
2212	Levelling Concrete, Class H	cu.m	5						

DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2213	Supply of P.C. Girder for Road Bridge, Type A	No.	40						
2214	Supply of P.C. Girder for Pipe Support Bridge, Type B	No.	20						
2215	Installation of P.C. Girder for Type A & Type B	No.	60						
2216	Supply & Installation of Neoprene Bearing Pad, W = 150,	sq.m	19						
2217	Supply & Installation of Lateral Tie Bar, $\phi$ 32, L=4.0 m	No.	50						
2218	Supply & Installation of Lateral Tie Bar, $\phi$ 32, L=2.0 m	No.	50						
2219	Rainforced Concrete of Slab & Shear-key for Bridge, Class C	cu.m	130						
2220	Formwork to Concrete for Item 2219	sq.m	320						
2221	Reinforcing Bar to Concrete for Item 2219	ton	7						
2222	Supply & Installation of Expansion Joint for Bridge	No.	11						
2223	Supply & Installation of Handrail	kg	12,000						
2224	Supply & Installation of Drainage Installation	No.	20						
2225	Supply of Steel Pipe on Bridge, $\phi$ 1,350.	m	165						



DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2300	INTAKE YARD								
2301	Stripping	sq.m	7,000						
2302	Common Excavation	cu.m	1,000						
2303	Fill & Back Fill	cu.m	600						
2304	Embankment at Yard	cu.m	20,000						
2305	Rip-rap Mound	cu.m	1,400						
2306	Rip-rap Revetment	cu.m	1,100						
2307	Sodding at Yard	sq.m	4,000						
2308	Bitumen Seal Coat Pavement of Road	sq.m	500						
2309	Supply & Installation of Guardrail	m	20						
2310	Supply & Installation of R.C. Pile for Air Chamber Foundation, L = 7.5 m	No.	24						
2311	Levelling Concrete, Class H	cu.m	16						
2312	Reinforced Concrete at Air Chamber, Class D	cu.m	120						



DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2400	PUMPING PLANTS								
2401	Supply of Main Pump	unit	6						
2402	Supply of Main Motors	unit	6						
2403	Supply of Butterfly Valves by Manual Operation	unit	12						
2404	Supply of Butterfly Valves by Motor Operation	unit	6						
2405	Supply of Check Valves	unit	6						
2406	Supply of Drainage Pumps with Motor	unit	2						
2407	Supply of Overhead Travelling Crane	unit	1						
2408	Supply of Suction and Delivery Pipes	L.S.							
2409	Supply of Intake Gate with Screen	unit	10						
2410	Supply of Catwalk for Inspection	L.S.							
2411	Supply of Air Chamber Facilities	L.S.							
2412	Supply of Spare Parts & Tools	L.S.							



DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2413	Transportation of All Plants and Equipment for Item 2400	L.S.							
2414	Installation of Pumping Plants and Equipment for Item 2400	L.S.							
	SUB-TOTAL								
2500	ELECTRICAL FACILITIES								
2501	Supply of 22 KV Receiving Cubicle for Substation	unit	1						
2502	Supply of 22 KV Incoming Circuit Breaker Cubicle for Substation	unit	1						
2503	Supply of 22 KV Circuit Breaker Cubicle for Substation	unit	2						
2504	Supply of 22 KV Bus Duct Material for Substation	lot	2						
2505	Supply of Main Transformer for Substation	unit	2						
2506	Supply of Transformer Secondary Cubicle for Substation	unit	2						
2507	Supply of Bus Connecting Cubicle for Substation	unit	1						
2508	Supply of Feeder Cubicle A & B for Substation	unit	2						
2509	Supply of Cables & Wires for Substation	L.S.							

DIVISION 2. INTAKE FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
2510	Supply of Spare Parts & Tools for Substation	L.S.							
2511	Transportation of Equipment, Material for Items 2501 - 2510	L.S.							
2512	Installation of Electrical Facilities & Appurtenance at Substation for Items 2501 - 2510	L.S.							
2513	Supply of 3.3 KV Receiving Cubicle for Control House	unit	2						
2514	Supply of 3.3 KV Bus Connecting	unit	1						
2515	Supply of Feeder Cubicle for Transformer to Pumping Plant in Control House	unit	1						
2516	Supply of Main Motor Starter for Control House	unit	6						
2517	Supply of Station Service Transformer Cubicle for Control House	unit	1						
2518	Supply of Motor Control Center & Sequence Relay Cubicle for Control House	unit	1						
2519	Supply of DC/AC Uninterruptable Power Source Cubicle for Control House	unit	1						
2520	Supply of Central Supervising & Control Panel for Control House	unit	1						
2521	Supply of Local Control Panel of Drainage Pump for Control House	unit	1						
2522	Supply of Diesel Engine Generator for Station Power Supply at Control House	lot	1						



DIVISION 3. PIPELINE

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
3000	GENERAL								
3001	Allow for Temporary Works for Pipeline	L.S.							
3002	Allow for Replacement of Existing R.C. Water Pipe to Factory along Highway Route-3	L.S.							
	SUB-TOTAL								
3100	SUPPLY OF PIPES & VALVES								
3101	Supply of Steel Pipe $\varnothing 1,350$ t = 11.9	m	26,300						
3102	Supply of Steel Jacking Pipe $\varnothing 1,350$	m	48						
3103	Supply of Steel Tee Pipe for Blow-Off, $\varnothing 1,350 \times 400$ L = 2.0 m	No.	27						
3104	Supply of Steel Tee Pipe for Manhole, $\varnothing 1,350 \times 600$ L = 2.0 m	No.	25						
3105	Supply of Steel Tee Pipe for PTT Branch, $\varnothing 1,350 \times 500$ L = 2.5 m	No.	1						
3106	Supply of Steel Tee Pipe for Air Chamber, $\varnothing 1,350 \times 500$ L = 2.5 m	No.	3						
3107	Supply of Steel Tee Pipe for Branch Line $\varnothing 1,350 \times 250$ L = 2.0 m	No.	2						
3108	Supply of Steel Tee Pipe for Branch Line, $\varnothing 1,350 \times 150$ L = 2.0 m	No.	2						

DIVISION 3. PIPELINE

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
3109	Supply of Steel Pipe with Flange - one side Ø1,350 L = 1.5 m	No.	34						
3110	Supply of Steel Pipe for PTT Branch, Ø500 t = 6.0	m	10						
3111	Supply of Steel Pipe with Flange - one side, Ø500 L = 0.5 m	No.	1						
3112	Supply of Steel Pipe with Flanges - two side, Ø500 L = 3.0 m	No.	1						
3113	Supply of Blind Flange for Steel Pipe, Ø500	No.	1						
3114	Supply of Steel Pipe for Blow-off, Ø400 t = 6.0	m	180						
3115	Supply of Steel Pipe with Flange - one side, Ø400 L = 0.665 m	No.	48						
3116	Supply of Steel Pipe with Flange - one side, Ø250 t = 6.6 L = 1.0 m	No.	2						
3117	Supply of Steel Pipe with Flanges - two side, Ø250 t = 6.6 L = 1.0 m	No.	2						
3118	Supply of Blind Flange for Steel Pipe, Ø250 mm	No.	2						
3119	Supply of Steel Pipe with Flange - one side, Ø150 t = 5.0 L = 1.0 m	No.	2						
3120	Supply of Steel Pipe with Flanges - two side, Ø150 t = 5.0 L = 1.0 m	No.	2						
3121	Supply & Installation of Blind Flange for Steel Pipe, Ø150	No.	2						



DIVISION 3. PIPELINE

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
3200	INSTALLATION OF PIPES & VALVES								
3201	Installation of Steel Pipe, Ø1,350	m	26,500						
3202	Jacking of Pipe, Ø1,350	m	48						
3203	Installation of Steel Pipe, Ø500 and Ø400	m	230						
3204	Installation of Steel Pipe, Ø250 and Ø150	m	10						
3205	Installation of Butterfly Valve, Ø1,350	No.	17						
3206	Installation of Butterfly Valve, Ø500	No.	1						
3207	Installation of Sluice Valve, Ø400	No.	24						
3208	Installation of Sluice Valve, Ø250	No.	2						
3209	Installation of Sluice Valve, Ø150	No.	2						
3210	Installation of High Speed Air Valve, Ø150	No.	25						
3211	Installation of Victaulic Closer Type Coupling, Ø1,350	No.	3						
3212	Installation of Dresser Type Coupling, Ø1,350	No.	17						

DIVISION 3. PIPELINE

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
3213	Installation of Dresser Type Coupling, Ø500 and Ø400	No.	24						
	SUB-TOTAL								
3300	CIVIL WORK FOR PIPELINE								
3301	Earthworks for Pipeline, Ø1,350	m	26,500						
3302	Earthworks for Pipeline, Ø500 and Ø400	m	230						
3303	Earthworks for Pipeline, Ø250 and Ø150	m	10						
3304	Common Excavation	cu.m	6,000						
3305	Fill & Backfill	cu.m	5,500						
3306	Mortar Riprap at River Protection	cu.m	350						
3307	Placed Riprap	cu.m	150						
3308	Aggregate Foundation	cu.m	100						
3309	Levelling Concrete, Class H	cu.m	50						
3310	Reinforced Concrete for Valve Chamber, blow-off put and Boxes, Class D	cu.m	600						





DIVISION 4. HEAD TANK

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
4000	GENERAL								
4001	Allow for Temporary Works of Head Tank	L.S.							
4002	Exploratory Drilling	m	10						
	SUB-TOTAL								
4100	HEAD TANK								
4101	Common Excavation at Head Tank	cu.m	1,300						
4102	Fill and Backfill at Head Tank	cu.m	650						
4103	Levelling Concrete at Head Tank, Class H	cu.m	25						
4104	Reinforced Concrete for Base Slab at Head Tank, Class C	cu.m	250						
4105	Reinforced Concrete of Level Meter Box and Valve Box, Class D	cu.m	20						
4106	Formwork to Concrete for Items 4104 and 4105	sq.m	340						
4107	Reinforcing Bar to Concrete for Item 4104 and 4105	ton	20						
4108	Prestressed Concrete Works for Upper Structure of Head Tank	Empty cu.m	4,910						







DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5000	GENERAL								
5001	Allow for Temporary Works for Receiving Facilities	L.S.							
5002	Exploratory Drilling	m	10						
	SUB-TOTAL								
5100	RECEIVING WELL								
5101	Common Excavation	cu.m	1,400						
5102	Fill & Backfill	cu.m	2,000						
5103	Reinforced Concrete including PVC Pipe $\phi$ 100, Class C	cu.m	550						
5104	Precast Concrete Cover, Class D, including Form-works & Reinforcing Bar, etc.	cu.m	10						
5105	Cinder Concrete, Class G	cu.m	30						
5106	Levelling Concrete, Class H	cu.m	45						
5107	Formwork to Concrete for Item 5103	sq.m	1,800						
5108	Reinforcing Bar to Concrete for Items 5103	ton	55						

DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5109	Supply & Installation of Miscellaneous Metal	kg	1,000						
5110	Concrete Stair	No.	1						
	SUB-TOTAL								
5200	RECEIVING RESERVOIR								
5201	Stripping	sq.m	19,000						
5202	Common Excavation	cu.m	3,500						
5203	Fill and Backfill	cu.m	500						
5204	Embankment	cu.m	25,000						
5205	Sodding	sq.m	17,000						
5206	Supply of EPT Rubber Sheet for Reservoir	sq.m	12,500						
5207	Installation of EPT Rubber Sheet for Reservoir	sq.m	12,500						
5208	Reinforced Concrete for Spillway, Class D	cu.m	50						
5209	Shoulder Anchor Concrete, Class D	cu.m	100						

DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5210	Levelling Concrete, Class H	cu.m	50						
5211	Formwork to Concrete Pay Items 5208 and 5209	sq.m	750						
5212	Reinforcing Bar to Concrete Pay Item 5208	ton	15						
5213	Concrete Stair	No.	3						
	SUB-TOTAL								
5300	VALVE BOX, PIT & PIPING WORKS								
5301	Supply of Steel Pipe, Ø1,350	m	190						
5302	Supply of Steel Pipe, Ø1,200	m	50						
5303	Supply of Steel Pipe, Ø900-700	m	175						
5304	Supply of Steel Pipe, Ø400-75	m	150						
5305	Supply of Dresser Type Coupling, Ø1,350	No.	9						
5306	Supply of Dresser Type Coupling, Ø1,200	No.	4						
5307	Supply of Dresser Type Coupling, Ø900	No.	2						



DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5308	Supply of Dresser Type Coupling, $\phi$ 700	No.	8						
5309	Supply of Dresser Type Coupling, $\phi$ 300	No.	2						
5310	Supply of Dresser Type Coupling, $\phi$ 200	No.	3						
5311	Supply of Dresser Type Coupling, $\phi$ 150	No.	2						
5312	Supply of Victaulic Shoulder Type Coupling, $\phi$ 1,350	No.	6						
5313	Supply of Victaulic Shoulder Type Coupling, $\phi$ 1,200	No.	2						
5314	Supply of Victaulic Shoulder Type Coupling, $\phi$ 900	No.	1						
5315	Supply of Victaulic Shoulder Type Coupling, $\phi$ 700	No.	4						
5316	Supply of Butterfly Valve, $\phi$ 1,350	No.	6						
5317	Supply of Control Valve, $\phi$ 1,200	No.	1						
5318	Supply of Butterfly Valve, $\phi$ 1,200	No.	2						
5319	Supply of Butterfly Valve, $\phi$ 900	No.	1						
5320	Supply of Butterfly Valve, $\phi$ 700	No.	6						

DIVISION 5. RECEIVING FACILITIES

ITEM	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5321	Supply of Sluice Valve, $\phi$ 300	No.	1						
5322	Supply of Sluice Valve, $\phi$ 200	No.	2						
5323	Supply of Sluice Valve, $\phi$ 75	No.	1						
5324	Installation of Steel Pipe, $\phi$ 1,350	m	190						
5325	Installation of Steel Pipe, $\phi$ 1,200	m	50						
5326	Installation of Steel Pipe, $\phi$ 900-700	m	175						
5327	Installation of Steel Pipe, $\phi$ 400-75	m	150						
5328	Installation of Dresser Type Coupling, $\phi$ 1,350 & $\phi$ 1,200	No.	13						
5329	Installation of Dresser Type Coupling, $\phi$ 900 & $\phi$ 700	No.	10						
5330	Installation of Dresser Type Coupling, $\phi$ 300, $\phi$ 200 & $\phi$ 150	No.	7						
5331	Installation of Victaulic Shoulder Type Coupling, $\phi$ 1,350 & $\phi$ 1,200	No.	8						
5332	Installation of Victaulic Shoulder Type Coupling, $\phi$ 900 & $\phi$ 700	No.	5						
5333	Installation of Control Valve & Butterfly Valves, $\phi$ 1,350 - 1,200	No.	9						

DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5334	Installation of Butterfly Valve, $\phi$ 900-700	No.	7						
5335	Installation of Sluice Valve, $\phi$ 300-75	No.	4						
5336	Earthworks of Steel Pipeline, $\phi$ 1,350-1,200	m	240						
5337	Earthworks of Steel Pipeline, $\phi$ 900-700	m	180						
5338	Earthworks of Steel Pipeline, $\phi$ 400-75	m	150						
5339	Supply & Installation of Reinforced Concrete Pipe, $\phi$ 1,200	m	310						
5340	Supply & Installation of Reinforced Concrete Pipe, $\phi$ 1,000	m	55						
5341	Earthworks for Reinforced Concrete Pipeline, $\phi$ 1,200-1,000	m	380						
5342	Supply & Installation of Surface Valve Box	No.	2						
5343	Common Excavation	cu.m	5,000						
5344	Fill & Backfill	cu.m	4,200						
5345	Base Concrete, Class D including Formworks, Reinforcing bar, etc.	cu.m	20						
5346	Reinforced Concrete for Valve Box, Pits, Emergency Dissipator, etc., Class D	cu.m	350						

DIVISION 5. RECEIVING FACILITIES

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
5347	Levelling Concrete for Valve Box, Pits, Emergency Dissipator, etc., Class-H	cu.m	40						
5348	Formwork to Concrete Pay Item 5346	sq.m	1,600						
5349	Reinforcing Bar to Concrete Item 5346	ton	30						
5350	Supply & Installation of Miscellaneous Metal	kg	3,000						
	SUB-TOTAL								
5400	RECEIVING YARD								
5401	Stripping	sq.m	27,000						
5402	Common Excavation	cu.m	20,500						
5403	Fill	cu.m	26,000						
5404	Sodding	sq.m	32,500						
5405	Bitumen Seal Coat Paving for 6 m Road	sq.m	11,000						
5406	Bitumen Seal Coat Paving for 3 m Road	sq.m	500						
5407	Concrete Open Drainage Channel including Earthworks, Concrete, Formwork, etc.	m	2,600						



DIVISION 6. CONTROL SYSTEM

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
6000	CONTROL SYSTEM								
6001	Supply of Water Level Measuring Equipment for Intake Tower	unit	2						
6002	Supply of Water Flow Measuring Equipment for Intake Tower	unit	1						
6003	Supply of Water Level Measuring Equipment for Head Tank	unit	2						
6004	Supply of Water Flow Measuring Equipment for Receiving Facilities	unit	1						
6005	Supply of Water Level Measuring Equipment for Receiving Facilities	unit	1						
6006	Supply of Cables & Wires Materials for Items 6001 - 6005	L.S.							
6007	Installation of Measuring Equipment, Cable & Wires for Items 6001-6006	L.S.							
6008	Supply of Radio Communication Equipment	unit	2						
6009	Supply of Guyed Tripole Tower	unit	2						
6010	Supply of Spare Parts for Items 6001-6005 and 6008	L.S.							
6011	Installation of Radio Communication Equipment	L.S.							
6012	Supply & Installation of Floating Type Water Level Gauge for Head Tank	unit	1						



DIVISION 7. BUILDING WORKS

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
7000	TEMPORARY WORKS								
7001	Allow for Temporary Works of Building Works	L.S.							
	SUB-TOTAL								
7100	BUILDING WORKS AT DOK KRAI								
7101	Building Works of Dok Krai Control House	L.S.							
7102	Sewerage & Drainage System for Building Item 7101	L.S.							
7103	Building Works of Dok Krai Substation	sq.m	102						
7104	Power Supply System for Dok Krai Substation	L.S.							
7105	Fence around Dok Krai Substation	m	120						
7106	Building Works of Dok Krai Administration Office	sq.m	98						
7107	Water Supply System for Building Item 7106	L.S.							
7108	Sewerage & Drainage System for Building Item 7106	L.S.							
7109	Power Supply System for Building Item 7106	L.S.							



DIVISION 7. BUILDING WORKS

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
7110	Building Works of Garage & Warehouse at Dok Krai	sq.m	80						
7111	Water Supply System for Building Item 7110	L.S.							
7112	Power Supply System for Building Item 7110	L.S.							
7113	Building Works of Dok Krai Compressor Room	sq.m	22						
7114	Power Supply System for Building Item 7113	L.S.							
7115	Building Works, Grade 2, of Dok Krai Camp	unit	2						
7116	Building Works, Grade 3, of Dok Krai Camp	unit	2						
7117	Building Works, Grade 4, of Dok Krai Camp	unit	3						
7118	Building Works, Grade 5, of Dok Krai Camp	unit	1						
7119	Land Grading for Dok Krai Camp	L.S.							
7120	Road Paving, 6m width, for Dok Krai Camp	sq.m	5,000						
7121	Road Paving, 3m width, for Dok Krai Camp	sq.m	700						
7122	Sewerage & Drainage System for Dok Krai Camp	L.S.							

DIVISION 7. BUILDING WORKS

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
7123	Water Supply System for Dok Krai Camp	L.S.							
7124	Power Supply System for Dok Krai Camp	L.S.							
7125	Elevated Water Tank for Building at Dok Krai	L.S.							
	SUB-TOTAL								
7200	BUILDING AT HEAD TANK								
7201	Building Works at Head Tank Maintenance Hut	sq.m	30						
7202	Water Supply System for Building Item 7201	L.S.							
7203	Sewerage & Drainage System for Building Item 7201	L.S.							
7204	Power Supply System for Building Item 7201	L.S.							
7205	Building Works, Grade 4, of Head Tank Camp	unit	4						
7206	Building Works, Grade 5, of Head Tank Camp	unit	1						
7207	Land Grading for Head Tank Camp	L.S.							
7208	Guard Hut and Gateway for Head Tank Camp	L.S.							

DIVISION 7. BUILDING WORKS

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
7209	Fence around Head Tank Camp	m	200						
7210	Water Supply System for Head Tank Camp	L.S.							
7211	Road Paving, 6m width, for Head Tank Camp	sq.m	700						
7212	Road Paving, 3m width, for Head Tank Camp	sq.m	250						
7213	Sewerage & Drainage System for Head Tank Camp	L.S.							
7214	Power Supply System for Head Tank Camp	L.S.							
7215	Elevated Water Tank for Building at Head Tank	L.S.							
	SUB-TOTAL								
7300	BUILDING WORKS AT MAB TA PUD								
7301	Building Works of Mab Ta Pud Administration Office	sq.m	214						
7302	Water Supply System for Building Item 7301	L.S.							
7303	Sewerage & Drainage System for Building Item 7301	L.S.							
7304	Building Works of Repairing Shop, Warehouse, and Garage at Mab Ta Pud	sq.m	125						

DIVISION 7. BUILDING WORKS

ITEM NO.	DESCRIPTION OF WORKS	UNIT	QUANTITY	RATE	AMOUNT	LOCAL CURRENCY		FOREIGN CURRENCY	
						Rate	Amount	Rate	Amount
7305	Water Supply System for Building Item 7304	L.S.							
7306	Power Supply System for Building Item 7304	L.S.							
7307	Building Works of Mab Ta Pud Diesel Generator Room	sq.m	22						
7308	Building Works, Grade 1, of Mab Ta Pud Camp	unit	1						
7309	Building Works, Grade 2, of Mab Ta Pud Camp	unit	5						
7310	Building Works, Grade 3, of Mab Ta Pud Camp	unit	9						
7311	Building Works, Grade 4, of Mab Ta Pud Camp	unit	11						
7312	Building Works, Grade 5, of Mab Ta Pud Camp	unit	2						
7313	Land Grading for Mab Ta Pud Camp	L.S.							
7314	Guard Hut and Gateway for Mab Ta Pud Camp	L.S.							
7315	Fence around Mab Ta Pud Camp	m	1,350						
7316	Water Supply System for Mab Ta Pud Camp	L.S.							
7317	Power Supply System for Mab Ta Pud Camp	L.S.							







#### DAYWORK SCHEDULE

1. The Daywork Schedule shall be read in conjunction with the Conditions of Contract.
2. Work shall only be executed by Daywork on the written order of the Engineer.
3. The Tenderer, when tendering shall complete Daywork Schedule including any additional items of labour, materials and plant which he wishes to be included in the Schedule.
4. The rate set out in the Daywork Schedule shall cover all expenses and allowances of overhead nature, including overhead charges, profit, taxes, insurances, and any other expenses related.
5. Payment for labour and the hire of plant shall be reckoned from the time of starting the particular item of Daywork, either at the beginning of or during the course of a "normal working day" (defined as 8 hours excluding meal breaks and rest periods). Payment for Daywork outside the "normal working day" shall only be made on the written instructions of the Engineer.
6. Unless the Engineer shall specifically agree to the contrary the Contractor shall not be entitled to any payment in respect of items of plant used on daywork for which rates are not included in this table.



DAYWORK SCHEDULE - LABOUR

CLASS OF LABOUR	UNIT	RATE
Common Labour	day	
Skilled Labour	"	
Fireman	"	
Carpenter	"	
Mason	"	
Electric Worker	"	
Plasterer	"	
Steel Worker	"	
Driver	"	
Heavy Equipment Operator	"	
Assistant Heavy Equipment Operator	"	
Diver	"	
Welder	"	
Concrete Worker	"	
Foreman	"	

DAYWORK SCHEDULE - MATERIAL

MATERIAL CLASSIFICATION	UNIT	RATE
Cement	ton	
Sand for Concrete	cu.m	
Gravel	cu.m	
Unscreen Gravel	cu.m	
Deformed Bar	ton	
Cobble	cu.m	
Diesel Gasoline	l	
Gasoline	l	
Timber	cu.m	
Timber Board	cu.m	

DAYWORK SCHEDULE - PLANT

PLANT CLASSIFICATION	UNIT	RATE
Bulldozer, 110 PS, 11 t	day	
Bulldozer, 140 PS, 15 t	"	
Backhoe Shovel, 100 PS, 0.6 m <sup>3</sup>	"	
Wheel Loader, 100 PS, 1.5 m <sup>3</sup>	"	
Dump Truck, 8 t	"	
Motor Grader, 125 PS, Bread, W = 3.7 m	"	
Water Supply Pump, 5 PS	"	
Drainage Pump, 7.5 PS	"	
Pontoon, 200 t	"	
Barge, 100 t	"	
Motor Boat, 10 PS	"	
Truck Crane, 10 t	"	
Truck Crane, 20 t	"	
Tank Lorry, 6 t	"	
Pot Concrete Mixer, 0.2 cu.m	"	
Tire Roller, 8-12 ton	"	

