

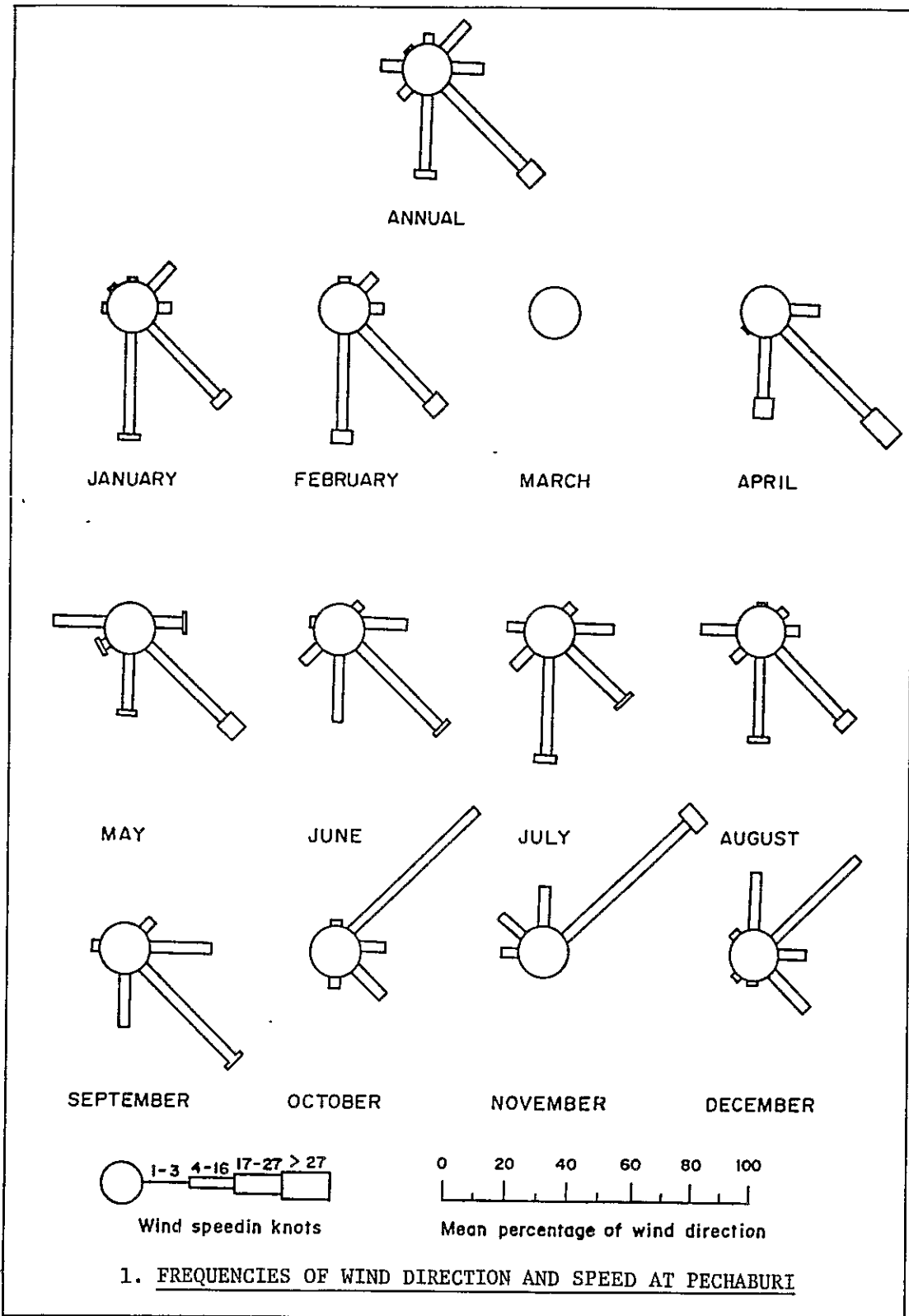
CLIMATOLOGICAL DATA FOR THE PERIOD 1951 - 1975

Station BANGKOK METROPOLIS  
Index Station 48 455  
Latitude 13°44' N.  
Longitude 100°30' E.

Elevation of station above MSL. 2.10 meters  
Height of barometer above MSL. 16.37 meters  
Height of thermometer above ground 1.50 meters  
Height of wind vane above ground 23.38 meters  
Height of rain gauge 0.70 meters

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
<b>Pressure</b> (+1000 or 900 mbs.)													
Mean	12.58	11.05	10.04	08.58	06.95	05.38	06.58	06.60	07.51	09.71	11.52	12.63	09.18
Ext. Max.	26.50	20.26	18.42	17.74	13.62	13.00	14.14	13.50	15.59	16.78	19.98	21.89	26.50
Ext. Min.	04.52	03.87	02.08	00.04	99.40	97.76	98.78	99.36	98.20	98.44	03.68	03.87	97.76
Mean daily range	4.75	4.85	4.87	4.91	4.50	3.81	3.74	1.97	4.38	4.43	4.25	4.46	4.41
<b>Temperature (°C)</b>													
Mean	25.5	27.1	28.6	29.5	29.0	28.5	28.0	27.8	27.5	27.4	26.6	25.3	27.6
Mean Max.	31.8	32.7	33.8	34.3	34.0	32.9	32.4	32.1	31.7	31.5	31.1	31.1	32.5
Mean Min.	20.4	22.7	24.5	25.6	25.3	25.0	24.8	24.6	24.4	24.3	22.9	20.6	23.7
Ext. Max.	36.0	36.6	39.8	39.0	39.4	36.8	36.0	35.3	35.7	34.5	35.1	35.2	39.8
Ext. Min.	9.9	14.9	16.5	18.9	21.1	21.7	21.9	21.2	21.3	19.8	14.2	10.5	9.9
<b>Relative Humidity (%)</b>													
Mean	71.0	76.0	77.0	77.0	80.0	80.0	81.0	82.0	84.0	83.0	79.0	74.0	79.0
Mean Max.	91.8	93.4	91.9	91.9	93.9	92.9	91.4	91.4	94.0	95.7	94.3	91.2	93.5
Mean Min.	49.5	51.5	55.5	56.6	61.3	62.4	62.4	62.2	67.9	67.7	61.2	51.5	60.0
Ext. Min.	27.0	17.0	25.0	28.0	30.0	46.0	47.0	48.0	49.0	49.0	38.0	31.0	17.0
<b>Dew Point (°C)</b>													
Mean	19.7	22.0	23.7	24.5	24.9	24.4	24.0	24.1	24.4	24.1	22.4	19.9	23.2
<b>Evaporation (mm.)</b>													
Mean - Piche	98.0	68.8	108.8	105.7	90.2	81.8	78.3	71.2	58.1	58.7	59.3	87.0	995.9
Mean - Pan	132.8	139.2	179.8	182.6	162.6	145.8	141.6	140.3	126.2	120.7	118.8	123.9	1714.3
<b>Cloudiness (0-8)</b>													
Mean	4.6	5.0	5.2	5.8	6.6	7.0	7.1	7.2	7.2	6.6	5.4	4.7	6.0
<b>Visibility (Kms.)</b>													
0700 L.S.T.	5.8	5.0	5.8	7.8	8.8	8.7	8.2	7.8	7.8	7.9	8.0	7.6	7.4
Mean	10.5	10.0	9.9	11.5	12.9	13.0	12.5	12.2	12.0	12.2	12.5	12.2	11.8
<b>Wind (knots)</b>													
Prevailing Wind	NE	S	S	S	S	S	SW	S	SW	NE	N	NE	-
Mean Wind Speed	3.8	5.2	5.8	5.7	4.6	4.9	4.6	4.6	3.9	3.5	3.7	3.5	-
Max. Wind Speed	31	42	48	56	42	43	43	45	44	40	45	31	45
<b>Rainfall (mm.)</b>													
Mean	8.9	29.1	28.0	70.0	185.1	150.4	171.3	205.8	402.1	234.2	47.6	10.4	1543.9
Mean rainy days	1.8	2.8	3.6	6.4	15.8	16.5	18.4	20.8	21.6	17.4	6.0	1.6	132.7
Greatest in 24 hr.	39.3	73.0	52.8	133.5	134.2	82.9	108.8	97.8	151.7	121.2	81.2	32.0	143.7
Days/Year	31/61	11/64	24/73	23/51	15/65	6/59	30/55	26/71	23/68	5/60	2/69	8/72	23/68
<b>Number of days with</b>													
Haze	21.5	21.6	22.5	16.6	12.1	12.7	14.0	13.1	12.8	13.2	13.8	18.0	191.9
Fog	5.4	3.6	2.8	1.4	1.6	0.1	0.5	0.1	0.0	0.3	1.0	1.4	18.2
Hail	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Thunderstorm	0.6	1.3	3.6	8.8	15.3	10.1	9.6	10.6	15.2	13.6	3.4	0.7	92.8
Squall	0.0	0.0	0.2	0.2	0.3	0.4	0.4	0.1	0.1	0.0	0.1	0.0	1.8

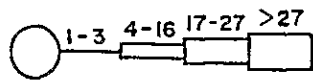
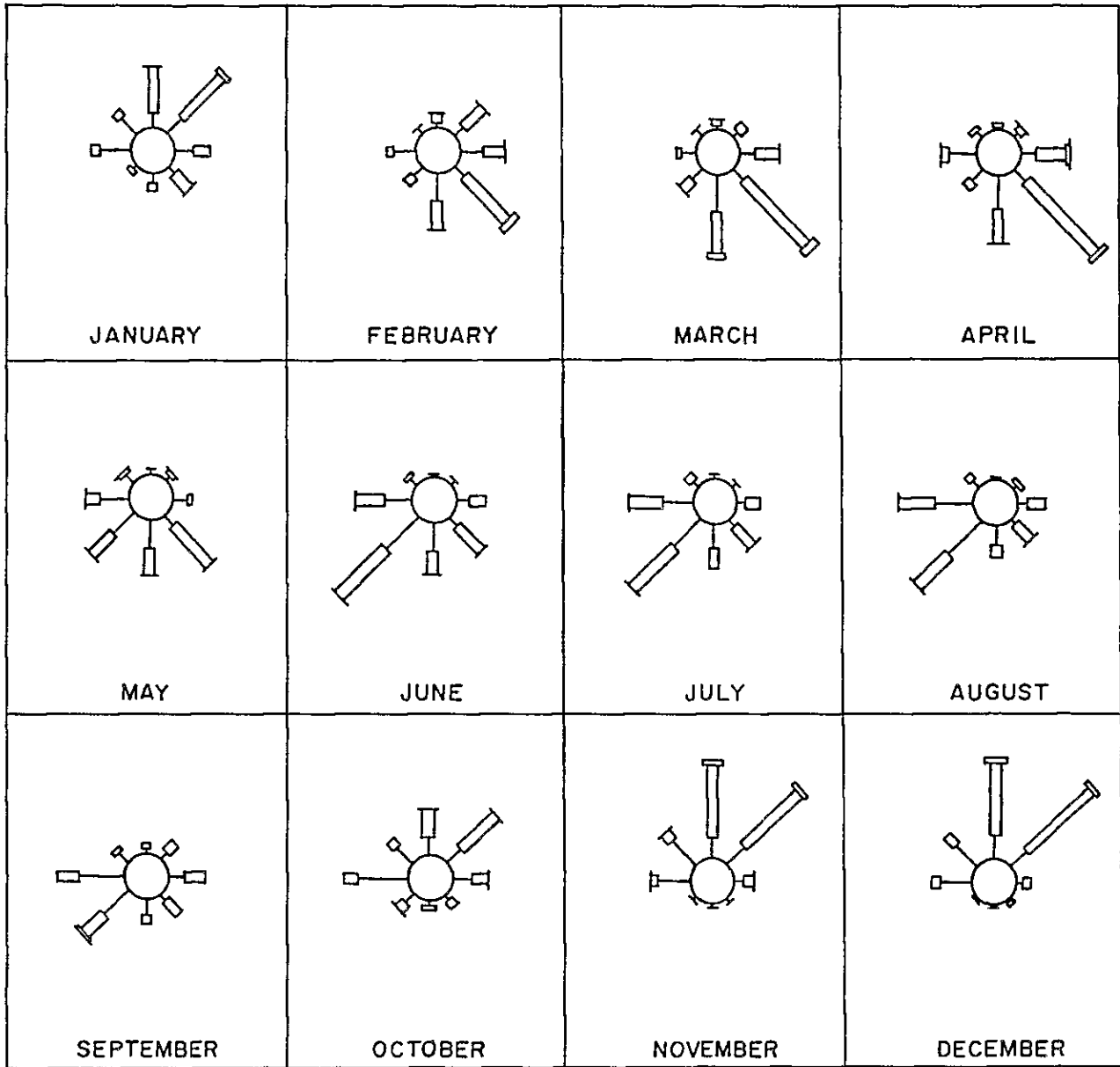
Remark: Evaporation - Pan 1961-1975



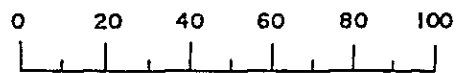
Annex 2-12 FREQUENCIES OF WIND DIRECTION AND SPEED

HUA HIN Index 48475  
 Lat. 12° 35' N. Long. 99° 57' E

Height of Windvane 13.5 M. (18.5 M. above M.S.L.)



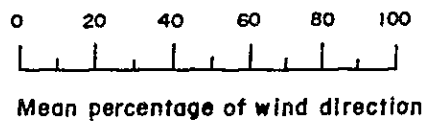
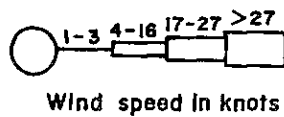
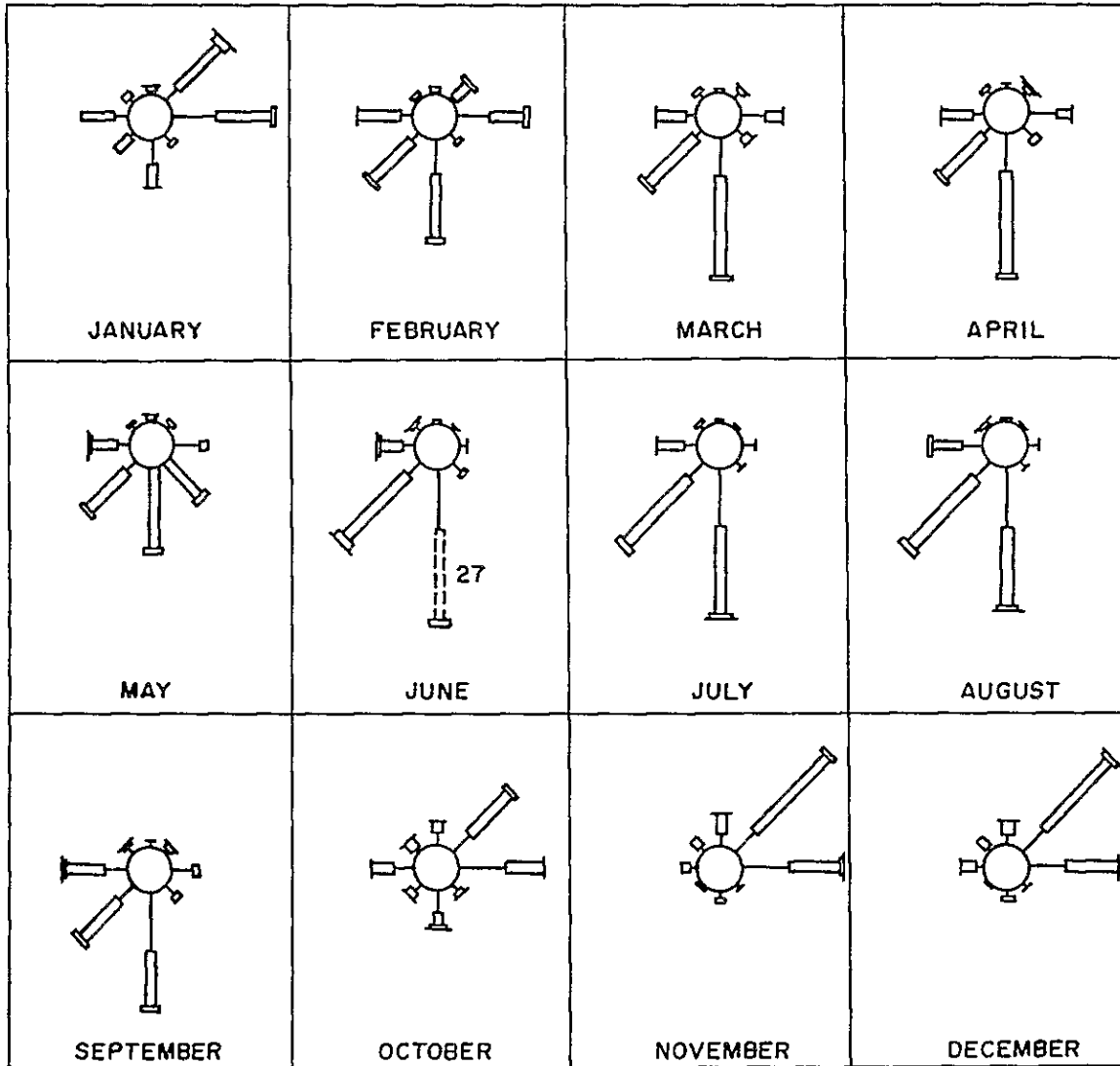
Wind speed in knots



Mean percentage of wind direction

2. FREQUENCIES OF WIND DIRECTION AND SPEED AT HUA HIN

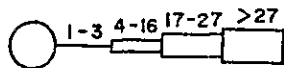
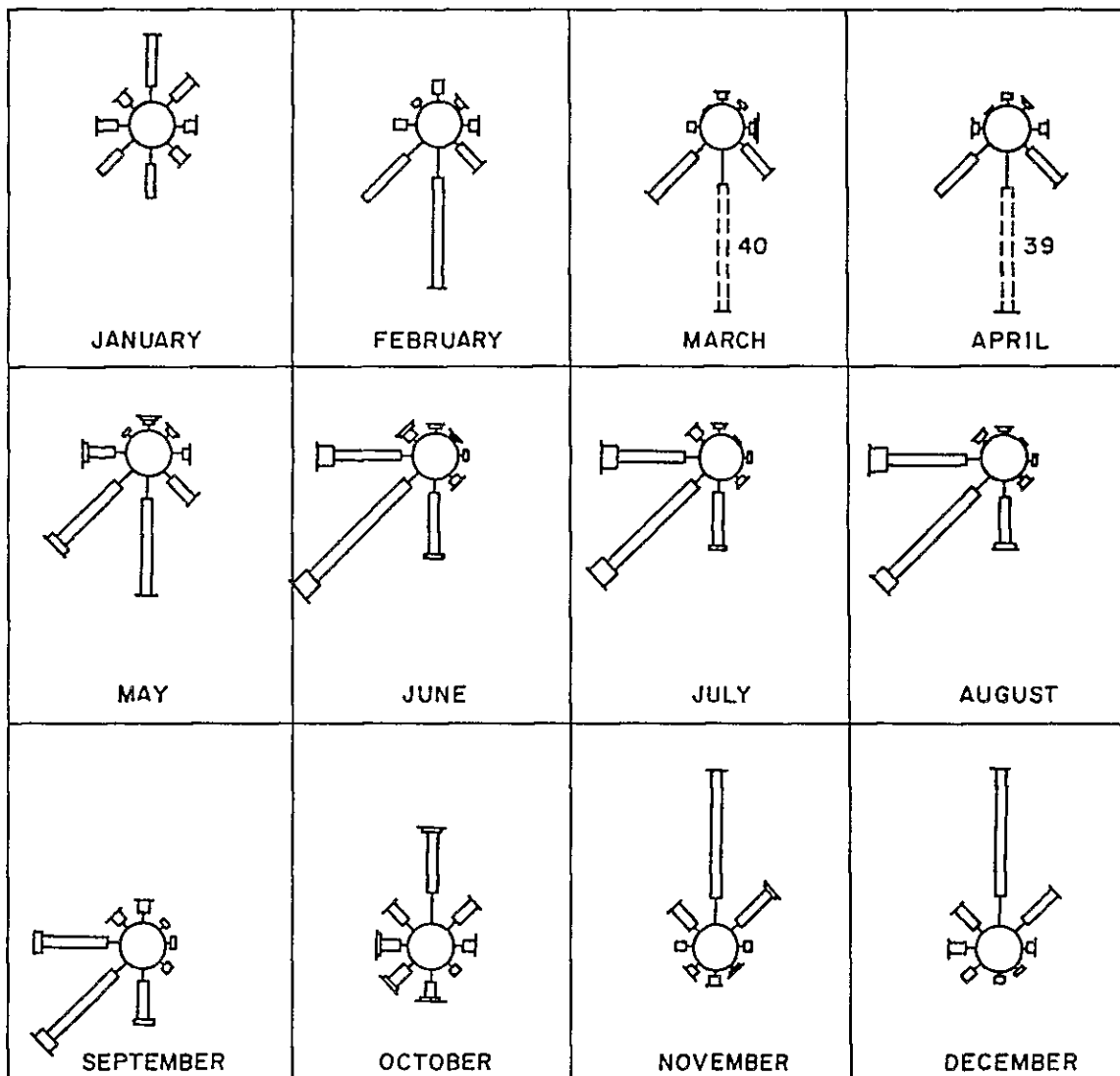
CHON BURI Index 48459  
 Lat. 13° 22' N. Long. 100° 59' E Height of Windvane 10.9 M (15.9 M. above M.S.L.)



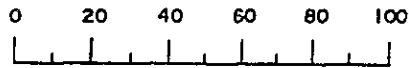
3. FREQUENCIES OF WIND DIRECTION AND SPEED AT CHON BURI

SATTAHIP Index 48477  
 Lat. 12°41' N. Long. 100° 59' E

Height of Windvane 12.0 M. (30.0 M. above M.S.L.)

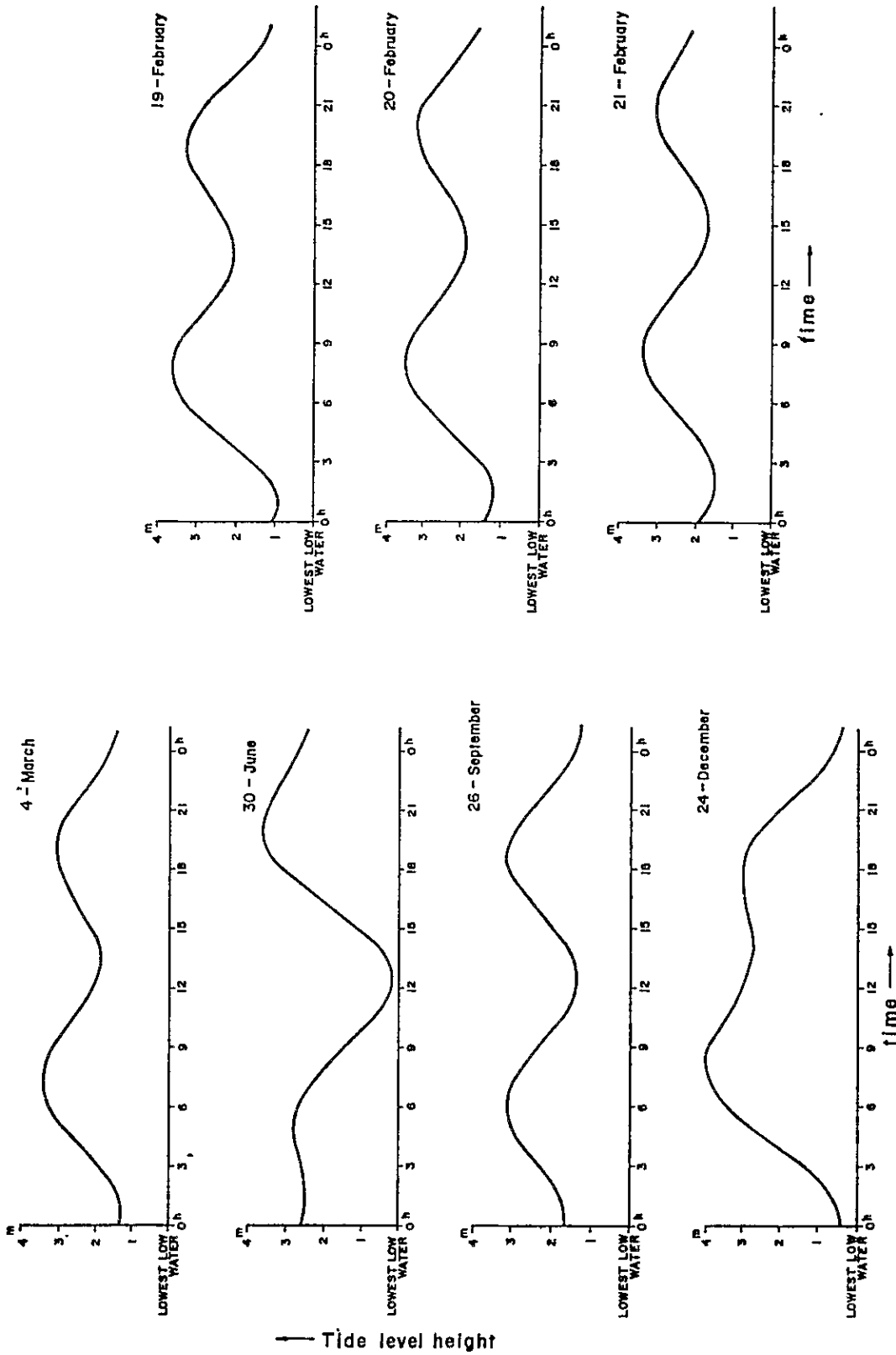


Wind speed in knots

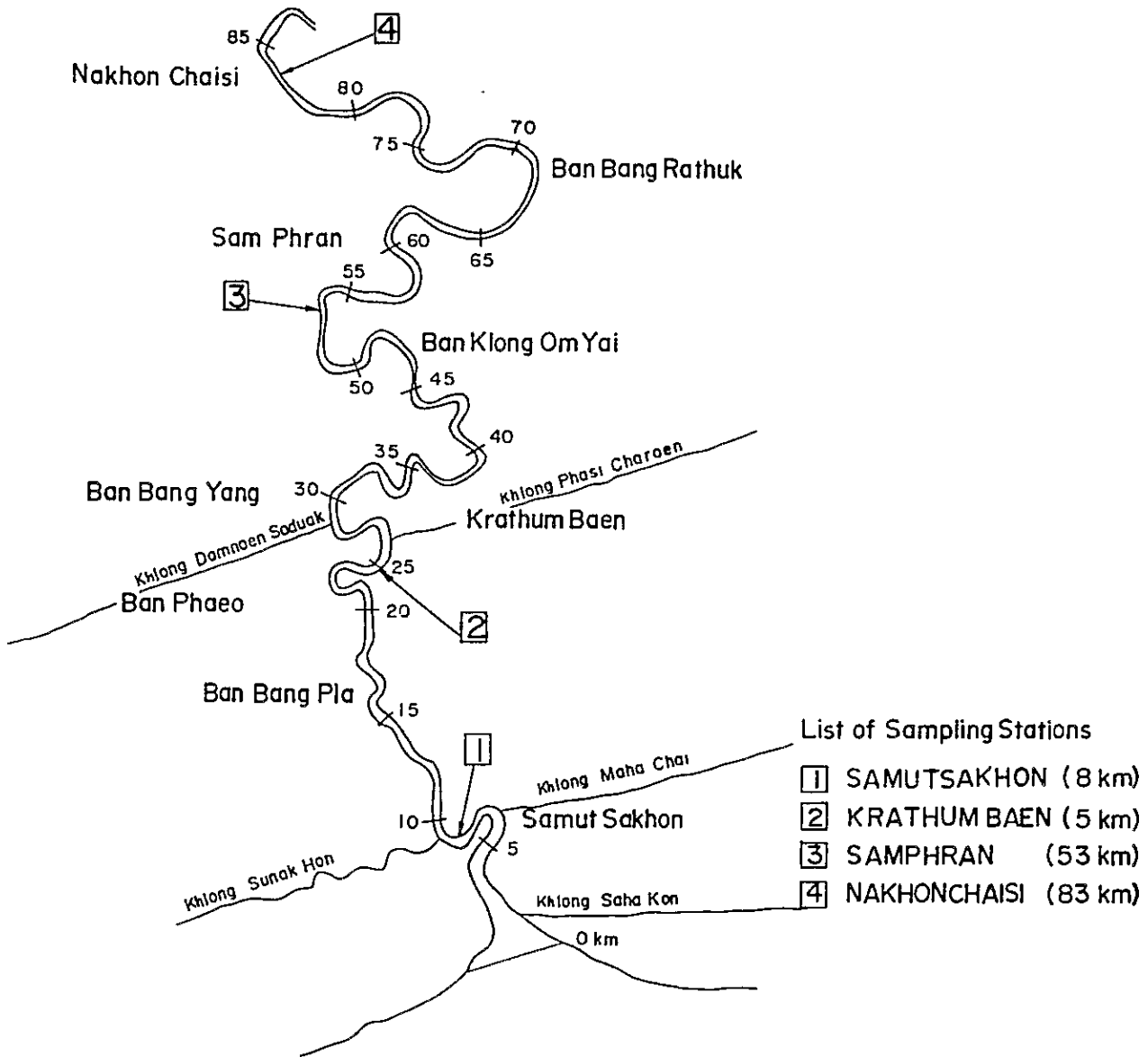


Mean percentage of wind direction

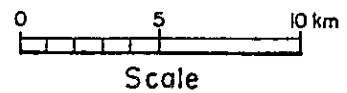
4. FREQUENCIES OF WIND DIRECTION AND SPEED AT SATTAHIP



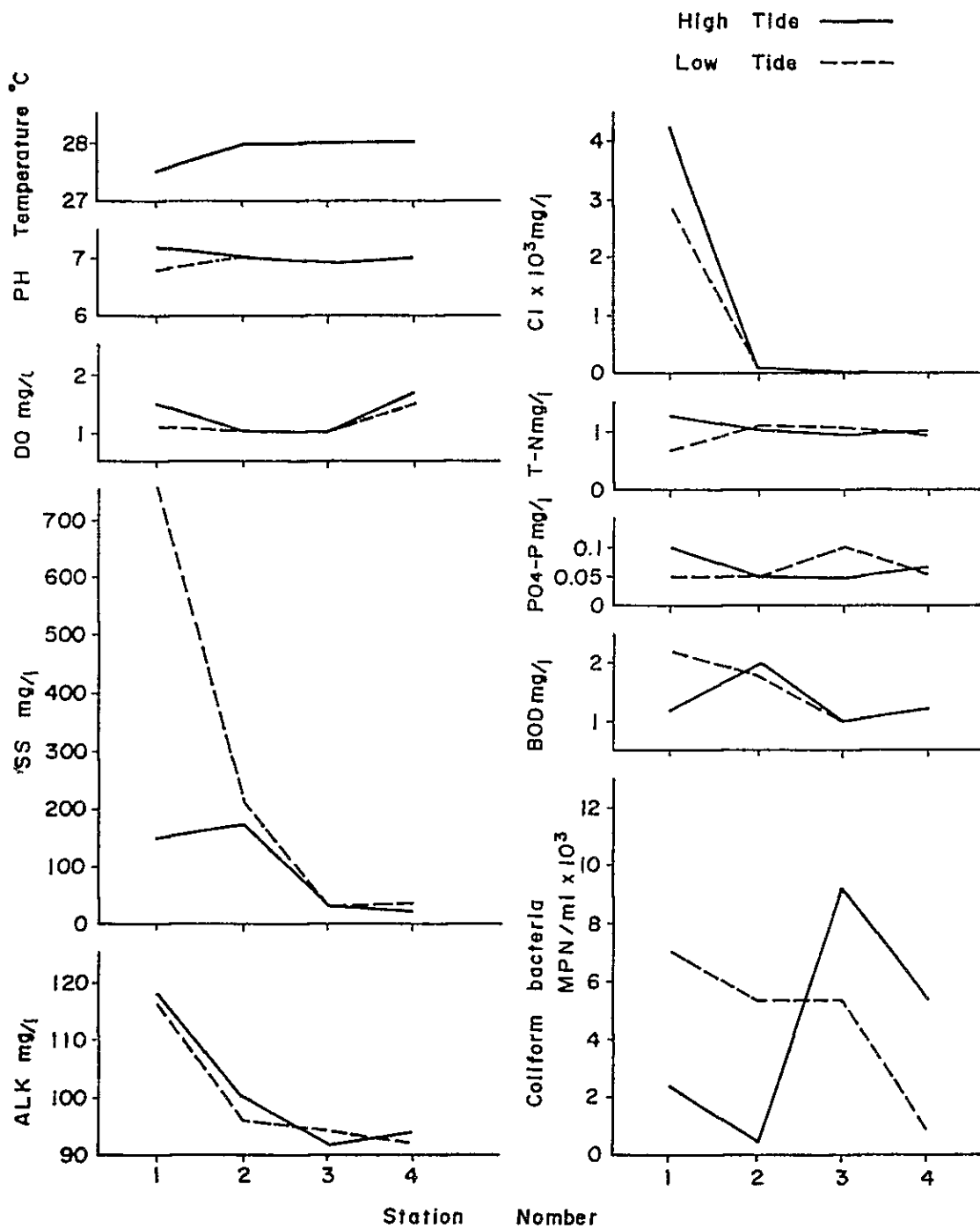
VARIATION OF TIDE AT THE ESTUARY THA CHIN RIVER  
 (from Tide tables in 1980, Hydrographic Department of ROYAL THAI NAVY)



1. SAMPLING STATIONS ALONG THE THA CHIN RIVER (1979)

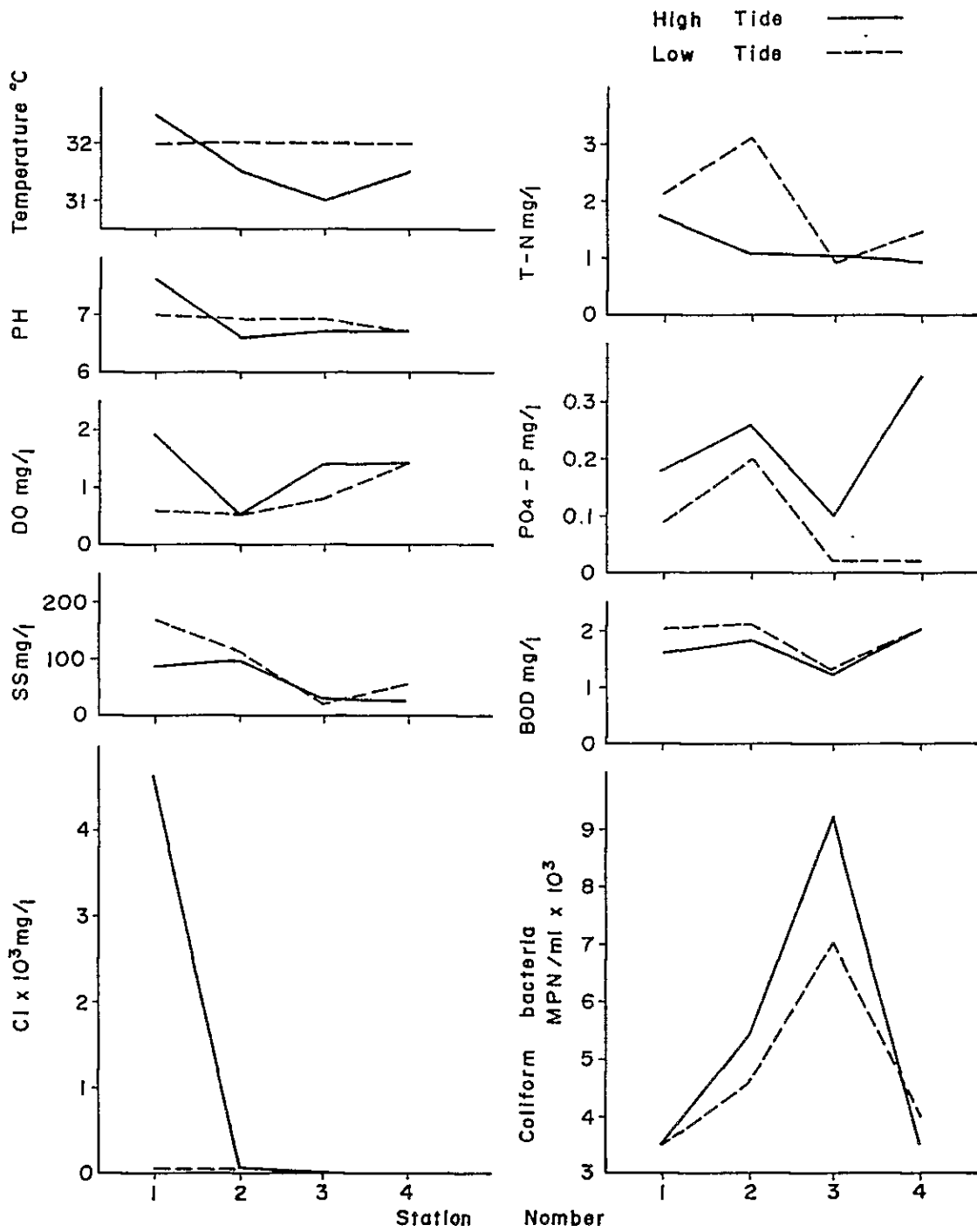


WATER QUALITY OF THE THA CHIN RIVER (1979)

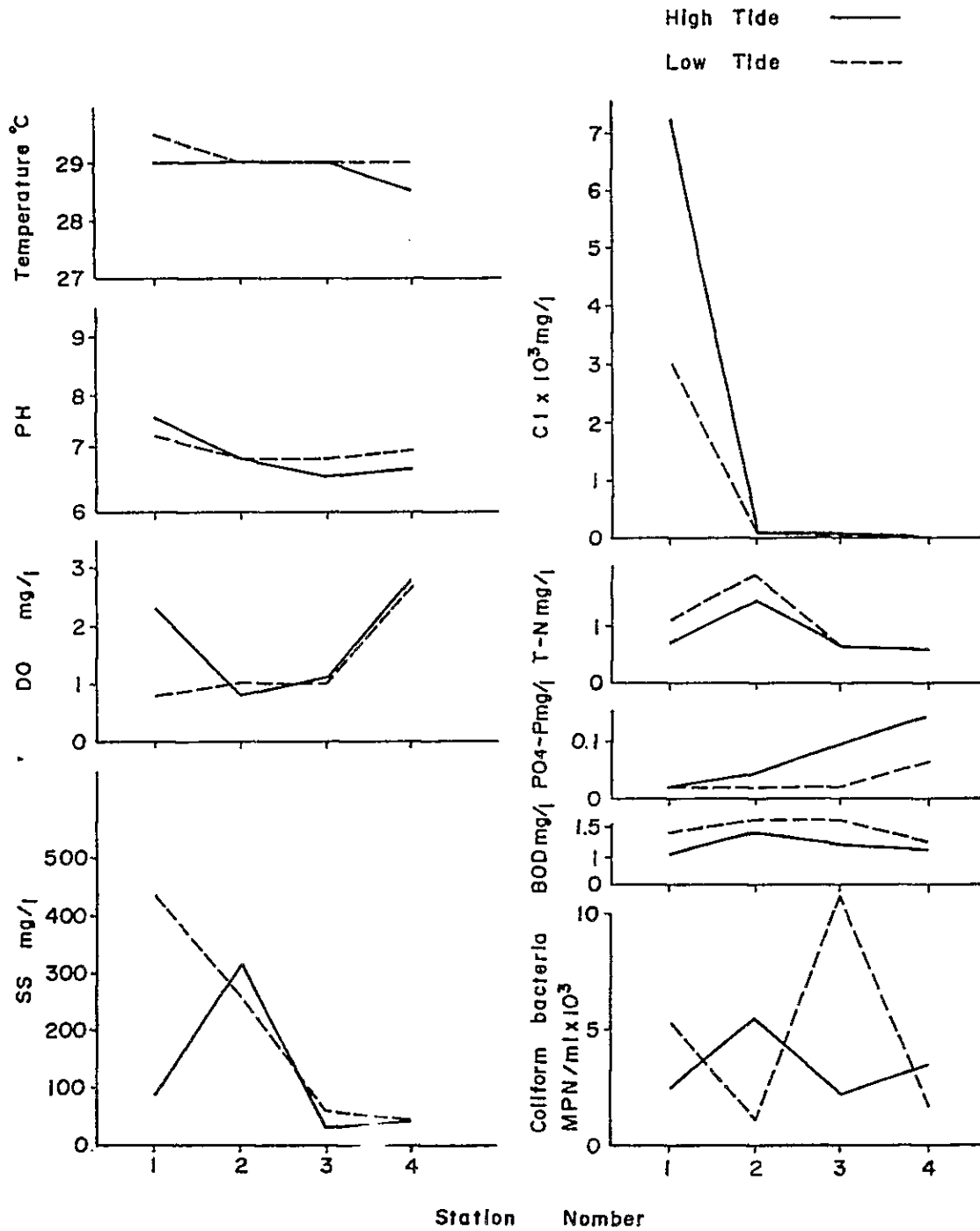


2. VARIATION OF TEMP. PH. DO. SS. ALKALINITY. Cl. T-N. PO<sub>4</sub>-P. BOD AND COLIFORM IN THA CHIN RIVER (Feb. 1, 1979)

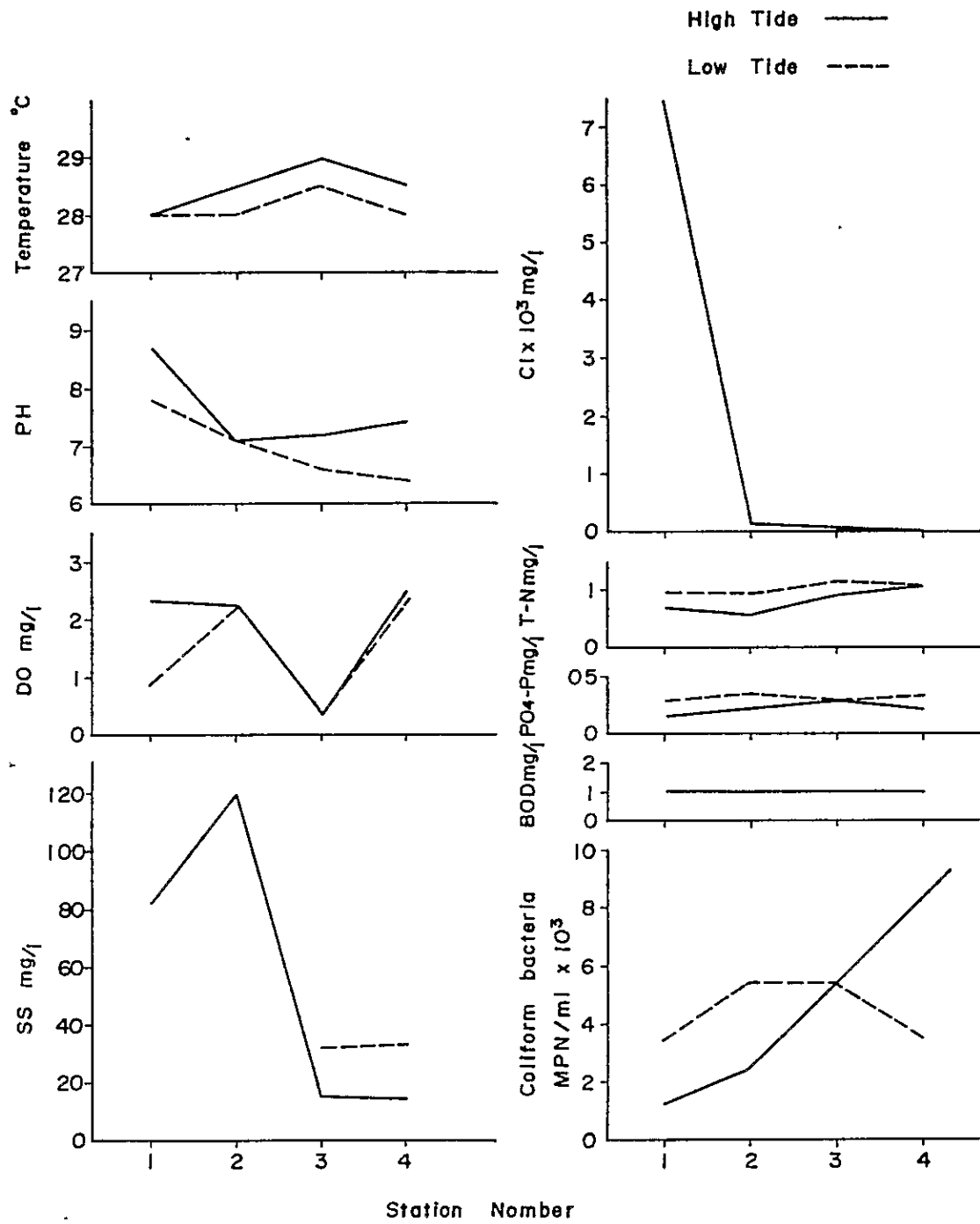




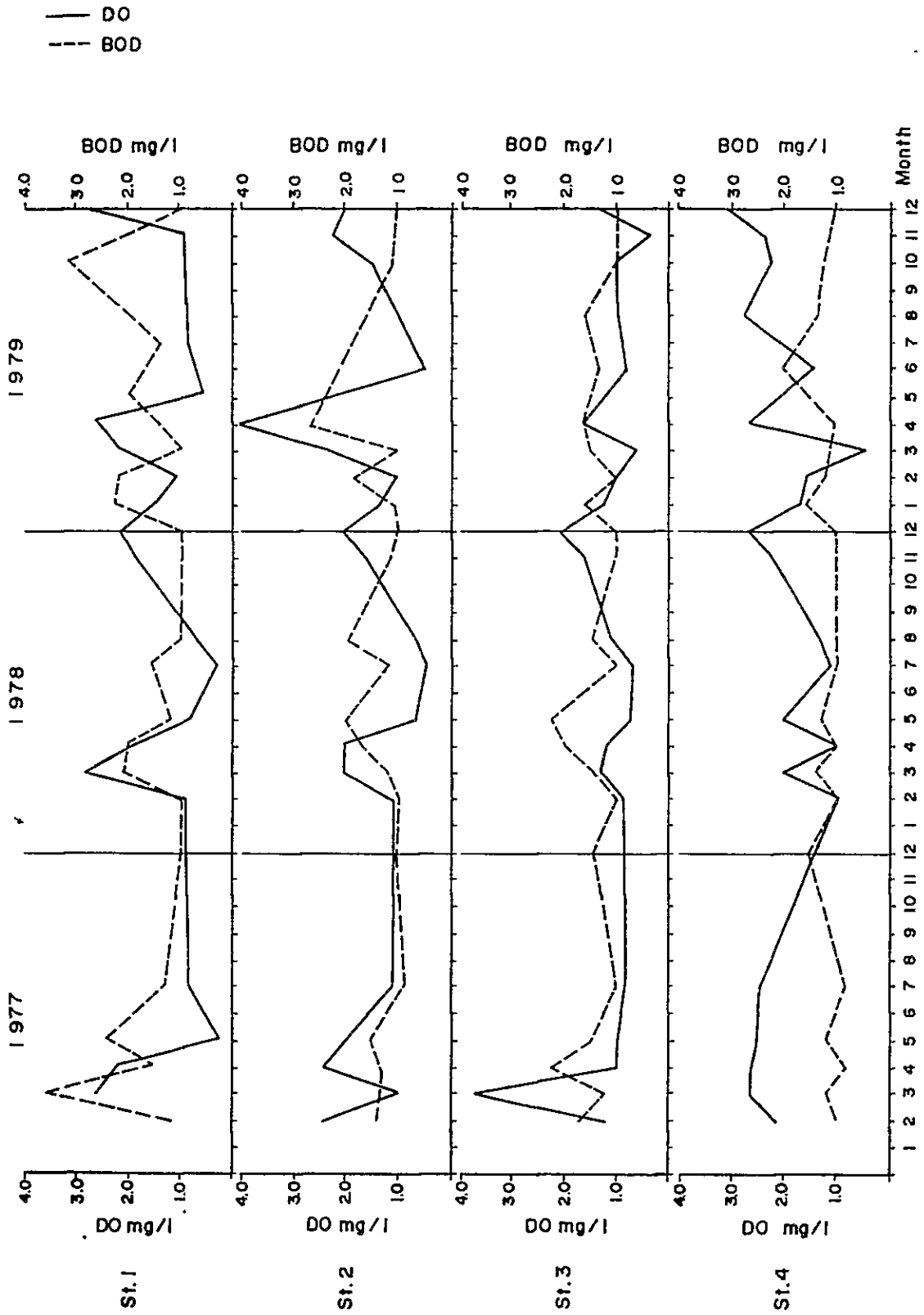
3. VARIATION OF TEMP. PH. DO. SS. Cl, T-N, PO<sub>4</sub>-P, BOD, AND COLIFORM IN THE CHIN RIVER (Jun. 9, 10, 1979)



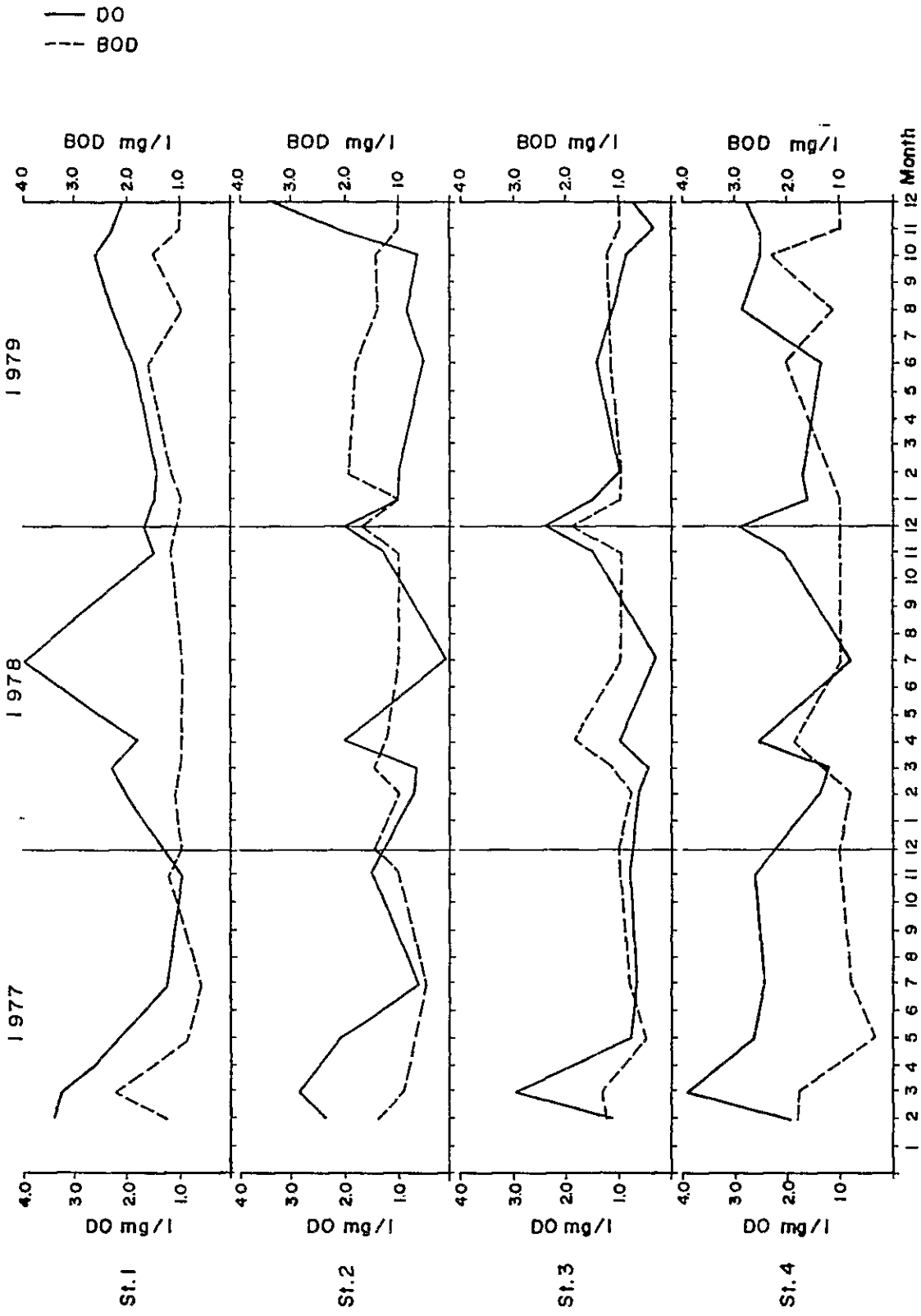
4. VARIATION OF TEMP. PH. DO. SS. CI. T-N. PO<sub>4</sub>-P. BOD. AND COLIFORM IN THE CHIN RIVER (Aug. 12, 19, 1979)



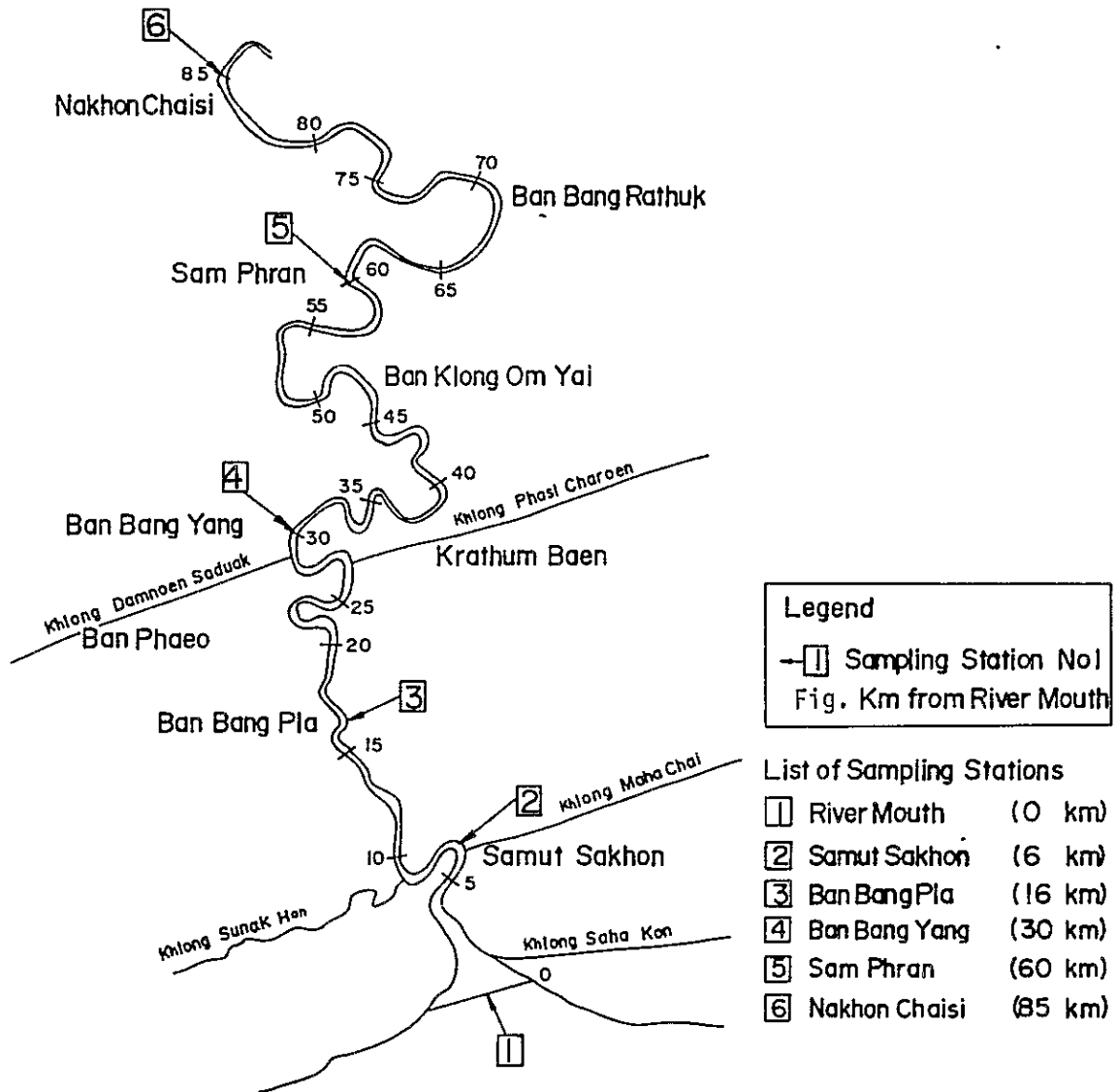
5. VARIATION OF TEMP. PH. DO. SS. Cl. T-N. PO<sub>4</sub>-P. BOD, AND COLIFORM IN THA CHIN RIVER (Nov. 8, 1979)



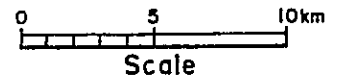
6. TIME VARIATION OF DO AND BOD IN THE CHIN RIVER (Low-Tide)



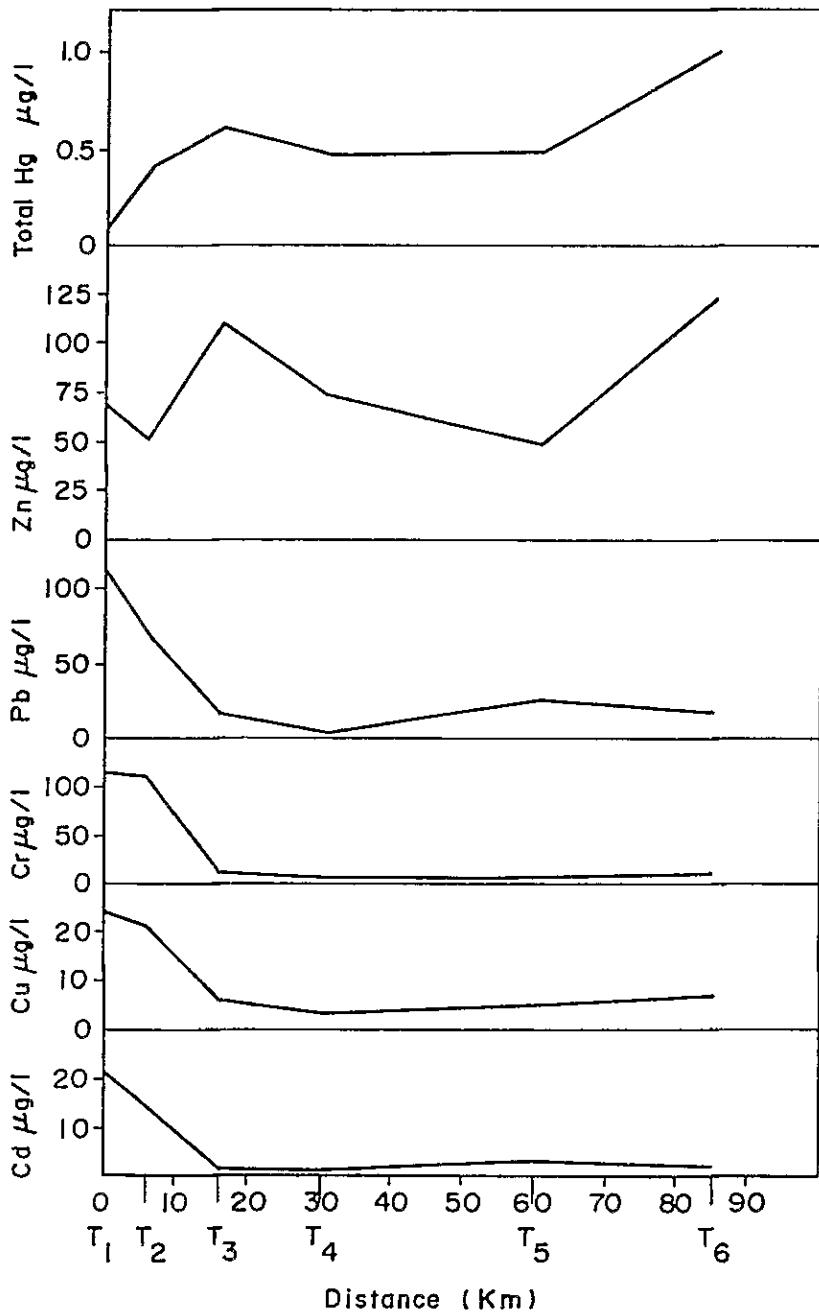
7. TIME VARIATION OF DO AND BOD IN THA CHIN RIVER (High-Tide)



1. SAMPLING STATIONS ALONG THE THA-CHIN RIVER (1978)



ANNEX 2-15 WATER QUALITY OF THE THA CHIN RIVER (1978)



2. VARIATION OF Cd, Cu, Cr, Pb, Zn and Hg, IN THE CHIN RIVER (December 8, 1978)

3. CONCENTRATIONS OF HEAVY METALS IN WATER, SEDIMENT AND BIOTA  
IN VARIOUS RIVERS AND SEAS IN THAILAND AND OTHER LOCATIONS

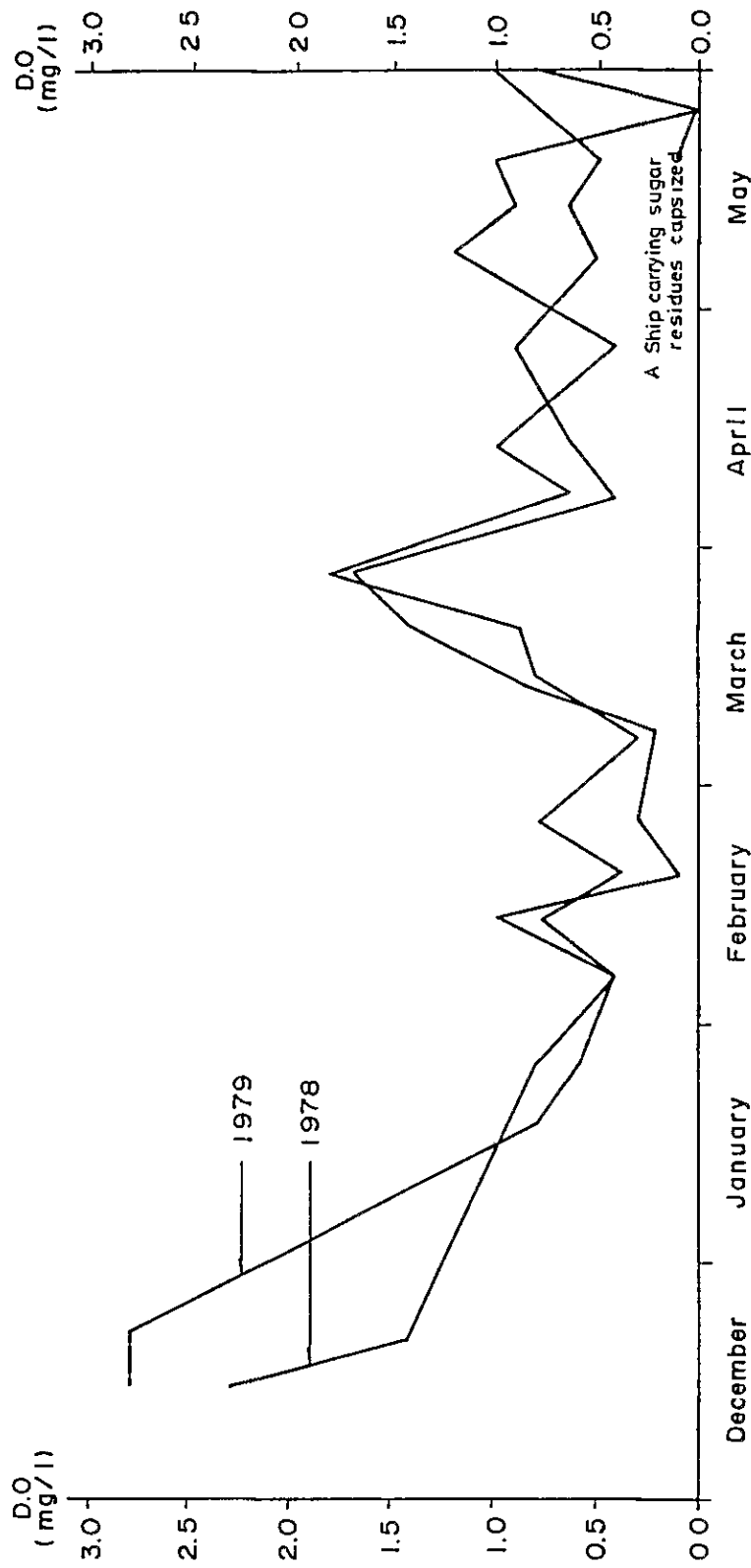
Source & Location	Type of Samples	Heavy Metal Concentration (µg/l, µg/kg)								References	
		Cd	Cu	Cr	Pb	Zn	Hg				
Ta-Chin River	Water	-	-	-	-	-	-	-	-	Nil-37.2	SUTHAROJ (1977)
(river mouth) (1977)	Sediment	190	-	-	7,100	63,000	-	-	-	1,090	CHEEVAPARANAPIVAT (1979)
River mouth (depth 2.7 m.) (1974)	"	20	-	9,700	1,100	100	-	-	-	23,400	NRCT (1974) ITTIKASEM (1977)
Mae Klong River	Water	-	-	-	-	-	-	-	-	Nil-6.33	SUTHAROJ (1977)
(river mouth) (1977)	Sediment	180	-	-	5,900	69,850	-	-	-	660	CHEEVAPARANAPIVAT (1979)
River mouth (depth 3.2 m.)	"	160	11,000	-	1,840	Nil	-	-	-	Nil	ITTIKASEM (1977) NRCT (1974)
Ping River	Water	-	-	-	-	-	-	-	-	0.03-0.28	SUTHAROJ (1977)
Wang River	"	-	-	-	-	-	-	-	-	0.20-0.70	"
Yom River	"	-	-	-	-	-	-	-	-	0.42-1.10	"
Nan River	"	-	-	-	-	-	-	-	-	0.01-0.20	"
Petrochemical site Cholburi Province	Stream Water	max. 0.8	3.4-5.2	8-23	3.3-5.3	19-23	-	-	-	1-2	PESCOD (1975)
"	Seawater	0.84	0.625-50.0 avg. = 7.0	3.31-7.0	1.2-34.8	2-44.0 avg. = 22.4	-	-	-	0.3-22.0 avg. = 5.58	"
Black Sea	"	-	-	-	3.6	-	-	-	-	-	FISHERMAN & HOM (1976)
Sirikit Dam	Stream Water	4.9	0.4	-	-	-	-	-	-	-	MCGARRY (1974)
Lopburi River	"	03.	3.1	-	-	-	-	-	-	-	

\* unit for water

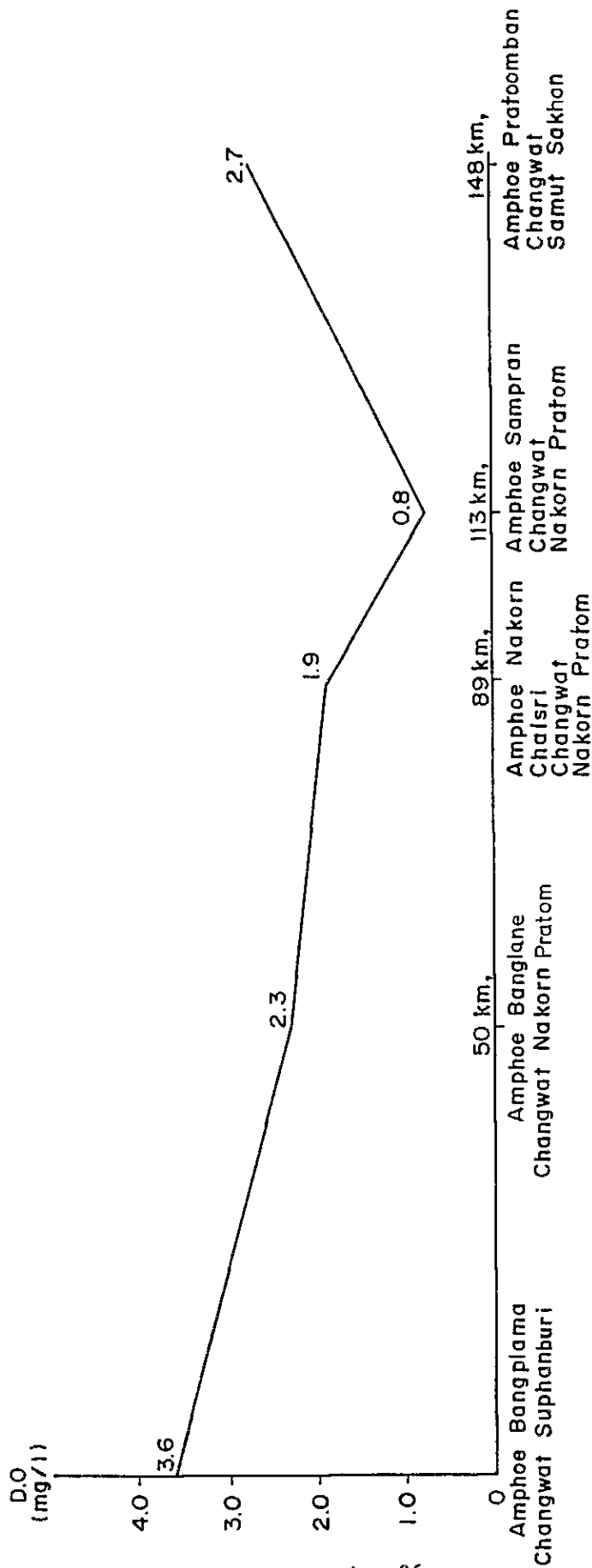
\*\* unit for sediment and biota

- data not available

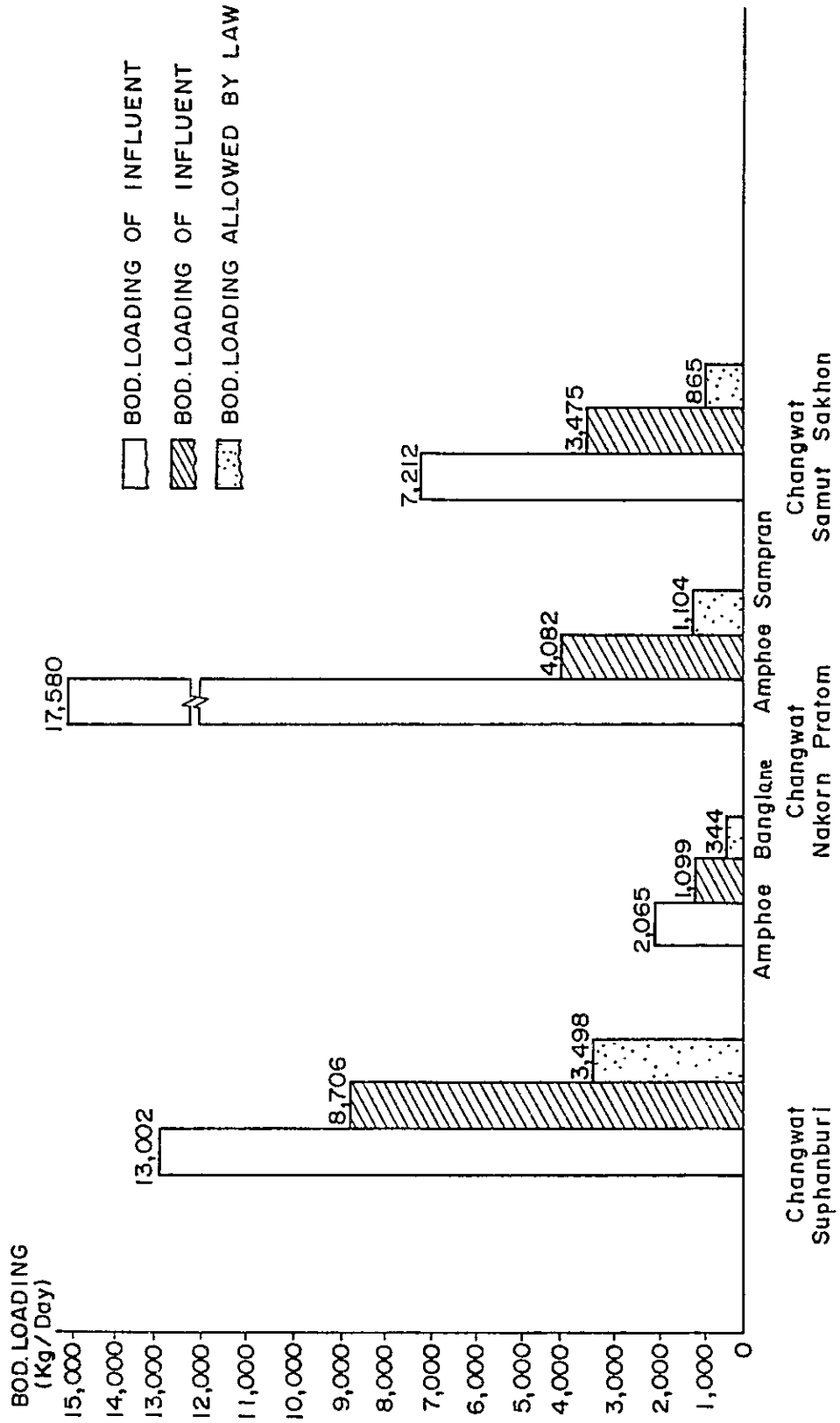




VOLUME OF OXYGEN DISSOLVED IN THE WATER (the minimum)



AVERAGE VOLUME OF OXYGEN DISSOLVED IN THE THA CHIN RIVER  
DURING THE SUMMER 1979 (January - May)

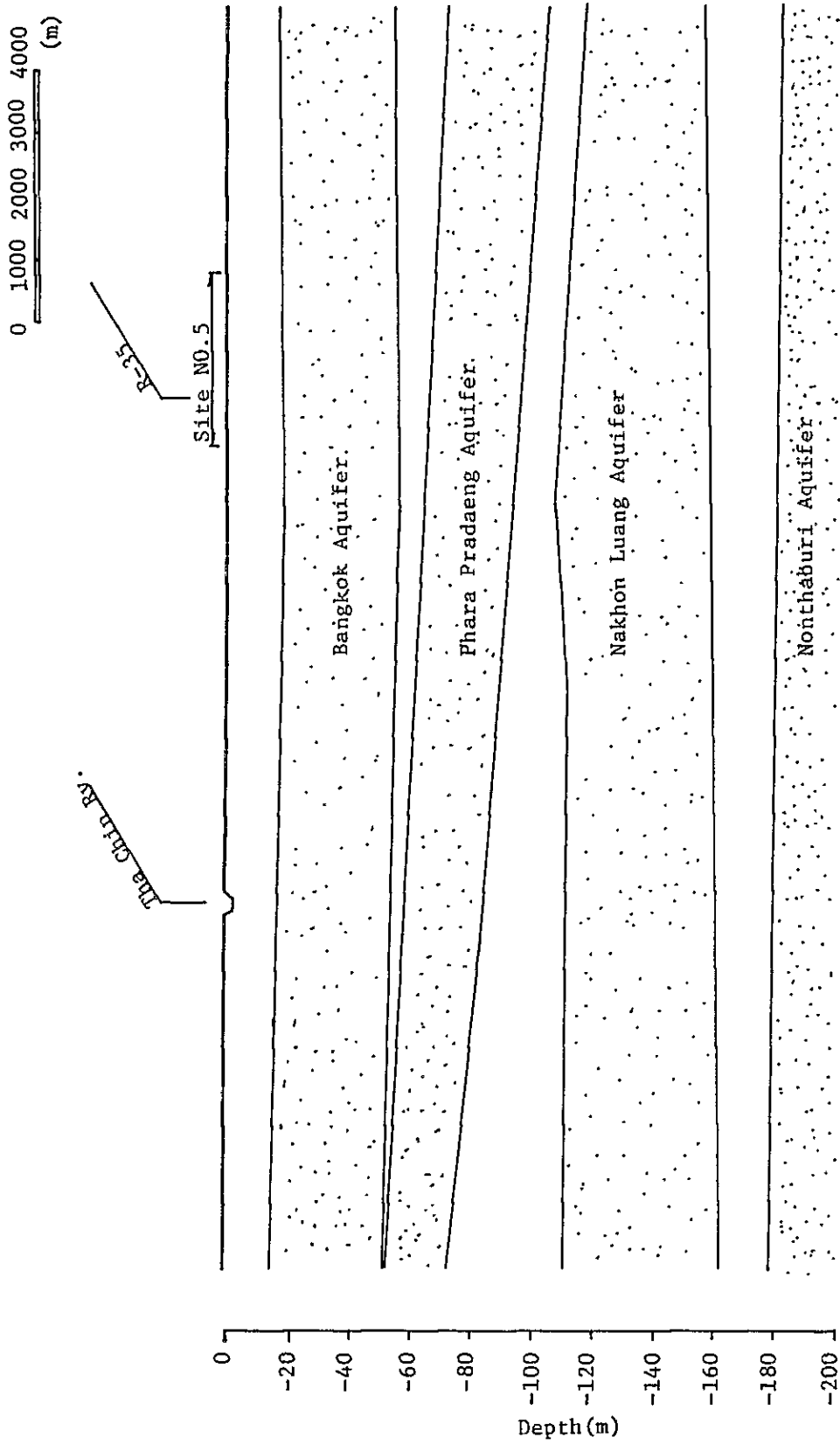


BOD LOADING OF THA CHIN RIVER

Annex 2-19 SOILS1. SOIL CLASSIFICATIONS

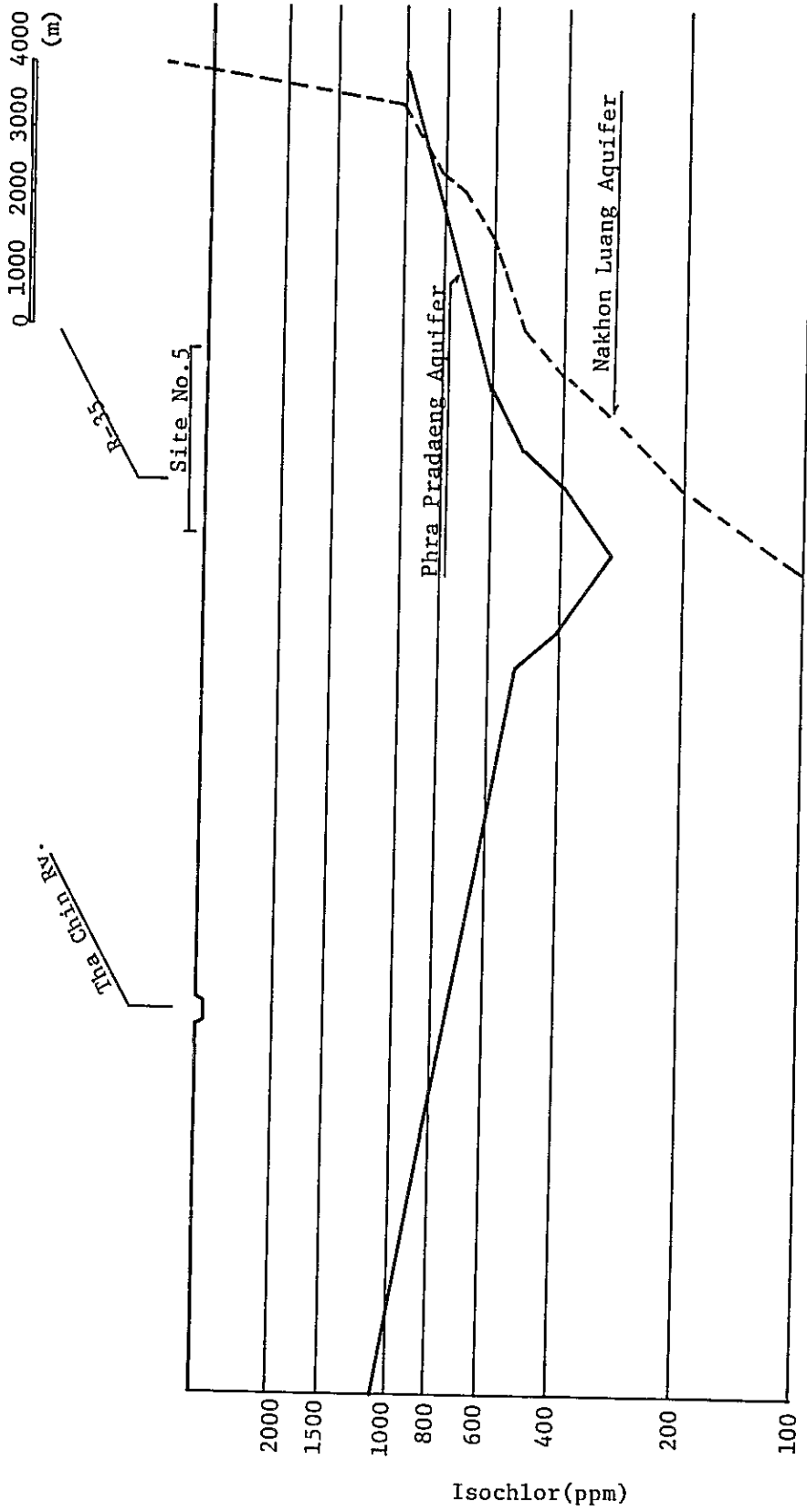
Symbol	SP	ML	CL
Major Division	Coarse Grained Soils Sandy	Fine Grained Soils Containing little or Coarse Grained Materials Fine Grained Soils having Low to Medium Compressibility	
Soil Groups & Typical Names	Poorly Grades Sands little of no Fines	Silts(inorganic) & very fine sands Rock Flour, Silty or Clayey fine sands with slight plasticity	Clays(inorganic) of low to medium plasticity. Sandy clays, silty clays, lean Clay.
Value as Embankment Material & Applications	Stable, Canal Sections with gentle Slope	Unstable, Embankment with moisture control	Stable. Core or Blanket
Permeability (cm/sec)	more than $10^{-3}$	$10^{-3}$ - $10^{-6}$	$10^{-6}$ - $10^{-8}$
Compaction Characteristics & Equipment	Good Tractor	Good to Poor Close Control Essential Rubber Tired Roller	Fair to Good Tamping Roller
Dry Unit Weight (t/m <sup>3</sup> )	1.60-1.92	1.52-1.92	1.52-1.92
Value as Subbase with Bituminous Surface	Fair to Poor	Poor	Poor
Value as Foundation when not subject Frost Action	Fair to Good	Fair to Poor	Fair to Poor
Shrinkage Expansion Elasticity	Almost None	Slight to None	Medium
Drainage Characteristics	Excellent	Fair to Poor	Practically Impervious
CBR in situ	10-25	5-15	5-15
Spring Constant (kg/cm <sup>3</sup> )	5.5-8.3	2.8-5.5	2.8-5.5





1. GEOLOGICAL PROFILE ALONG R-35

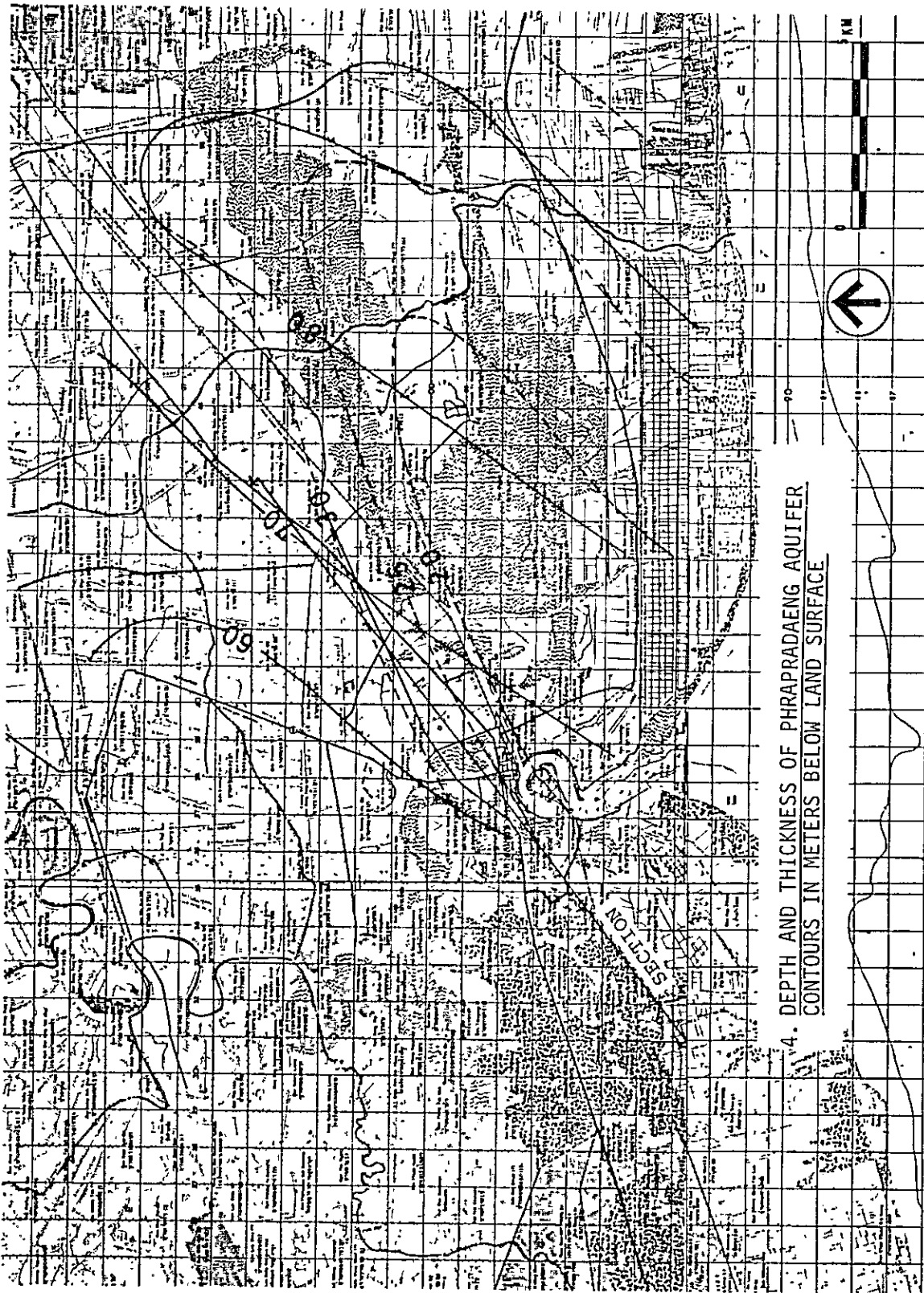
Annex 2-20 GROUNDWATER

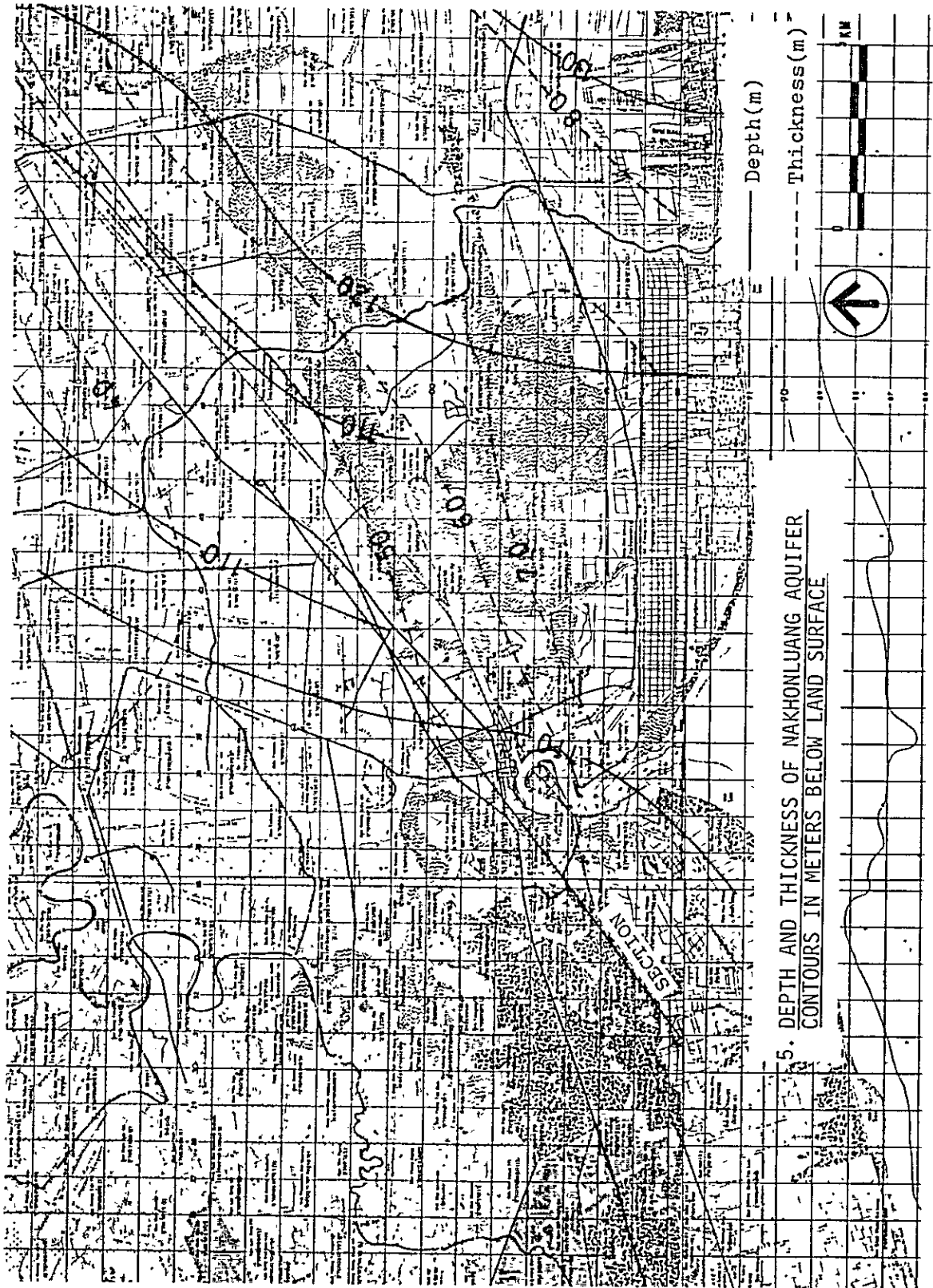


2. ISOCHLOR ALONG R-35

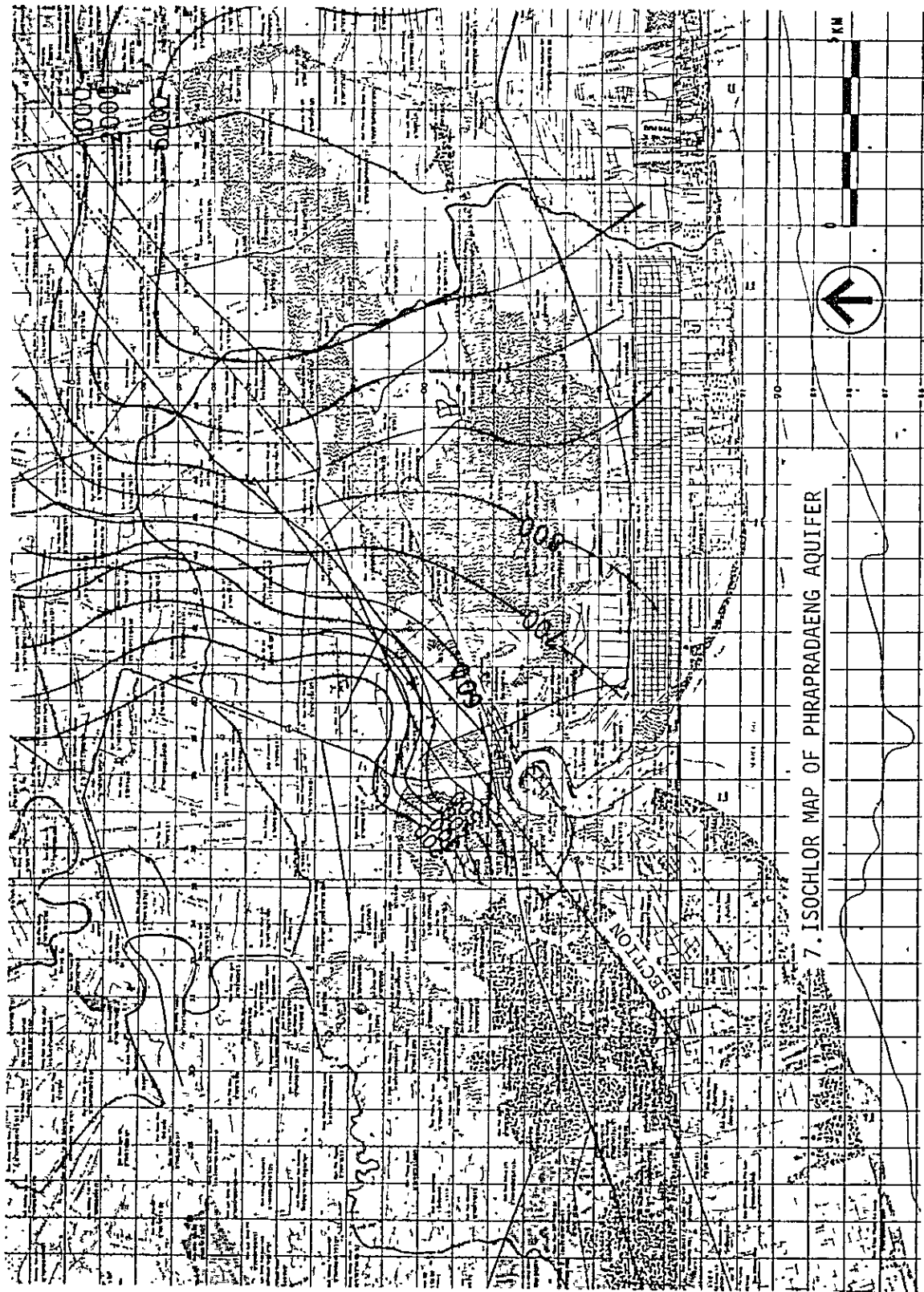


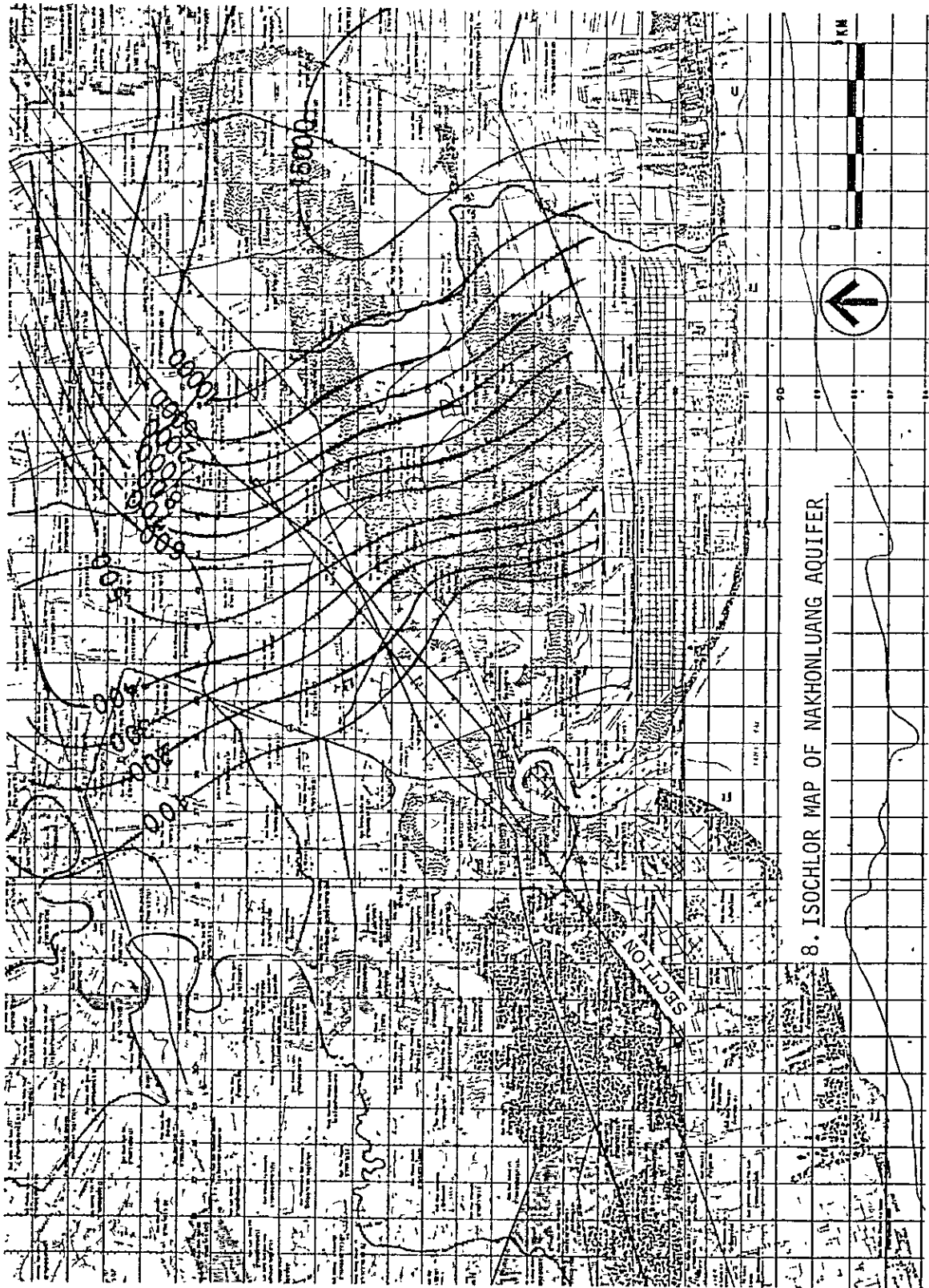


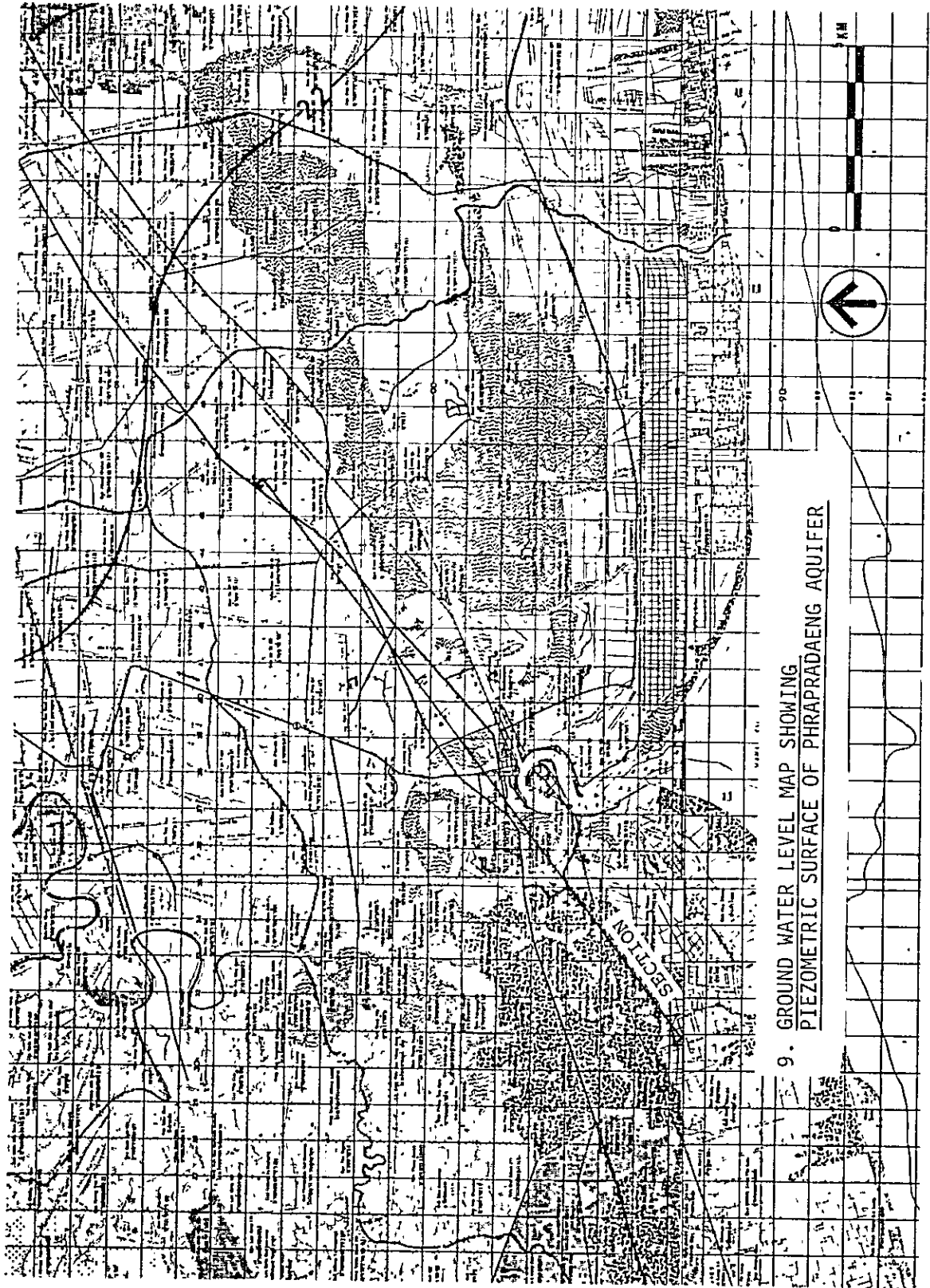




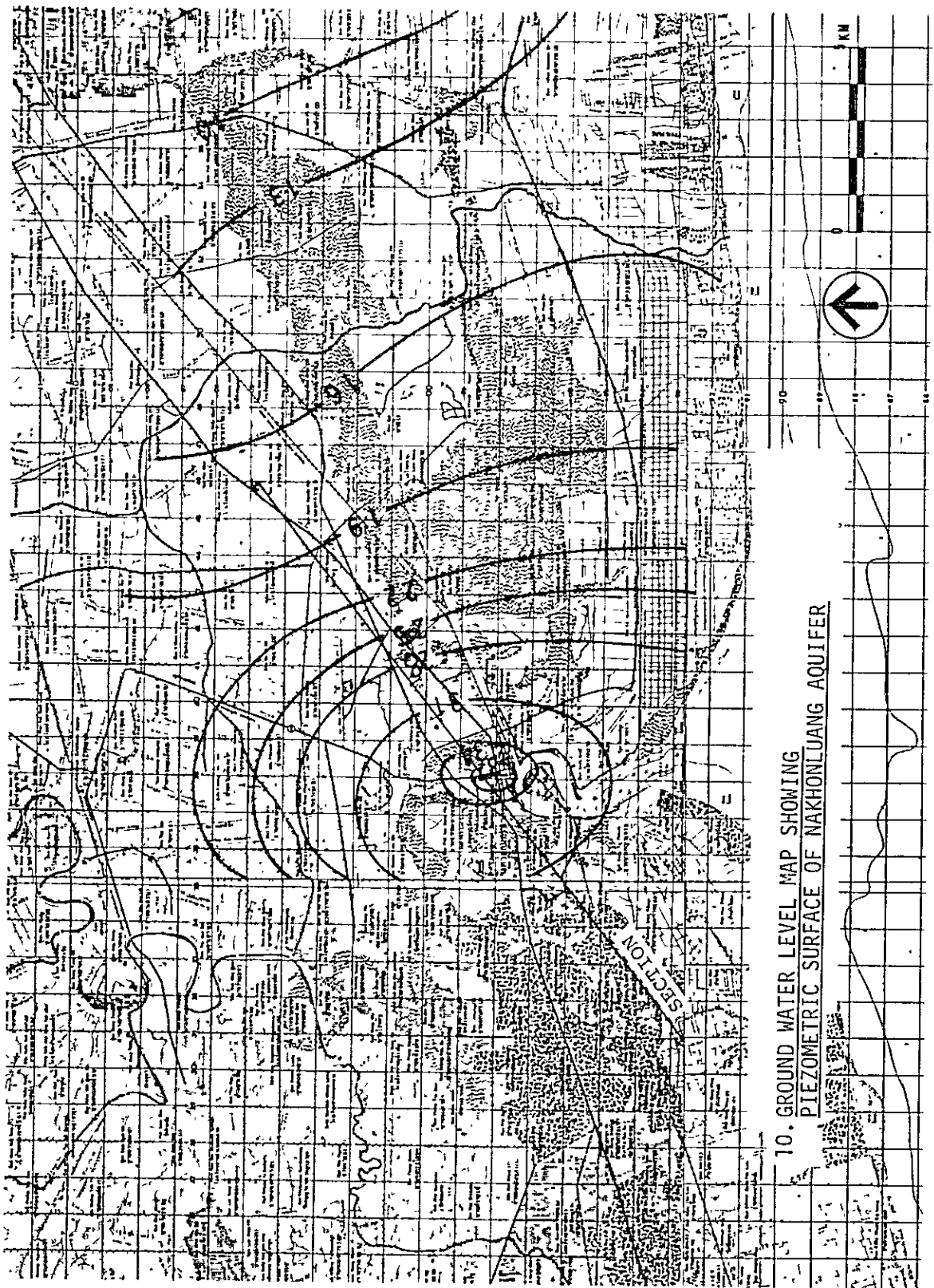




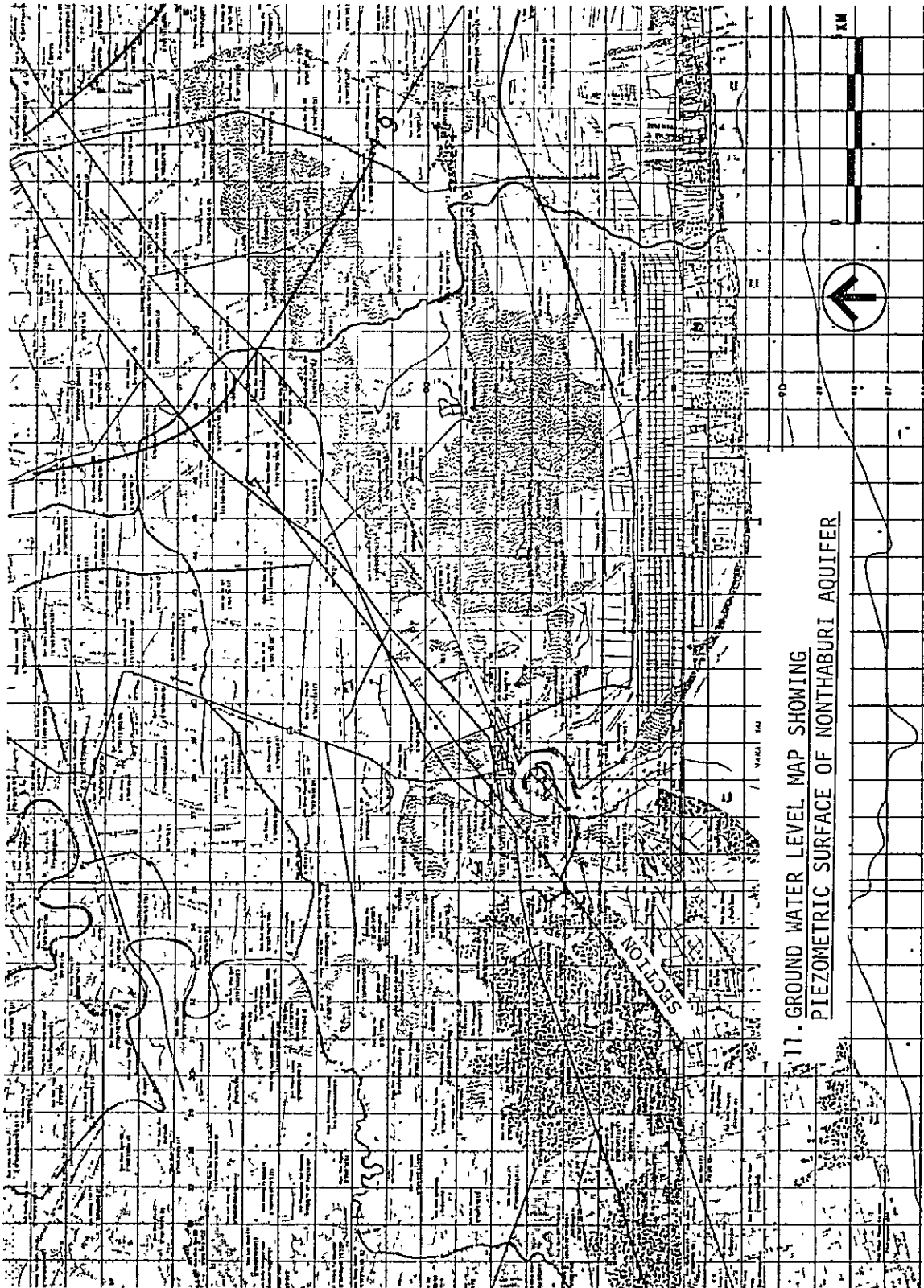








10. GROUND WATER LEVEL MAP SHOWING  
PIEZOMETRIC SURFACE OF NAKHONLUANG AQUIFER





Annex 3-1 AVERAGE ANNUAL POPULATION GROWTH RATE  
BY FIVE YEARS AD 1960 - 2000

Unit: %

	1960	1965	1970	1975	1980	1985	1990	1995	2000
Bangkok		6.3	3.9	4.3	3.3	2.9	2.5	2.4	2.4
Samut Prakarn		3.3	3.6	5.3	3.4	3.2	2.9	2.7	2.6
Nonthaburi		3.6	2.9	4.7	2.8	2.7	2.3	2.2	2.2
Total		5.8	3.8	4.4	3.3	3.0	2.5	2.4	2.4

Source: Greater Bangkok Plan 2,000 MOINT

Annex 3-2 NUMBER OF FISH PROCESSING FACTORY, COLD  
STORAGE PLANT AND ICE PLANT, 1977

	Whole Country	Samut Sakhon
Fish meal	73	12
Fish sauce	109	15
Shrimp paste	567	5
Fish canned	6	2
Salted fish	312	51
Dried & boiled shrimp	105	-
Smoked fish	9	-
Steamed fish	55	-
Dried squid	172	-
Other kind of fish sauce	31	-
Shrimp & crabs canned	1	-
Fish ball	16	4
Shrimp crackers	4	-
Fermented fish	1	1
Others	14	-
Cold storage plant	39	3
Ice plant	154	6

Source: Fisheries Record of Thailand 1977 MOAC

PARAMETERS IN LINEAR REGRESSION EQUATIONS FOR  
ESTIMATING MANUFACTURING GDP BY TYPE OF INDUSTRY

Type of Industry	a	b	R <sup>2</sup>
1. Foods	6.24	-20,264.4	0.83
2. Beverage	8.99	14,085.96	0.98
3. Tobacco & Snuff	15.33	-10,925.86	0.85
4. Textile	13.41	-11,596.84	0.88
5. Wearing Apparel	8.87	17,915.79	0.99
6. Leather & Leather Products	34.43	53,801.96	0.01
7. Wood & Cork	58.36	-35,642.97	0.84
8. Furniture & Fixture	74.68	13,798.04	0.95
9. Paper & Paper Products	127.65	3,635.48	0.82
10. Printing & Publishing	171.12	-201,216.87	0.92
11. Chemicals of Chemical Products	16.36	13,136.22	0.99
12. Petroleum	19.80	-38,501.31	0.91
13. Rubber & Rubber Products	18.55	33,260.27	0.99
14. Non-Metal Mineral	10.56	25,377.22	0.99
15. Basic Metal	34.11	17,756.17	0.88
16. Metal Products	54.13	312.84	0.82
17. Machinery	66.23	-3,018.58	0.95
18. Electrical Machinery	35.21	137,077.00	0.93
19. Transportation Equipments	7.90	25,927.88	0.97
20. Miscellaneous	34.00	16,855.06	0.95

Note 1) Basic formula for equation is  $Y = at + b$

where Y : GDP  
t : Year  
a : Coefficient  
b : Constant

2) R<sup>2</sup> denotes coefficient of determination

3) Since the regression equation for "Leather and Leather Products" has a very low R<sup>2</sup>, its GDP in 1990 is estimated equal to that in 1978.

## ESTIMATED LAND DEMAND BY TYPE OF INDUSTRY

Type of Industry	GDP Estimated in 1990 (National Level)	GDP increase from 1978 to 1980 (National Level)	Additional Land Required (National Level)	Additional Land Required (BMA)
	(million Baht)	(million Baht)	(Rai)	(Rai)
1. Foods	30,588	14,518	5,326	1,592
2. Beverage	17,560	9,547	3,502	1,194
3. Tobacco & Snuff	11,873	6,136	2,251	900
4. Textile	13,615	6,348	2,329	897
5. Wearing Apparel	17,365	9,818	3,602	1,491
6. Leather & Leather Products	391	0	0	0
7. Wood & Cork	2,755	820	301	76
8. Furniture & Fixture	2,115	1,149	421	184
9. Paper & Paper Products	1,315	697	256	113
10. Printing & Publishing	2,133	464	170	74
11. Chemicals & Chemical Products	9,704	5,270	1,933	804
12. Petroleum	10,540	4,543	1,667	657
13. Rubber & Rubber Products	7,500	4,712	1,729	361
14. Non-Metal Mineral	13,917	8,253	3,028	1,126
15. Basic Metal	3,377	1,407	516	169
16. Metal Products	3,164	1,615	592	202
17. Machinery	2,630	1,321	485	192
18. Electrical Machinery	4,123	2,586	949	381
19. Transportation Equipments	18,520	10,833	3,974	1,594
20. Miscellaneous	4,568	2,643	970	190
Total	177,736	92,680	34,001	12,197

Note 1) For converting GDP into land site, land/GDP for standard factory in Thailand is adopted.

EXPORTS BY COMMODITIES

Unit: Million US\$

	1950	1955	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977
Food, beverages and animal, vegetable oil				344	348	411	554	689	1,388	1,335	1,773	
Crude materials excluding fuels			0	251	218	242	274	493	570	434	588	
Mineral fuels				2	5	7	13	21	21	13	7	
Chemicals				1	3	3	4	11	21	15	16	
Textile				-	10	22	46	123	140	135	239	
Iron, steel, non-ferrous metals				24	81	79	88	114	182	131	178	
Machinery				-				4	7	7	13	
Electrical machinery				-		4	2	2	14	24	48	
Transport equipment				-				3	4	5	8	
Miscellaneous manufactured goods				1	4	8	5	15	25	29	46	
Goods not classified by kind				7	38	53	53	88	74	65	61	
All commodities				627	710	831	1,039	1,566	2,449	2,195	2,978	

Source : Yearbook of International Trade Statistics 1977

IMPORTS BY COMMODITIES

Unit : Million US\$

	1950	1955	1960	1965	1970	1971	1972	1973	1974	1975	1976	1977
Food, beverages and animal, vegetable oil				51	67	75	88	89	123	136	152	
Crude materials excluding fuels				110	123	142	153	245	304	289	350	
Mineral fuels				62	113	134	152	233	625	708	832	
Chemicals				75	167	176	227	325	454	439	502	
Textile				79	88	62	70	96	110	91	87	
Iron, steel, non-ferrous metals				64	166	160	187	258	375	311	381	
Machinery				98	220	214	241	311	538	579	473	
Electrical machinery				41	105	86	95	136	177	192	221	
Transport equipment				84	135	132	133	240	299	369	361	
Miscellaneous manufactured goods				37	55	51	53	67	85	91	103	
Goods not classified by kind				25	52	54	83	69	58	67	99	
All commodities				725	1,293	1,287	1,484	2,073	3,156	3,279	3,572	

Source : Yearbook of International Trade Statistics 1977

## GROWING INDUSTRIES IN SAMUT SAKHON (1971 - 1977)

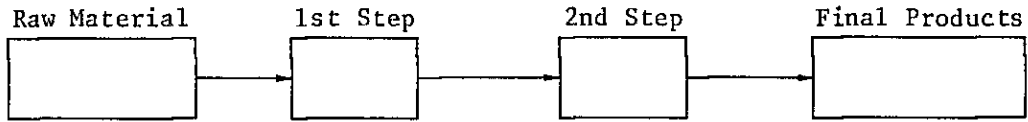
Type of industry	Type of industry showing more than average gross rate	1977/1971	Type of industry	Type of industry showing more than average gross rate	1977/1971
31122	Slaughter houses	201	31150	Glycerin, vegetable & animal oil	159
31181	Sugar mills & refineries	274	31401	Cigarette and cigar	153
31210	Preparation of animal feeds	334			
(31229)	Candy	202			
(31229)	Canned fruits	645			
31330	Breweries	233			
31340	Alcoholic beverages	253			
32115	Dyeing	281	32113	Cotton textile	155
32119	Preparing, spinning & weaving of yarns (expt. cotton & silk)	301			
32120	Made-up textile	396			
32140	Mats from strew & fibers	394			
32201	Apparel	245	32203	Umbrella	176
32202	Hats	250	32118	Gunny bag	152
32401	Footwear exopt. rubber and fiber one	216	3211		
			34113	Papers	162
			34202	Printing of books, maps, etc.	168
35121	Natural fertilizers	380	35221	Medicine & cosmetics	183
(35599)	Rubber-made roof material	347	35234	Cleaning and bleach compounds	166
(35299)	Printing ink	184	35294	Powdered Gum Dammar	169
			35300	Petroleum refineries & products	156
			35400		
			35510	Tires, tubes and retreating tires	168
			36102	Ceramics	171
			36200	Glass and glass products	182
			36921	Cements	159
			36993	Concrete & cement products	161
38113	Aluminium-tin stainless steel ware	207			
38191	Oxidizing, plating, polishing of metals	239			
38210	Engine, machine equipments and parts	271	38392	Wet and dry batteries	179
38320	Radio, TV set and communications equipment and apparatus	444			
(38330)	Refrigerator & Elec. Fans	381			
38431	Assembly of motor vehicles and parts	296	38420	Manufacture and repairing of railroad equipment	159
38432	Motor vehicles body	442			
38440	Assembling and repairing of motorcycle and bike	296			
39014	Silverware making	197			



III. Type of Foundation

- (1) Pile
- (2) Raft
- (3) Others (Specify)

Process of Production



IV. Utility

Water Consumption : \_\_\_\_\_ m<sup>3</sup>/month

Source of Water : well                      City water                      Others

Treatment of Water before Use : Yes                      No

Electricity : Contracted kw

Average Consumption : \_\_\_\_\_ Kw/Hour/month or in Baht

Voltage : \_\_\_\_\_

V. Industrial Waste & Pollution Problem

	Volume	& Type	Treatment Method	Noise
Water				Vibration
Solid Waste				Care - in
Air Pollution				Ground Water Level Problem

VI. Transportation of Product :      Transportation of Raw Material :

Mode	Quantity	Share(%)	Quantity	Share (%)
Truck				
Train				
Others				



VII. Transportation of Workers

Does your company have housing accommodation? \_\_\_\_\_

If yes, Number of workers staying at company housing \_\_\_\_\_

Transportation of Workers

Mode	Share (%)	Share(%)
(1) Walking/bicycle		Where the workers come from?
(2) Motorcycle		1. Local area
(3) Public Bus		2. Bangkok
(4) Company Bus		3. Others provinces (specify)
(5) Private Car		
(6) Others:		

Commuting Distance of Workers

Share (%)

Less than 1 km

1 - 10 km

10 - 30 km

over 30 km

VIII. Future Prospect for Your Industry in the 1980's

Excellent                      Good                      Bad

IX. Today's Investment Environments

What do you think of the today's investment environments?

(1) Regarding market demand						
* Domestic	Excellent	<input type="text"/>	Good	<input type="text"/>	Bad	<input type="text"/>
* Export	Excellent	<input type="text"/>	Good	<input type="text"/>	Bad	<input type="text"/>
(2) Financial condition						
* Availability of Money	Excellent	<input type="text"/>	Good	<input type="text"/>	Bad	<input type="text"/>
* Interest rate	Excellent	<input type="text"/>	Good	<input type="text"/>	Bad	<input type="text"/>

X. What are the Important Factors Choosing Your Plant Site?

- (1) Availability of Raw materials
- (2) Availability of Labor (skilled & unskilled)
- (3) Large space
- (4) Close to market
- (5) Availability of Utility (water, electricity, telephone)
- (6) Access Road (major highway, transportation)
- (7) Others (Specify)

XI. Why did you Choose the Present Location?

- (1) Inherited from previous owner/or later
- (2) The price was reasonable
- (3) Availability of Utilities
- (4) Others (Specify)

XII. Do You Face Problems or Inconvenience at the Present Location?

- (1) Lack of space
- (2) Complaint from neighbors about noise, pollution etc.
- (3) Difficult to obtain labor (skilled & unskilled)
- (4) Inadequate supply of water, electricity etc.
- (5) Others (Specify)

XIII. Do You have a Plan to Invest in the Future (within 10 years)

Yes

No

- New investment is
- (1) Expansion of existing factory
  - (2) New branch factory at new location
  - (3) Relocation of the present factory

XIV. What is the Major Reasons for New Investment?

- (1) Growth of market
- (2) Requirement of additional space
- (3) Complants about noise and other pollution
- (4) Availability of fund
- (5) Government control and incentives
- (6) Others (Specify)



XIX. What Type of Facilities at or near SIE do You Wish Beside the Basic Utilities?

- (1) a common water treatment system
- (2) housing for workers
- (3) workshop
- (4) park
- (5) commercial area
- (6) community center (post office, bank, school, etc.)
- (7) others (specify)

XX. What is the Reasonable Price Range for SIE with Completed Basic Utilities?

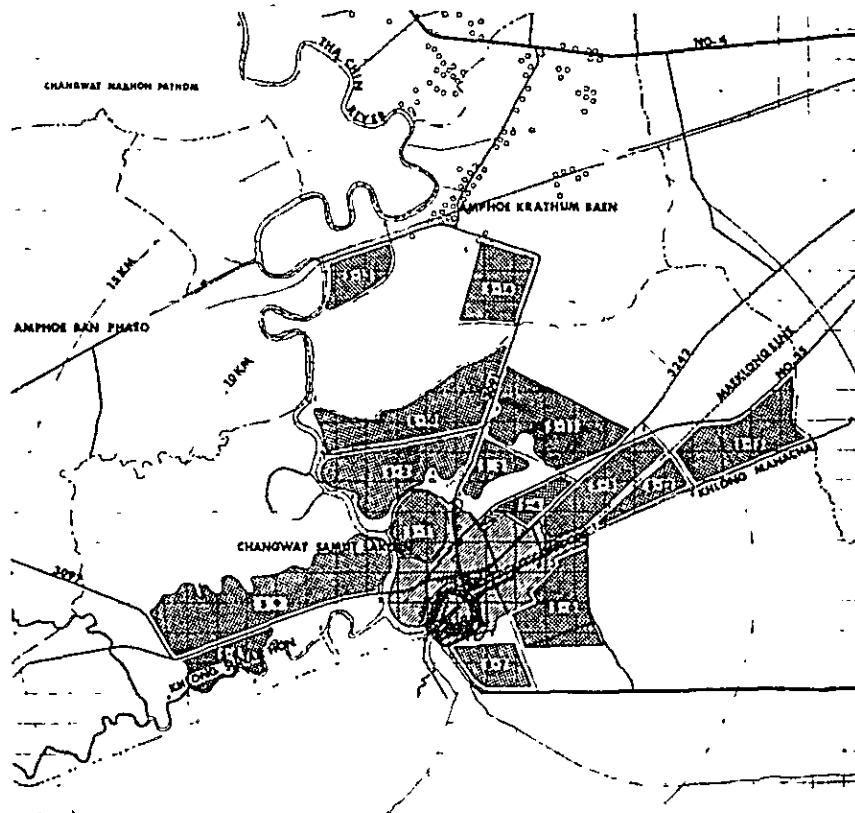
- (1) 200,000 - 250,000 Baht
- (2) 250,000 - 300,000 Baht
- (3) 300,000 - 350,000 Baht
- (4) 350,000 - 400,000 Baht

## LAND DEMAND TO SIE BY TYPE OF INDUSTRY ( INDUSTRIAL SURVEY RESULT )

Type of Industry	Total No. of Answered Factories	Present Land Size		No. of Factories willing to move to SIE from Bangkok			Land Demand from Bangkok			Land Demand from Samut Sakhon		
		Total (Rai)	Average (Rai)	(1)+(2)	(3)	Total (Rai)	(1)+(2)	(3)	(1)+(2)	(3)		
1. Textile	29	181.87	6.27	10	11	154.0	84.0	70.0	-	10.0		
2. Metal	27	75.43	2.79	4	14	119.0	35.0	84.0	-	-		
3. Food	13	65.27	5.02	3	6	53.0	20.0	33.0	-	5.0		
4. Plastic	6	6.83	1.14	4	1	25.0	21.0	4.0	10.0	-		
5. Rubber	7	7.95	1.14	3	3	18.5	8.0	10.5	-	5.0		
6. Chemical	2	27.00	13.50	-	1	4.0	-	4.0	-	-		
7. Wood	1	7.00	7.00	1	-	20.0	20.0	-	-	-		
8. Ceramic	-	-	-	-	-	-	-	-	-	-		
9. Glass	8	29.00	3.63	2	-	7.0	7.0	-	-	-		
10. Paper	1	12.00	12.00	-	-	-	-	-	-	-		
Total	94	412.35	4.39	27	36	400.5	195.0	205.5	10.0	20.0		

Note: (1): Answered Definitely yes  
(2): Most likely  
(3): May be





Source: Preliminary Feasibility Study for SIE, ECFA

SELECTION OF CANDIDATE SITES OF INDUSTRIAL ESTATE  
- PRIMARY SELECTION -





## Annex 5-3. EVALUATION OF CANDIDATE SITES (Case 1)

Items		Max. Score	S-2	S-5	S-6	S-9	S-10	S-11	S-15
I	Environmental Acceptability	30	22.7	16.8	17.8	29.3	5.7	7.6	13.1
	i Waterway discharge	25	18.7	12.6	14.9	25.0	3.0	3.3	8.1
	ii Constant wind direction	2	1.0	1.2	0.9	1.3	1.2	1.3	2.0
	iii Existing environmental problems	3	3.0	3.0	2.0	3.0	1.5	3.0	3.0
II	Infra & Utility Services Availability	25	15.5	19.8	19.0	18.3	15.8	17.1	16.5
	i Road & commuter service	10	5.4	10.0	7.9	8.2	5.1	9.2	9.0
	ii Water supply	8	7.5	5.7	8.0	7.6	7.3	6.2	3.8
	iii Power supply	2	0.7	0.3	0.1	0.1	2.0	0.4	0.1
	iv Telecommunications	2	1.6	1.8	2.0	2.0	1.3	1.2	0.6
	v Railway	1	0	1.0	0	0	0	0	1.0
	vi Waterway	2	0.3	1.0	1.0	0.4	0.1	0.1	2.0
III	Land Acquisition Possibility & Develop. Cost	30	20.4	23.7	27.8	22.7	19.9	20.7	26.7
	i Land price	5	3.0	4.0	5.0	4.0	3.0	4.0	4.0
	ii No. of houses & land ownership	5	2.3	2.7	5.0	2.3	2.3	1.8	3.6
	iii Development cost (external)	12	11.1	12.0	10.8	11.9	10.6	10.9	11.6
	iv Current land use & productivity	5	1.5	2.5	5.0	2.0	1.0	1.0	5.0
	v Topography & soil condition	3	2.5	2.5	2.0	2.5	3.0	3.0	2.5
IV	Regional Development Policy	15	10.5	11.5	4.5	6.5	9.5	12.0	11.0
	i Satellite city development policy	3	1.5	3.0	1.5	1.5	1.5	3.0	3.0
	ii Provincial development policy & plans	3	3.0	3.0	1.0	2.0	2.0	3.0	3.0
	iii Development effects to the surroundings	3	2.0	3.0	0.5	1.0	1.0	2.0	2.0
	iv Trends in factory location	3	3.0	0	1.0	1.0	3.0	1.0	0
	v Expansion possibility	3	1.0	2.5	0.5	1.0	2.0	3.0	3.0
Total score		100	69.1	71.8	69.1	76.8	50.9	57.4	67.3
			3	2	3	1	7	6	5

## EVALUATION OF CANDIDATE SITES (Case 2)

Item	Max. Score	S-2	S-5	S-6	S-9	S-10	S-11	S-15
I Environmental Acceptability	25	19.0	19.3	20.9	24.3	7.6	9.5	14.7
i Waterway discharge	20	15.0	15.1	18.0	20.0	4.9	5.2	9.7
ii Constant wind direction	2	1.0	1.2	0.9	1.3	1.2	1.3	2.0
iii Existing environmental problems	3	3.0	3.0	2.0	3.0	1.5	3.0	3.0
II Infra & Utility Services Availability	30	17.6	23.9	22.5	20.4	17.7	19.3	19.8
i Road & commuter services	10	5.4	10.0	7.9	8.2	5.1	9.2	9.0
ii Water supply	10	9.4	7.3	10.0	9.5	9.2	7.9	5.1
iii Power supply	2	0.7	0.3	0.1	0.1	2.0	0.4	0.1
iv Telecommunications	2	1.6	1.8	2.0	2.0	1.3	1.2	0.6
v Railway	3	0	3.0	1.0	0	0	0.5	2.0
vi Waterway	3	0.5	1.5	1.5	0.6	0.1	0.1	3.0
III Land Acquisition Possibility & Develop. Cost	30	19.6	23.7	26.8	22.7	18.7	19.7	26.4
i Land price	5	3.0	4.0	5.0	4.0	3.0	4.0	4.0
ii No. of houses & land ownership	5	2.3	2.7	5.0	2.3	2.3	1.8	3.6
iii Development cost (external)	12	10.3	12.0	9.8	11.9	9.4	9.9	11.3
iv Current land use & productivity	5	1.5	2.5	5.0	2.0	1.0	1.0	5.0
v Topography & soil condition	3	2.5	2.5	2.0	2.5	3.0	3.0	2.5
IV Regional Development Policy	15	10.5	11.5	4.5	6.5	9.5	12.0	11.0
i Satellite city development policy	3	1.5	3.0	1.5	1.5	1.5	3.0	3.0
ii Provincial development policy & plans	3	3.0	3.0	1.0	2.0	2.0	3.0	3.0
iii Development effects to the surroundings	3	2.0	3.0	0.5	1.0	1.0	2.0	2.0
iv Trends in factory location	3	3.0	0	1.0	1.0	3.0	1.0	0
v Expansion possibility	3	1.0	2.5	0.5	1.0	2.0	3.0	3.0
Total score	100	66.7	78.4	74.7	73.9	53.5	60.5	71.9
		5	1	2	3	7	6	4

## EVALUATION OF CANDIDATE SITES (Case 3)

Item	Max. Score	S-2	S-5	S-6	S-9	S-10	S-11	S-15
I Environmental Acceptability	20	16.8	15.3	15.5	19.3	7.8	9.1	13.6
i Waterway discharge	16	13.8	12.1	13.1	16.0	5.6	5.8	9.6
ii Constant wind direction	2	1.0	1.2	0.9	1.3	1.2	1.3	2.0
iii Existing environmental problems	2	2.0	2.0	1.5	2.0	1.0	2.0	2.0
II Infra & Utility Services Availability	30	17.6	23.9	22.5	20.4	17.7	19.3	19.8
i Road & commuter services	10	5.4	10.0	7.9	8.2	5.1	9.2	9.0
ii Water supply	10	9.4	7.3	10.0	9.5	9.2	7.9	5.1
iii Power supply	2	0.7	0.3	0.1	0.1	2.0	0.4	0.1
iv Telecommunications	2	1.6	1.8	2.0	2.0	1.3	1.2	0.6
v Railway	3	0	3.0	1.0	0	0	0.5	2.0
vi Waterway	3	0.5	1.5	1.5	0.6	0.1	0.1	3.0
III Land Acquisition Possibility & Develop. Cost	35	18.0	28.7	25.3	24.9	17.4	18.2	25.5
i Land price	5	3.0	4.0	5.0	4.0	3.0	4.0	4.0
ii No. of houses & land ownership	5	2.3	2.7	5.0	2.3	2.3	1.8	3.6
iii Development cost (external)	17	8.7	17.0	8.3	14.1	8.1	8.4	10.4
iv Current land use & productivity	5	1.5	2.5	5.0	2.0	1.0	1.0	5.0
v Topography & soil condition	3	2.5	2.5	2.0	2.5	3.0	3.0	2.5
IV Regional Development Policy	15	10.5	11.5	4.5	6.5	9.5	12.0	11.0
i Satellite city development policy	3	1.5	3.0	1.5	1.5	1.5	3.0	3.0
ii Provincial development policy & plans	3	3.0	3.0	1.0	2.0	2.0	3.0	3.0
iii Development effects to the surroundings	3	2.0	3.0	0.5	1.0	1.0	2.0	2.0
iv Trends in factory location	3	3.0	0	1.0	1.0	3.0	1.0	0
v Expansion possibility	3	1.0	2.5	0.5	1.0	2.0	3.0	3.0
Total score	100	62.9	79.4	67.8	71.1	52.4	58.6	69.9
		5	1	4	2	7	6	3

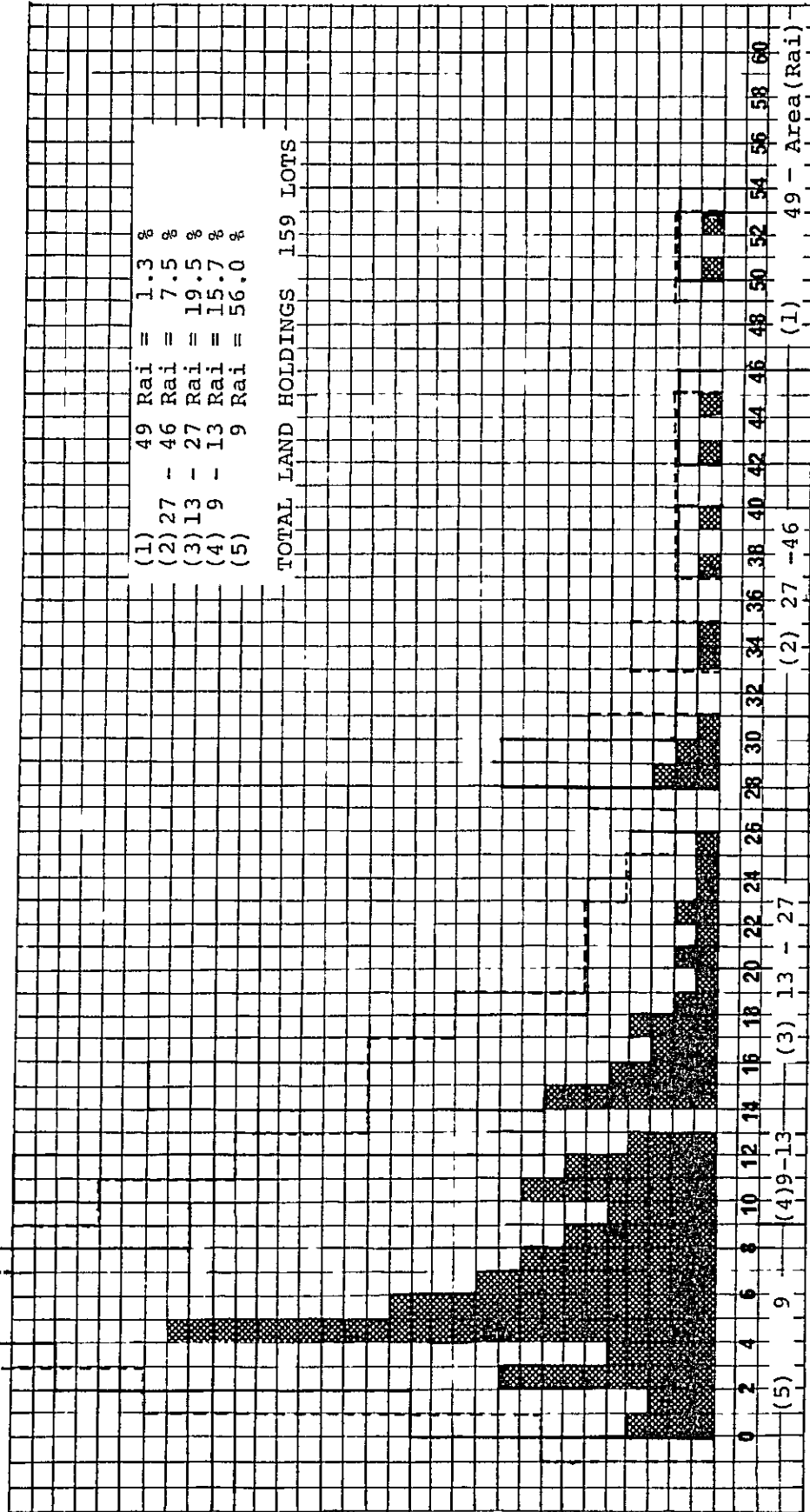
## EVALUATION OF CANDIDATE SITES (Case 4)

Items	Max. Score	S-2	S-5	S-6	S-9	S-10	S-11	S-15
I Environmental Acceptability	15	12.9	11.6	11.8	14.6	7.9	9.1	10.2
i Waterway discharge	12	10.4	9.0	9.9	12.0	6.3	6.5	7.2
ii Constant wind direction	1	0.5	0.6	0.4	0.6	0.6	0.6	1.0
iii Existing environmental problems	2	2.0	2.0	1.5	2.0	1.0	2.0	2.0
II Infra & Utility Services Availability	35	19.5	27.9	26.0	22.5	19.6	21.6	23.5
i Road & commuter service	10	5.4	10.0	7.9	8.2	5.1	9.2	9.0
ii Water supply	12	11.2	8.8	12.0	11.4	11.0	9.6	6.3
iii Power supply	2	0.7	0.3	0.1	0.1	2.0	0.4	0.1
iv Telecommunications	2	1.6	1.8	2.0	2.0	1.3	1.2	0.6
v Railway	5	0	5.0	2.0	0	0	1.0	3.5
vi Waterway	4	0.6	2.0	2.0	0.8	0.2	0.2	4.0
III Land Acquisition Possibility & Develop. Cost	35	12.2	28.7	19.2	22.9	11.2	13.4	20.9
i Land price	5	3.0	4.0	5.0	4.0	3.0	4.0	4.0
ii No. of houses & land ownership	5	2.3	2.7	5.0	2.3	2.3	1.8	3.6
iii Development cost (external)	17	2.9	17.0	2.2	12.1	1.9	3.6	5.8
iv Current land use & productivity	5	1.5	2.5	5.0	2.0	1.0	1.0	5.0
v Topography & soil condition	3	2.5	2.5	2.0	2.5	3.0	3.0	2.5
IV Regional Development Policy	15	10.5	11.5	4.5	6.5	9.5	12.0	11.0
i Satellite city development policy	3	1.5	3.0	1.5	1.5	1.5	3.0	3.0
ii Provincial development policy & plans	3	3.0	3.0	1.0	2.0	2.0	3.0	3.0
iii Development effects to the surroundings	3	2.0	3.0	0.5	1.0	1.0	2.0	2.0
iv Trends in factory location	3	3.0	0	1.0	1.0	3.0	1.0	0
v Expansion possibility	3	1.0	2.5	0.5	1.0	2.0	3.0	3.0
Total score	100	55.1	79.7	61.5	66.5	48.2	56.1	65.6

6 1 4 2 7 5 3



SITE 5



CHARACTERISTIC OF LAND HOLDING CLASSIFIED BY AREA

FACILITIES TO BE MADE IN THE SIE

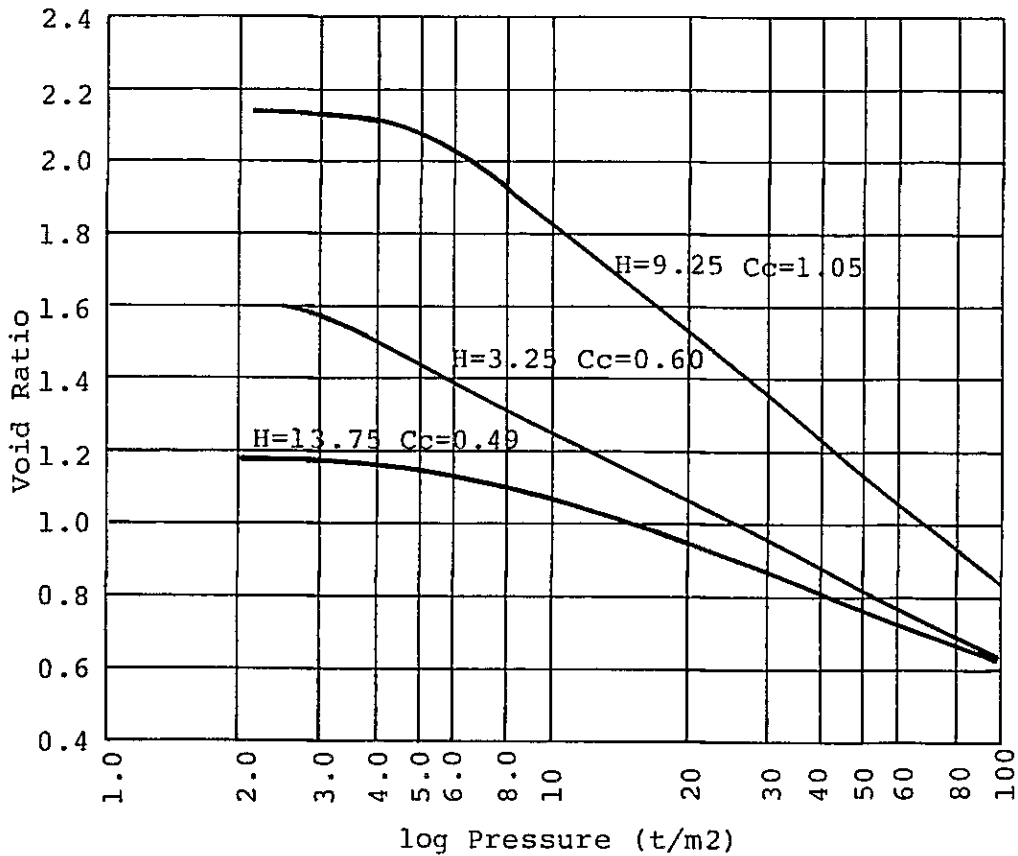
	Degree of Necessity			Sponsor Investor		Maintenance Operation		Remarks
	A	B	C	IEAT	Others	IEAT	Others	
(Commercial Facilities)								
Bank		o			o		o	Private
Clinic	o				o		o	"
Shopping area	o				o		o	Residential Area
Cafeteria		o			o		o	
Restaurant		o			o		o	
Bar			o					
Central Kitchen			o					in Restaurant
Gas Station	o				o		o	Private
Nursery Home			o					Residential Area
Truck Terminal		o			o		o	E.T.O.
Guest House		o			o		o	Private
Weigh Bridge		o			o		o	
(Public Facilities)								
Post Office		o			o		o	
Fire Station	o				o		o	Municipality
Security Office	o			o		o		
Solid Waste Disposal	o				o		o	Municipality
Bus Stop	o				o		o	
Schools			o					Residential Area
(Administration Center)								
IEAT Office	o			o		o		
. office room								
. conference room								
. exhibition hall								
. training center								
. library								
. car parking								
Workshop	o			o		o		
Warehouse		o		o		o		
(Park and Green)								
Park & Lake	o			o		o		
Play Ground	o			o		o		
Sport Fields	o			o		o		
Buffer Green	o			o		o		
Promenade	o			o		o		
(Utilities)								
Water Supply	o			o		o		
Power Supply	o				o		o	P.E.A., E.G.A.T.
Storm Drainage	o			o		o		
Treatment Plant	o			o		o		
Telephone Station	o				o		o	T.O.T.

Note:    must : A            preferable : B            not necessary : C

7. SOIL CONDITIONS

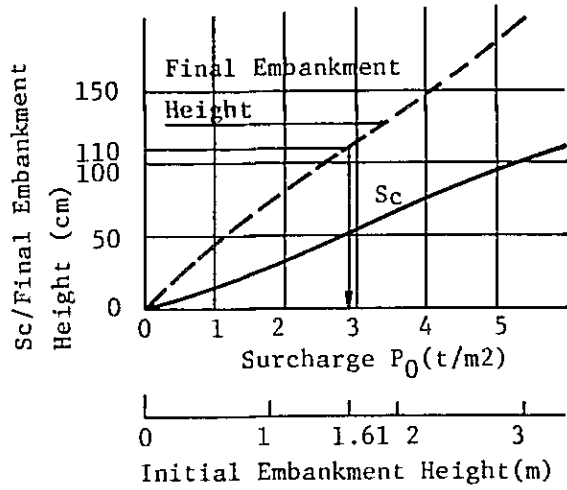
ELEVATION + 1.1 MSL		$\gamma_t$ (t/m <sup>3</sup> )	$P_c$	$a_0$	$C_c$	$C_v$	Depth (m)
DARK GREY, SOFT, SILTY CLAY (CL) with - sand lenses at 4.5, 7.5 and 10.2 m - organic contents of 3.5 % - medium plasticity	2.25	1.60	1.35	1.60	0.60	$10 \times 10^{-4}$	2.25
	1.30	1.60	3.72	1.60	0.60	$10 \times 10^{-4}$	1.30
	1.15	1.60	5.43	2.02	1.05	$1 \times 10^{-4}$	1.15
	0.70	1.60	6.78	2.02	1.05	$1 \times 10^{-4}$	0.70
12.0 m							
DARK GREY, SOFT, CLAYEY AND SANDY SILT (ML) with - numerous shells	1.25	1.60	7.95	1.10	0.49	$7 \times 10^{-4}$	1.25
14.5 m							
LIGHT GREY, MEDIUM TO COARSE SAND (SP) with - finer size between 15.0 and 17.0 m							

Typical Logging Log and Figures of Stratum

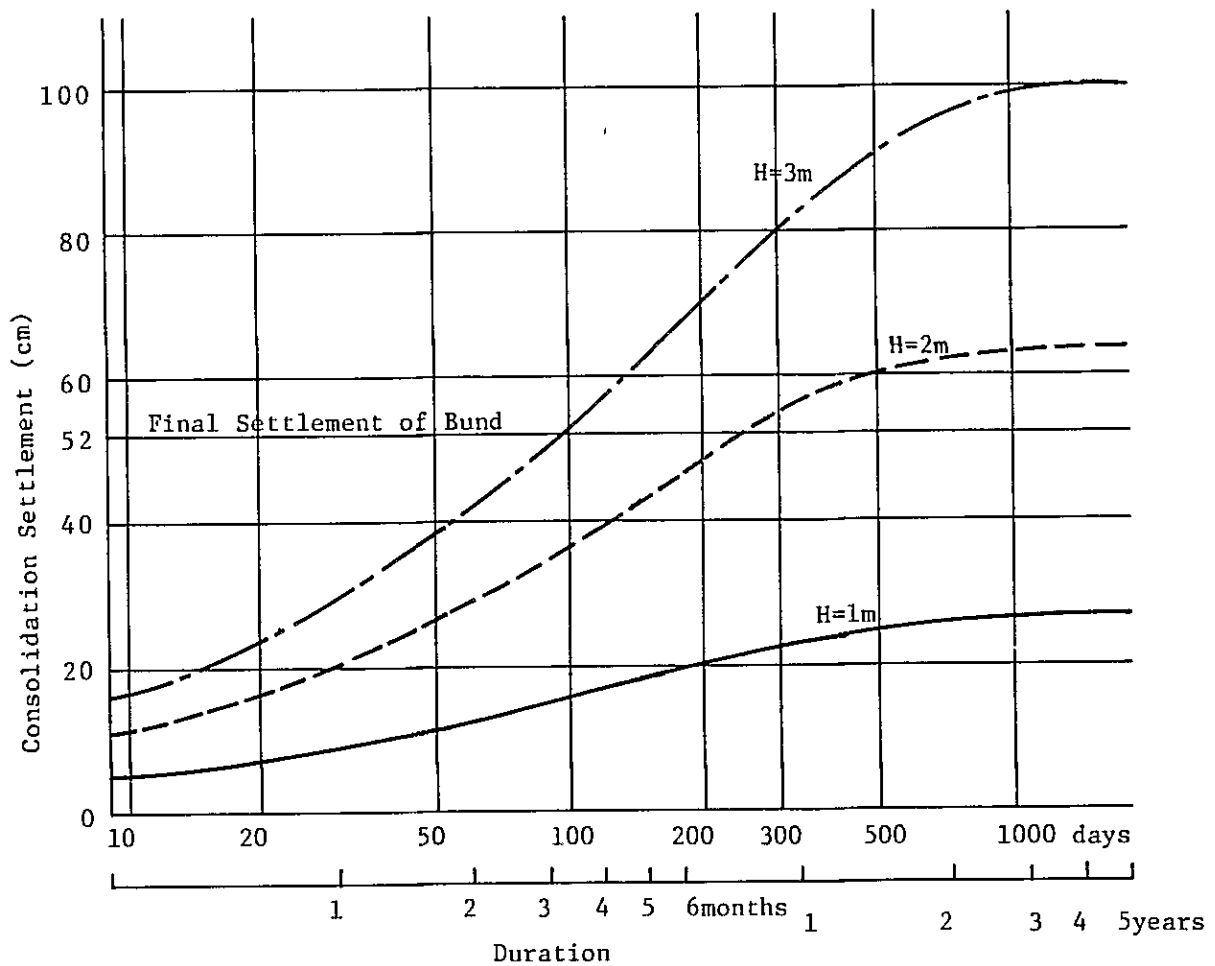




2. CONSOLIDATION SETTLEMENT



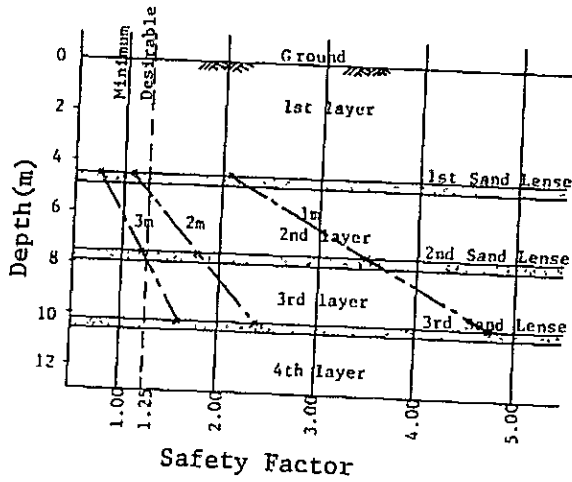
Final Settlement and Initial Embankment Height  
 Sc : Final Settlement (cm)



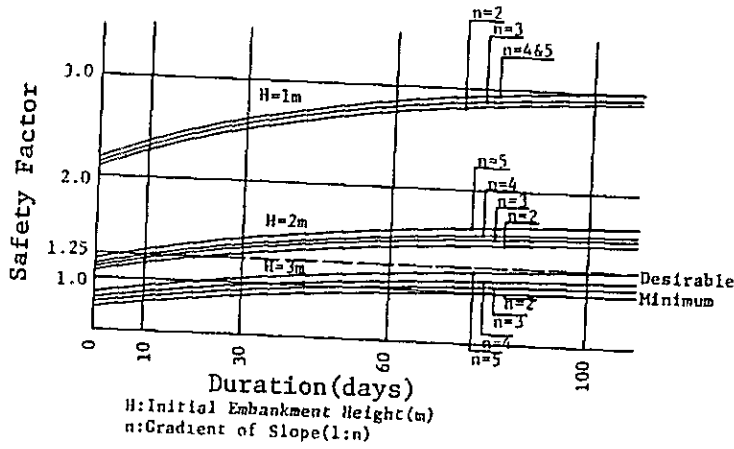
Settlement-Duration Curve  
 H : Initial Embankment Height

### 3. STABILITY OF EMBANKMENT

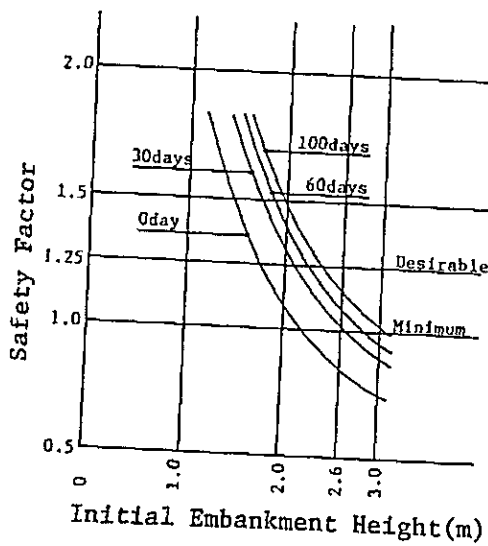
Annex 7-1-3/3



Depth of Slip Surface and Safety Factor  
(Slope 1:2.0, U=0%)



Gradient of Slope, Consolidation Rate,  
and Safety Factor  
(Depth of Slip Surface; 4.5m)

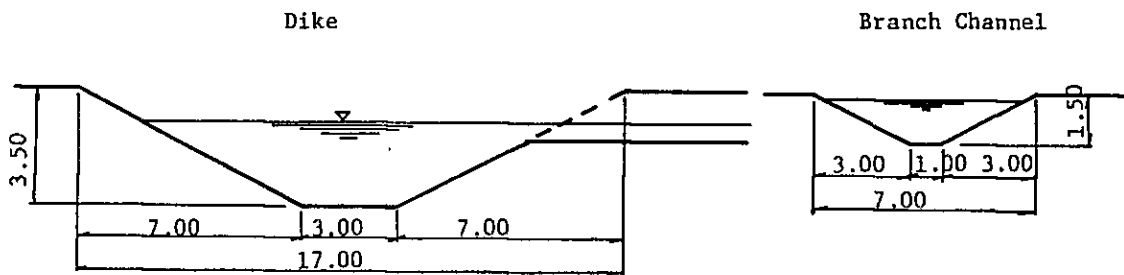


Initial Embankment Height, Duration  
and Safety Factor

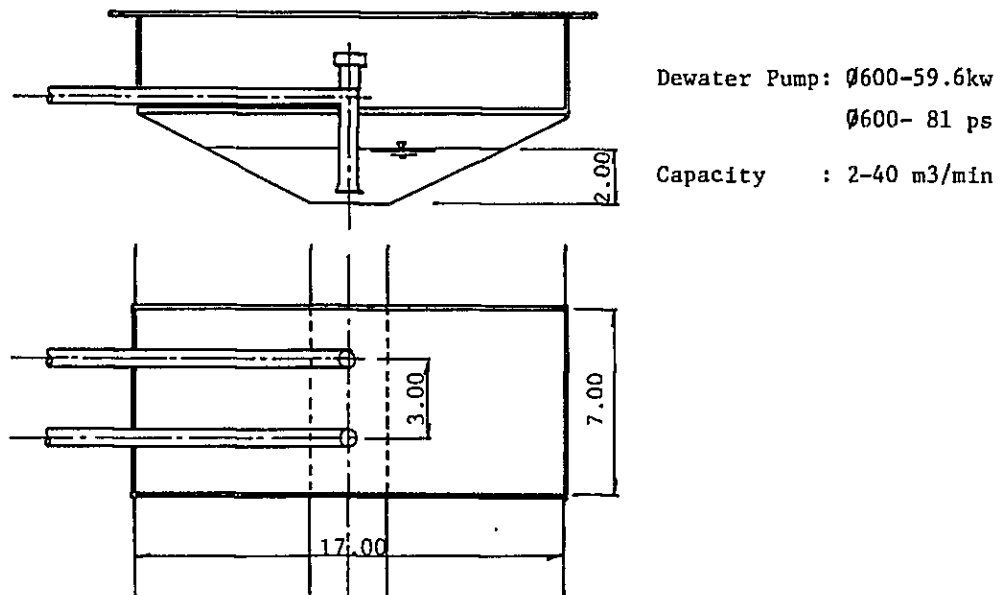
1. WATER LEVEL AT THE PUMPING STATION AND THE PERIPHERAL POINTS

	Dike	Branch 1	Branch 2	Branch3	Branch 4
Q (m3/sec)	22.135	5.331	5.331	7.013	3.518
Water Level					
1 m	2.556	3.021	3.017	3.309	3.249
2 m	2.616	3.162	3.157	3.373	3.350
3 m	3.167	4.194	4.191	3.944	3.998

2. Typical Cross Sections



3. Pumping Station



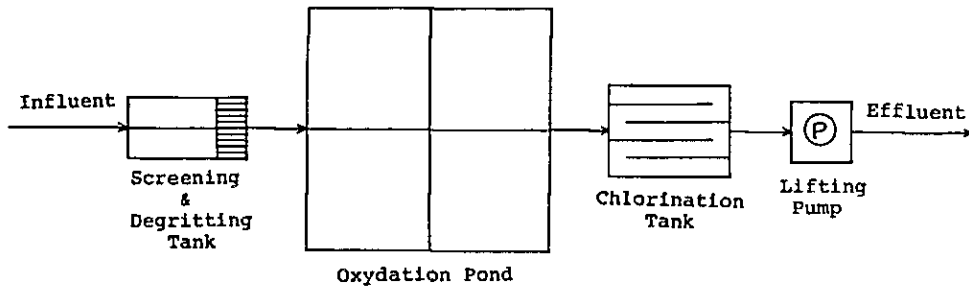
## DESIRED WATER QUALITY STANDARD FOR INDUSTRIAL USE BY RESPECTIVE INDUSTRIES AND APPLICATIONS

Industry (Industrial Classification)	Application	Clarity (ppm)	pH (-logH)	Alkalinity CaCO <sub>3</sub> (ppm)	Hardness CaCO <sub>3</sub> (ppm)	Evaporative Sediment (ppm)	Chlorine Ions Cl <sup>-</sup> (ppm)	Iron Fe (ppm)	Manganese Mn (ppm)	Remarks
18 Food Processing	Cooling	10	7	35	50	75	30	0.1	0.1	
	Cleaning	5	7	35	50	80	20	0.1	0.1	
	Raw Material Boiler	1	7	60	60	80	20	0.1	0.1	
19	Temp. & Humidity Control	10	7	50	50	80	30	0.1	0.1	
	Product Processing	1	7	40	30	80	10	0.1	0.1	
20 Textiles (except dyeing)	Cooling	20	7	60	50	200	30	0.1	0.1	
	Cleaning	20	7	50	50	200	20	0.1	0.1	
	Raw Material	-	-	-	-	-	-	-	-	
21 Clothing and Other Textile Products	Boiler	-	-	-	-	-	-	-	-	
	Temp. & Humidity Control	20	7	60	60	150	20	0.1	0.1	
2068 Dyeing and Textile Preparation	Product Processing	20	7	50	50	150	15	0.1	0.1	
	Cooling	20	7	50	50	100	100	0.1	0.1	
	Cleaning	1	7	50	100	50	20	0.05	0.05	
23 Furniture & Equipment Manufacturing	Raw Material	1	7	50	10	50	10	0.01	0.01	
	Boiler	1	7	50	20	50	10	0.05	0.05	
	Temp. & Humidity Control	1	7	50	20	50	10	0.05	0.05	
22 Lumber & Lumber Products	Product Processing	1	7	50	10	50	10	0.05	0.05	
	Cooling	20	7	60	50	200	30	0.1	0.1	
23 Furniture & Equipment Manufacturing	Cleaning	20	7	50	50	200	20	0.1	0.1	
	Raw Material	-	-	-	-	-	-	-	-	
	Boiler	20	7	60	60	150	20	0.1	0.1	
23 Furniture & Equipment Manufacturing	Temp. & Humidity Control	20	7	50	50	150	20	0.1	0.1	
	Product Processing	20	7	50	50	150	15	0.1	0.1	

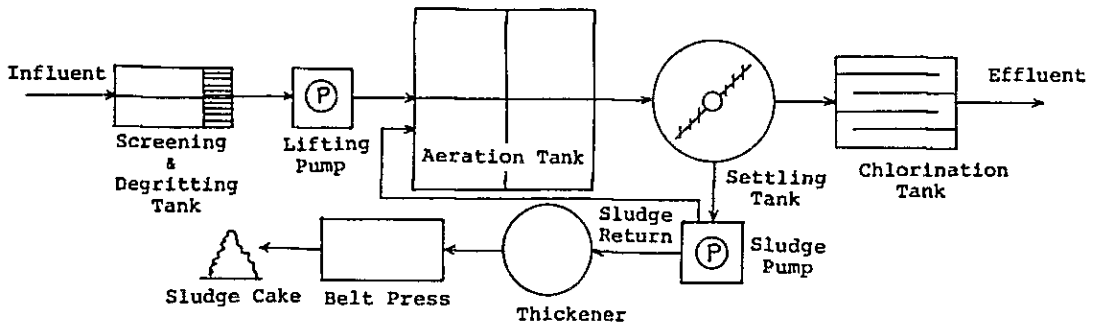
24 Pulp, Paper & Paper Products	Cooling	10	7.5	50	100	150	30	0.05	0.02
	Cleaning Raw Material	5	7.5	30	30	100	10	0.05	0.02
	Boiler Temp. & Humidity Control	5	7	50	80	80	30	0.05	0.02
	Product Processing	2	7	50	50	100	10	0.05	0.02
25 Publishing, Printing & Related Industries	Product Processing	5	7.5	40	50	100	50	0.05	0.02
	Cooling	20	7	60	50	200	30	0.1	0.1
	Cleaning Raw Material	20	7	50	50	200	20	0.1	0.1
	Boiler Temp. & Humidity Control	20	7	60	60	150	20	0.1	0.1
26 Chemical Industry	Product Processing	20	7	50	50	150	15	0.1	0.1
	Cooling	20	7	50	50	200	80	0.1	0.05
	Cleaning Raw Material	10	7	50	50	80	20	0.1	0.05
	Boiler Temp. & Humidity Control	10	7	40	40	70	10	0.1	0.05
27 Petroleum Products & Coal Products	Product Processing	10	7	50	50	100	15	0.1	0.05
	Cooling	15	7	70	60	130	20	0.1	0.05
	Cleaning Raw Material	30	7	40	50	200	10	0.1	0.05
	Boiler Temp. & Humidity Control	6	7	40	50	200	5	0.05	0.01
28 Rubber Products	Product Processing	6	7	40	50	150	5	0.05	0.01
	Cooling	6	7	40	50	200	5	0.05	0.01
	Cleaning Raw Material	6	7	40	50	200	5	0.05	0.01
	Boiler Temp. & Humidity Control	6	7	90	80	200	5	0.1	0.01
29 Tanning & Related Leather Products	Product Processing	1	7	50	50	100	5	0.05	0.01
	Cooling	20	7	60	50	200	30	0.1	0.1
	Cleaning Raw Material	20	7	50	50	200	20	0.1	0.1
	Boiler Temp. & Humidity Control	20	7	60	60	150	20	0.1	0.1
29 Tanning & Related Leather Products	Product Processing	20	7	50	50	150	15	0.1	0.1

30	Ceramics, Earth & Stoneware Products	Cooling	15	7	100	70	200	30	0.1	0.1
		Cleaning Raw Material	15	7	20	40	80	20	0.1	0.1
		Boiler Temp. & Humidity Control Product Processing	10	7	30	30	50	10	0.1	0.1
31	Steel	Boiler Temp. & Humidity Control Product Processing	10	7	100	70	200	30	0.1	0.1
		Cooling	30	7	100	200	300	100		
		Cleaning Raw Material	30	7	100	200	300	100		
32	Non-Ferrous Metal	Boiler Temp. & Humidity Control Product Processing	20	7	100	100	200	50		
		Cooling	20	7	100	100	300	50		
		Cleaning Raw Material	20	7	100	100	300	50		
33	Metal Products	Cooling	20	7	40	60	300	20	0.1	0.1
		Cleaning Raw Material	16	7	40	50	300	10	0.1	0.1
		Boiler Temp. & Humidity Control Product Processing	20	7	40	60	200	10	0.1	0.1
34	General Machinery & Equipments	Boiler Temp. & Humidity Control Product Processing	20	7	40	50	300	10	0.1	0.1
		Cooling	20	7	40	60	300	20	0.1	0.1
		Cleaning Raw Material	20	7	40	50	300	10	0.1	0.1
35	Electrical Machinery & Equipments	Boiler Temp. & Humidity Control Product Processing	20	7	40	60	200	10	0.1	0.1
		Cooling	20	7	40	50	300	10	0.1	0.1
		Cleaning Raw Material	20	7	40	50	300	10	0.1	0.1
36	Transportation Machinery & Equipments	Boiler Temp. & Humidity Control Product Processing	20	7	40	60	200	10	0.1	0.1
		Cooling	20	7	40	50	300	10	0.1	0.1
		Cleaning Raw Material	20	7	40	50	300	10	0.1	0.1
37	Precision Machinery & Equipments	Boiler Temp. & Humidity Control Product Processing	20	7	40	60	200	10	0.1	0.1
		Cooling	20	7	40	50	300	10	0.1	0.1
		Cleaning Raw Material	20	7	40	50	300	10	0.1	0.1
38	Arms Manufacturing	Boiler Temp. & Humidity Control Product Processing	20	7	40	60	200	10	0.1	0.1
		Cooling	20	7	40	50	300	10	0.1	0.1
		Cleaning Raw Material	20	7	40	50	300	10	0.1	0.1

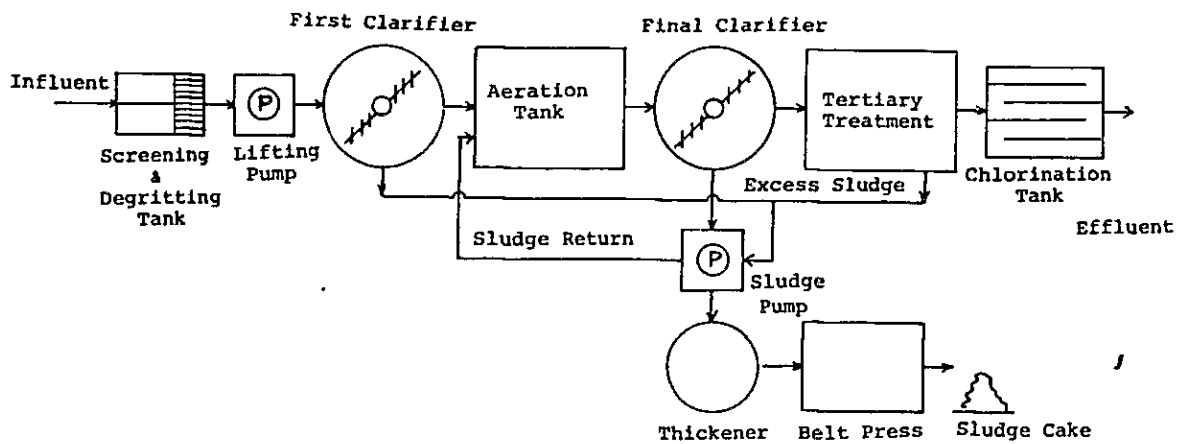
MAIN FLOW SHEETS OF WASTEWATER TREATMENT PLANTS



1st Stage Waste Water Treatment System (Oxydation Pond)



2nd Stage Waste Water Treatment System (Activated Sludge System)



3rd Stage Waste Water Treatment System (Tertiary Treatment)

## ALLOWABLE TRADE EFFLUENT STANDARD

Unit: ppm

Item	Discharge to River		Discharge to Sewer	
	Japan 1]	Thailand 2]	Japan 3]	Thailand 4]
BOD (5days 20°C)	av.120 max.160	av.20 max.60	<600	<5000
SS (Suspended solids)	av.150 max.200	min.30 max.150	<600	<200
pH	5.8 ~8.6	5~9	5~9	6~9
HS (Sulphides)	-	<11	-	<10
HCN (Cyanide)	<1	<0.2	<1	<2
Oil and Grease	<5 mineral <30 biotic	<0.5	<5 <30	<30
Tar	-	none	-	<20
Formaldehyde	-	<1	-	-
Phenols and Cresols	<5	<1	<5	-
Cl (Free Chlorine)	-	<1	-	<5
Zn (Zinc)	<5	<5	<5	<10
Cr (Chromium)	<2	<0.5	<2	<2
Cu (Copper)	<3	<1	<3	<1
As (Arsenic)	<0.5	<0.25	<0.5	<2
Cd (Cadmium)	<0.1	<0.03	<0.1	-
Pb (Lead)	<1	<0.2	<1	-
Ba, Ni (Barium, Nickel)	-	<1	-	Ni<2
PCB	-	-	<0.003	-
Tw (Water Temperature)	<45°C	<40°C	<45°C	<45°C
Org.-P (Organic Phosphor)	<1	none	<0.005	<30
Hg (Mercury)	none	<0.005	none	-
R-Hg (Alkyl Mercury)	none	-	none	<10
D.S. (Disolved Solids)	-	<2000	-	-
Se (Selenium)	-	<0.02	-	-

1], 3] Applicable Effluent Volume over 50m<sup>3</sup>

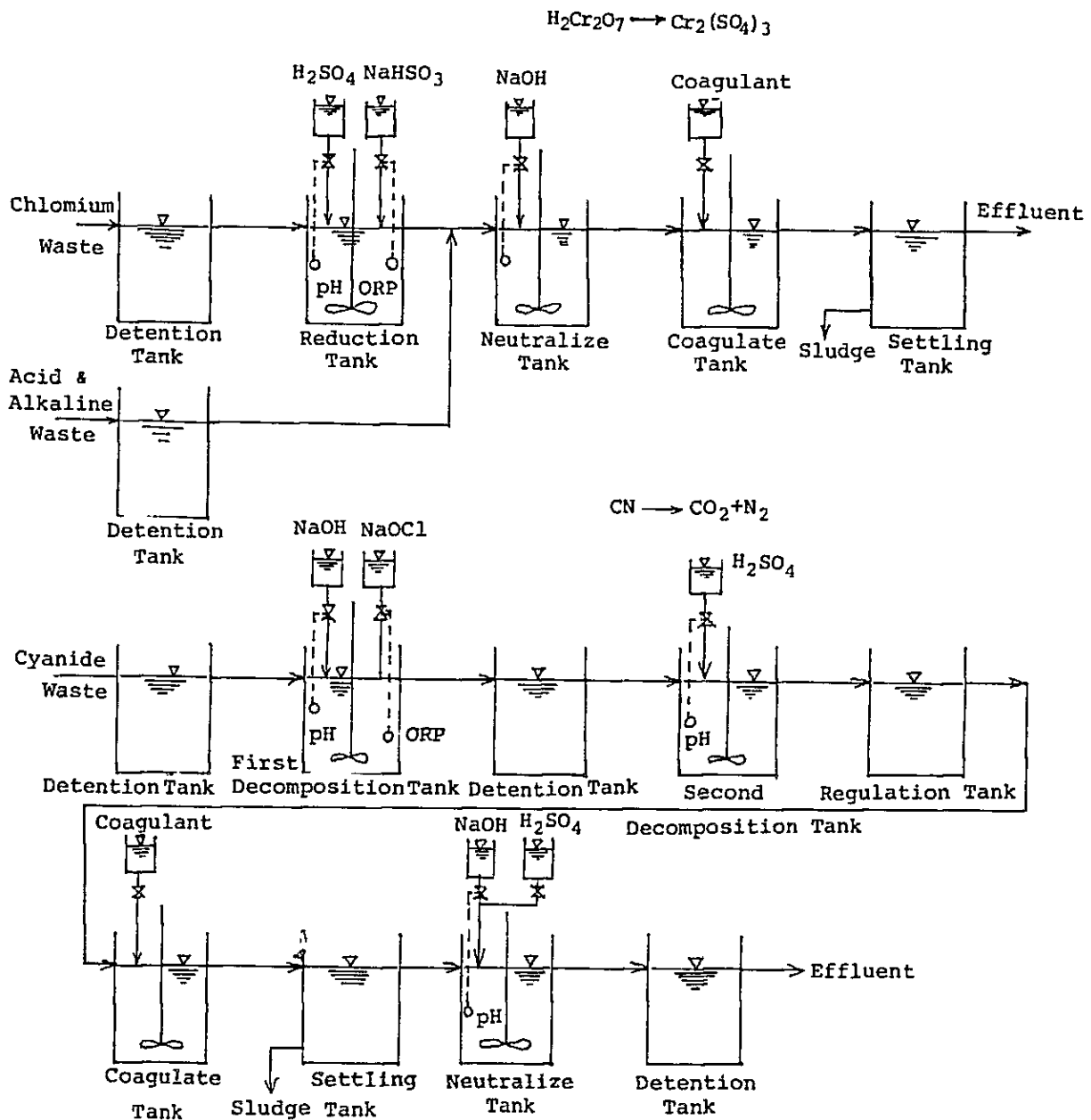
2] MOI settled at 1979

4] Recommended by UNIDO Expert



EXAMPLES OF PRETREATMENT PROCESS

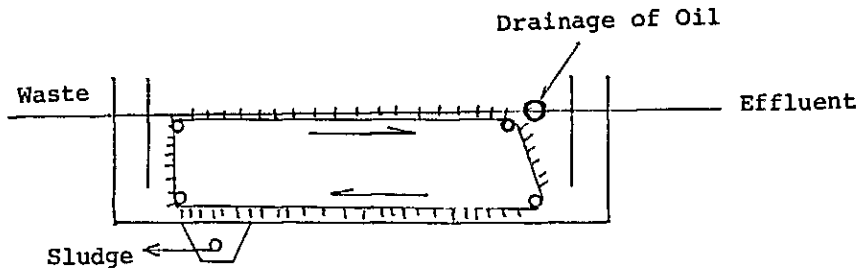
a) Chromium, Acid, Alkaline, Cyanide Waste  
Object; Plating Factory



Plating Waste Treatment Flow (Inorganic Reduction Method)

b). Oil

Objects; Oil-Chemistry, Machinery, Foods.

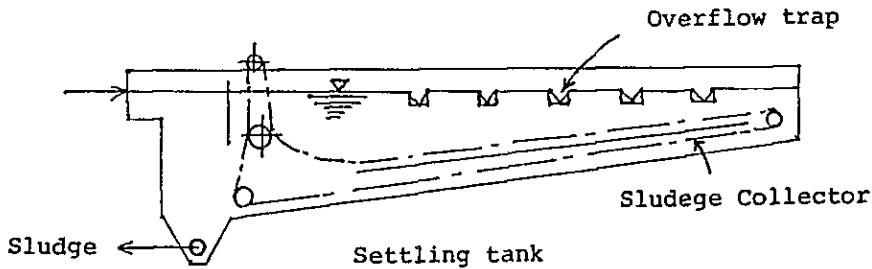


Oil Separator (Gravity Method)

c). Suspended Solid (SS)

Objects; Inorganic: Textile, Ceramic

Organic: Food Products

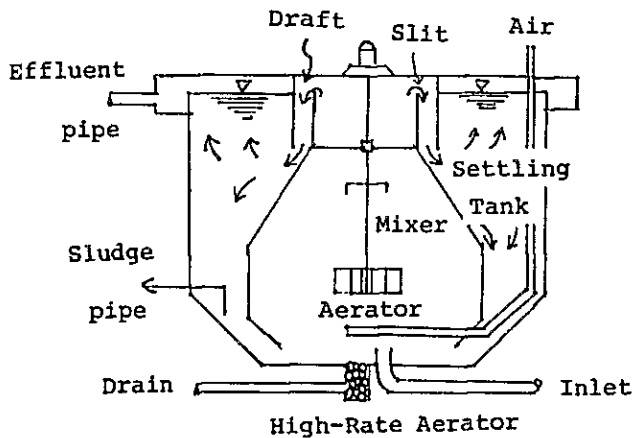


Settling tank

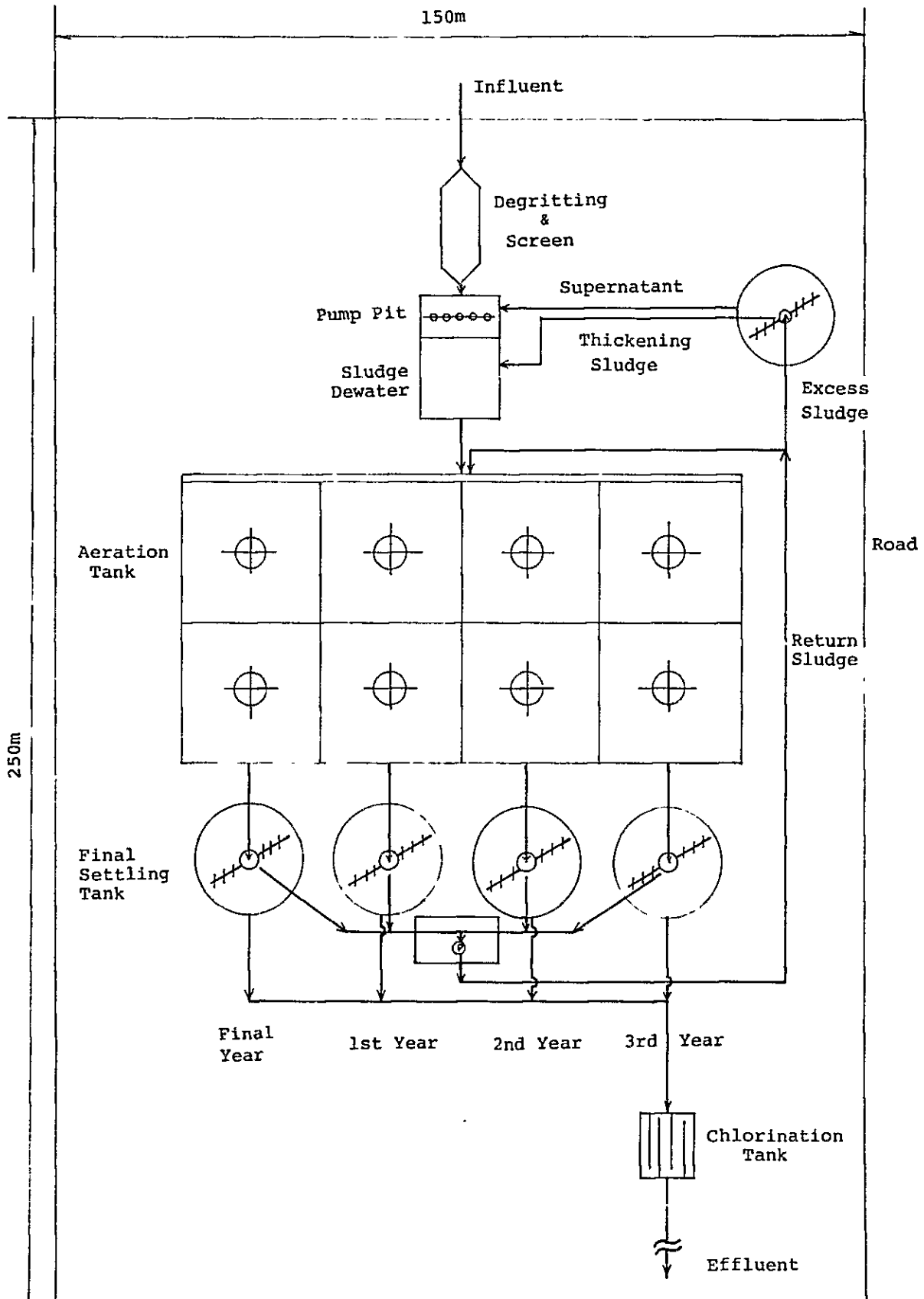
d). Biochemical Oxygen Demand

Object: Food Products

Waste water produced from the Food Industry can often best be treated by means of an activated sludge process.



LAYOUT OF WASTEWATER TREATMENT SYSTEM



CONSTRUCTION COST OF THE PLANT

A Unit: Baht 1000

Name	Sec.	Unit Cost	No.	Cost	Note
Degritting Tank	S		1	440	
Influent Gate	M		1	120	
Motor Drive Screen	M	580	2	1150	
Pump Pit	S		1	440	
Lifting Pump	M	720	5	3600	18kw x 5 = 90kw/hr
Aeration Tank	S	880	8	7080	26m <sup>□</sup> x 4m <sup>H</sup> = 8ponds
Aerator	M	580	8	4600	11.25kw x 8 = 90kw
Final Clarifier	S	880	4	3540	20m <sup>∅</sup> x 3m <sup>H</sup> x 4ponds
Sludge Collector	M	1150	4	4600	5.5kw x 4 = 22kw
Sludge Pump	M	440	5	2210	18kw x 5 = 90kw
Pipe Duct	S		1	1770	
Piping, Valve	M		1	530	
Thickener	S		1	710	16m <sup>∅</sup> x 4m <sup>S.W.D.</sup> x 1pond
Sludge Collector	M		1	880	
Sludge Pump	M		1	270	
Belt Press Filter	M	3110	3	10470	30kw x 3 = 90kw
Filter Accessory	M		1	1150	
Chlorinator	S		1	710	2m <sup>W</sup> x 12m <sup>L</sup> x 5 lines
Subtotal		Structure	14690	Machine	29570
Building					
Control Room					23m <sup>W</sup> x 15m <sup>L</sup> x 3m <sup>H</sup> (2nd Fl.)
Pumping House		4420			8m <sup>W</sup> x 15m <sup>L</sup> x 8m <sup>H</sup> (1st Fl.)
Filter House					15m <sup>W</sup> x 15m <sup>L</sup> x 8m <sup>H</sup> (1st Fl.)
Electrical System					
Accept					
Control			8850	Running Power	
Detector					382kw/hr
Running					

Total

Baht 57530000

S: Structure

M: Machine

ANNUAL CONSTRUCTION COST

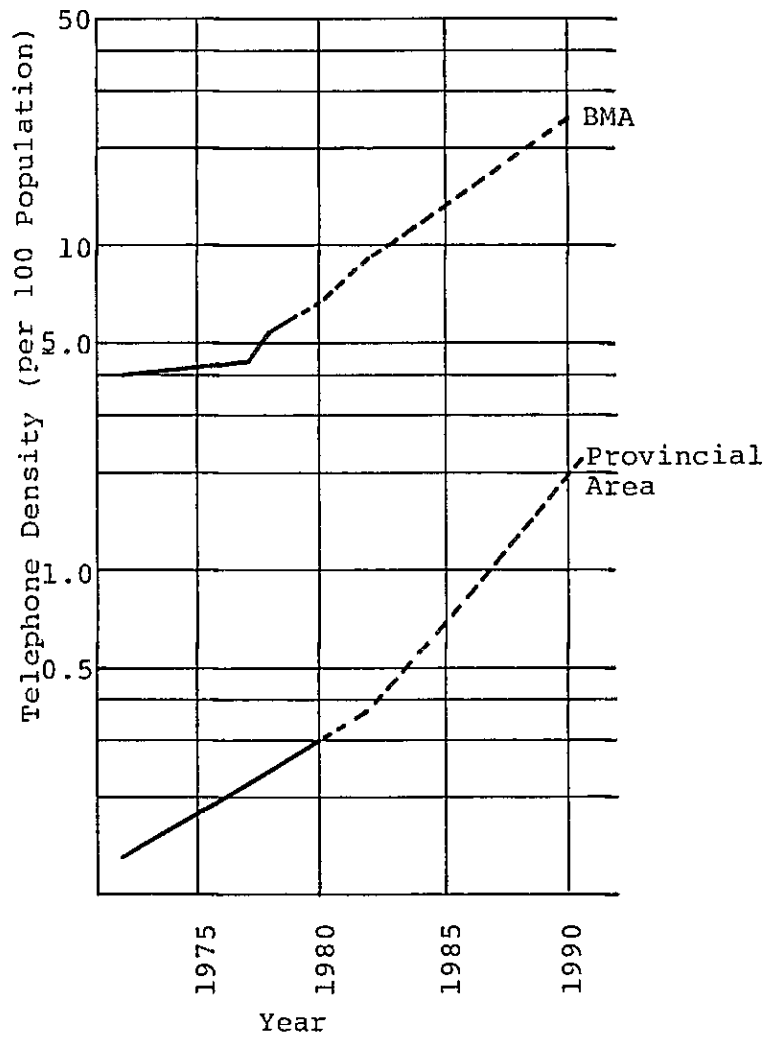
A Unit: Baht 1000

Name	1st Year	2nd Year	3rd Year	Final Year
Influent Gate	120	-	-	-
Motor Drive Screen	1150	-	-	-
Degritting Tank	440	-	-	-
Lifting Pump	1430	720	720	720
Pump Pit	440	-	-	-
Aeration Tank	1770	1770	1770	1770
Aerator	1150	1150	1150	1150
Final Clarifier	880	880	880	880
Sludge Collector	1150	1150	1150	1150
Sludge Pump	880	440	440	440
Pipe Duct	880	880	-	-
Piping, Valve	270	90	90	90
Thickener	710	-	-	-
Sludge Collector	880	-	-	-
Sludge Pump	270	-	-	-
Belt Press Filter	4260	3110	3110	-
Chlorination Tank	710	-	-	-
Chlorinator	1150	-	-	-
Building	4430	-	-	-
Electrical System	4430	4430	-	-
Sub total	27400	14620	9310	6200
Total	Baht 57530000			
Running Power	130kw	94kw	94kw	64kw
Total Running Power	382kw			

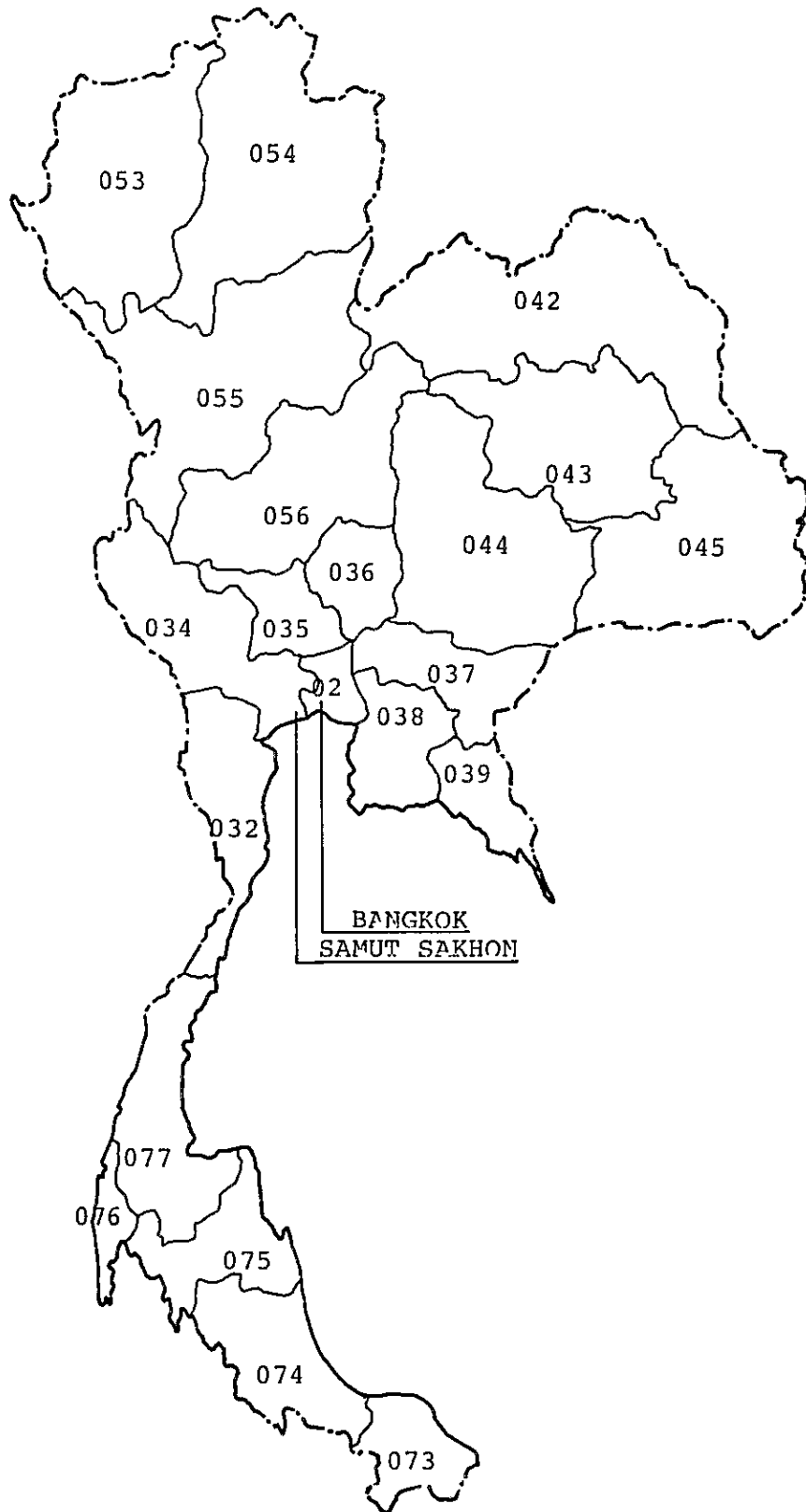
## POWER REQUIREMENTS IN BANGKOK

	BANG KUN TIEN (kw/ha)	PHRA PRA DAENG (kw/ha)	PHASI CHAROEN (kw/ha)	RAJA BURANA (kw/ha)	SAMUT SAKHON (kw/ha)	Average (kw/ha)
1. Textile	17. 937 20. 1880 21. 1875  (1564)	4. 2344 9. 375 10. 67 12. 625 16. 875 17. 375  (77%)	14. 500   (500)	10. 3906 20. 2272 22. 1250  (2476)	3. 260 8. 390 11. 446  (365)	(1136)
2. Metal & Machine	11. 833 14. 625 22. 3012  (1490)	3. 721 7. 937  (829)				(1159)
3. Food	13. 446   (446)	1. 625   (625)	3. 71 9. 208 10. 468 22. 625 23. 267 24. 187  (304)	16. 815   (815)	6. 45   (45)	(447)
4. Chemical				11. 4166 21. 1562 23. 1666  (2464)	2. 82 9. 62 13. 2232 16. 1250  (986)	(1685)
5. Rubber			12. 218   (218)		12. 625 15. 446 17. 1041  (704)	(461)
6. Wood & Furniture	12. 178   (178)					(178)
7. Non metal						
8. Paper						
9. Etc.	19. 312   (312)					(312)
Remarks:  These power requirements are calculated by our interview survey in Thailand.						

TELEPHONE DENSITY BY YEAR



MAP OF AREA CODE NUMBERS





UNIT COST BY WORK ITEMS

UNIT: THOUSAND BARTS

MEDIUM ITEM

ITEM	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
LAND ALONG ROAD	0.000	0.000	0.000	175.000	0.000	0.000	175.000
LAND	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ACCESS/PRIMARY ROAD	0.000	0.904	2.989	1.606	0.922	0.865	7.286
SECONDARY ROAD	0.000	2.057	1.647	2.257	0.955	0.946	8.979
TERTIARY ROAD	0.000	1.463	1.647	1.504	0.597	0.605	5.814
SERVICE ROAD	0.000	0.228	0.413	0.289	0.133	0.141	1.203
ROAD IMPROVEMENT	0.000	1.463	1.647	1.504	0.597	0.605	5.816
MAIN ROAD	0.000	1.077	0.861	0.954	0.272	0.309	3.272
FEEDER ROAD	0.000	0.731	0.562	0.646	0.213	0.239	2.431
DUPL X BOX 5X3.5	0.000	5.975	10.855	12.753	4.547	3.749	37.880
BOX 5X3	0.000	2.898	5.263	6.165	2.239	1.850	18.414
DIKE	0.000	0.042	0.336	0.077	0.098	0.077	0.624
BUND	0.000	0.090	0.665	0.224	0.199	0.164	1.341
DEWATER PUMP	0.000	590.565	5249.502	797.798	618.449	1601.997	8858.307
BOX 4X1.5	0.000	1.546	2.898	3.225	1.194	0.983	9.846
BRANCH CHANFL	0.000	0.011	0.086	0.020	0.020	0.162	0.162
U-DITCH 1.2X1.2	0.000	0.395	0.662	0.505	0.306	0.276	2.474
U-DITCH 1.0X1.0	0.000	0.332	0.533	0.577	0.252	0.211	2.004
U-DITCH 0.8X0.8	0.000	0.202	0.136	0.427	0.141	0.126	1.032
BOX 1.2 X 1.2	0.000	0.405	0.679	0.824	0.315	0.264	2.446
BOX 1.0 X 1.0	0.000	0.349	0.613	0.704	0.269	0.224	2.140
BOX 0.8 X 0.8	0.000	0.286	0.489	0.577	0.217	0.180	1.749
DEEP WFL	0.000	59.864	172.871	316.413	100.119	113.119	762.386
RESERVOIR (RES)	0.000	156.294	274.172	335.556	125.391	164.591	995.984
RESERVOIR (IND)	0.000	575.266	1044.183	1240.191	459.678	380.714	3720.102
ELEVATED TANK(RES)	0.000	116.530	352.397	218.831	85.842	113.945	887.585
ELEVATED TANK(IND)	0.000	543.847	1094.052	1090.887	385.290	373.644	3487.819
AC PIPE 100	0.000	0.114	0.005	0.070	0.009	0.012	0.210
AC PIPE 150	0.000	0.119	0.009	0.122	0.016	0.020	0.294
AC PIPE 200	0.000	0.133	0.013	0.185	0.024	0.030	0.385
AC PIPE 250	0.000	0.156	0.016	0.235	0.031	0.038	0.476
AC PIPE 300	0.000	0.189	0.021	0.301	0.039	0.049	0.599
AC PIPE 400	0.000	0.283	0.032	0.457	0.060	0.075	0.907
AC PIPE 500	0.000	0.414	0.050	0.723	0.095	0.118	1.400
ACCESSORIES	0.000	5.545	386.955	29.585	42.160	156.945	671.210
DCIP 100	0.000	0.085	0.331	0.137	0.071	0.068	0.693
DCIP 150	0.000	0.140	0.452	0.190	0.095	0.093	0.971
DCIP 200	0.000	0.208	0.573	0.244	0.120	0.117	1.263
DCIP 300	0.000	0.336	0.895	0.367	0.187	0.184	1.989
DCIP 500	0.000	1.374	1.753	0.762	0.361	0.359	4.609
RC PIPE 300	0.000	0.269	0.037	0.124	0.031	0.028	0.468
RC PIPE 400	0.000	0.309	0.055	0.206	0.048	0.044	0.662
RC PIPE 500	0.000	0.394	0.066	0.240	0.057	0.053	0.800
RC PIPE 600	0.000	0.485	0.109	0.309	0.080	0.072	1.055
RC PIPE 800	0.000	0.885	0.185	0.483	0.129	0.116	1.797
RC PIPE 1000	0.000	1.346	0.176	0.693	0.176	0.159	2.646
MISCELLANEOUS	0.000	33.725	236.075	222.585	114.665	67.450	674.580
TREATMENT PLANT S1	0.000	1365.950	13083.100	5484.049	4648.599	2731.199	27312.800
TREATMENT PLANT S2	540.000	729.200	7370.000	2511.800	2482.000	1458.000	15121.000
TREATMENT PLANT S3	540.000	465.000	4510.000	1810.000	1582.000	930.000	9337.000
TREATMENT PLANT S4	540.000	310.000	2840.000	1375.000	1052.000	620.000	6737.000
TEAT BUILD	0.000	615.395	957.869	1708.932	470.476	402.788	4155.460
CONT D	0.000	135.538	192.134	684.780	130.402	122.586	1235.440
CONT D	0.000	131.620	608.680	202.790	115.230	117.880	1176.200

MEDIUM ITEM	UNIT: TONNAGE-HAND HARTS	F.L.	D.L.	F.M.	O.P.	TAX	O/P	TOTAL
WORK SHOP BUILD	0.000	165.829	262.260	571.450	129.260	111.102	1149.792	
CONT D	0.000	51.273	50.490	199.440	47.559	35.178	353.720	
CONT O	0.000	31.440	109.390	27.260	26.550	26.900	272.500	
LEAD OFFICE EX WORK	0.000	769.800	504.240	640.260	226.355	254.275	2634.970	
FS/SECURITY OFF.	0.000	54.941	91.427	159.862	43.568	38.042	346.730	
CONT D	0.000	11.314	39.860	40.250	11.710	11.306	114.460	
SPORTS FIELD/PARK	0.000	1740.140	502.100	2378.379	380.810	472.610	5474.039	
CONT D	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
VEHICLES	0.000	0.000	2056.000	0.000	0.000	0.000	2056.000	
COMMERCIAL BUILD	0.000	404.920	469.020	840.768	241.170	212.182	2108.060	
CONT D	0.000	124.890	488.050	339.320	119.968	119.592	1191.820	
EXTERNAL WORKS	0.000	562.840	499.672	443.268	196.088	214.568	1806.476	
HIGH VOLT LINE	0.000	0.147	0.064	0.927	0.013	0.265	0.265	
S/F TYPE A	0.000	125.464	195.052	375.624	98.692	84.834	849.870	
(CONT D)	0.000	41.870	133.340	144.040	43.620	42.020	424.680	
EXTERNAL	0.000	78.471	69.141	40.551	19.363	28.986	256.512	
S/F TYPE B	0.000	109.360	309.878	573.620	148.724	126.894	1348.536	
(CONT D)	0.000	51.332	194.407	240.746	63.530	61.485	621.500	
EXTERNAL	0.000	127.746	110.226	195.972	33.448	47.012	424.496	
LOW VOLT LINE	0.000	0.147	0.037	0.016	0.007	0.007	0.215	
TELEPHONE LINE 100P	0.000	0.147	0.093	0.029	0.017	0.017	0.305	
TELEPHONE LINE 200P	0.000	0.147	0.064	0.020	0.012	0.012	0.255	
EXCHANGE STATION	0.000	69.040	619.500	43.500	109.000	109.000	990.000	
ENGINEERING FOR O/D	6020.000	6580.000	0.000	0.000	2700.000	12240.000	27550.000	
SITE CLEARING	0.000	0.160	0.640	0.160	0.160	0.160	1.280	
SUPERVISION	58.500	15.760	0.000	0.000	0.000	0.000	74.200	
OTHERS	840.000	3750.000	6807.000	7295.000	2384.000	2834.000	23920.000	

F.L. : Foreign Labour      F.M. : Foreign Material      O/P : Overhead & Profit  
D.L. : Domestic Labour      D.M. : Domestic Material

TOTAL PROJECT COST

MAJOR ITEM UNIT:THOUGHTAND BAHTS

ITEM	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
<b>1 LAND ACQUISITION</b>								
LAND ALONG ROAD	146.700	0.	0.	0.	25672.	0.	0.	25672.
LAND	1938.000	0.	0.	0.	17442.	0.	0.	17442.
SUB TOTAL		0.	0.	0.	43114.	0.	0.	43114.
<b>2 LAND PREPARATION</b>								
SITE CLEARING	2040.200	0.	326.	1306.	326.	326.	326.	2611.
SUB TOTAL		0.	326.	1306.	326.	326.	326.	2611.
<b>3 ROAD NETWORK</b>								
ACCESS/PRIMARY ROAD	1395.000	0.	1261.	4169.	2241.	1286.	1206.	10164.
SECONDARY ROAD	5816.000	0.	11962.	16073.	13125.	5256.	5504.	52220.
TERTIARY ROAD	4125.000	0.	6036.	6793.	6205.	2462.	2497.	23993.
SERVICE ROAD	160.000	0.	41.	74.	52.	24.	25.	216.
ROAD IMPROVEMENT	1168.000	0.	1709.	1924.	1757.	697.	707.	6794.
MAIN ROAD	3716.000	0.	4001.	2454.	3545.	1009.	1148.	12158.
FEEDER ROAD	3194.000	0.	2336.	1795.	2192.	681.	762.	7768.
DUPLEX BOX 5X3.5	90.000	0.	538.	977.	1148.	409.	337.	3409.
BOX 5X3	25.000	0.	72.	132.	154.	56.	46.	460.
SUB TOTAL		0.	27956.	34391.	30419.	12179.	12234.	117180.
<b>4 FLOOD PROTECTION</b>								
DIKE	11950.000	0.	501.	4009.	919.	1169.	919.	7518.
RUND	6650.000	0.	600.	4432.	1499.	1332.	1096.	8958.
DEWATER PUMP	4.000	0.	2362.	20998.	3191.	2474.	6408.	35633.
SUB TOTAL		0.	3463.	29439.	5609.	4975.	8422.	51909.
<b>5 DRAINAGE SYSTEM</b>								
RDX 4X1.5	410.000	0.	634.	1188.	1322.	490.	403.	4037.
BRANCH CHANNEL	9665.000	0.	104.	835.	191.	244.	191.	1566.
U-DITCH 1.2X1.2	1920.000	0.	759.	1272.	1545.	588.	492.	4655.
U-DITCH 1.0X1.0	6575.000	0.	2180.	3501.	4448.	1659.	1390.	13179.
U-DITCH 0.8X0.8	6198.000	0.	1249.	843.	2646.	876.	781.	6395.
BOX 1.2 x 1.2	20.000	0.	8.	14.	16.	6.	5.	50.
BOX 1.0 x 1.0	20.000	0.	7.	12.	14.	5.	4.	43.
BOX 0.8 x 0.8	190.000	0.	54.	93.	110.	41.	34.	332.
DIKE 0.8 x 0.8	275.000	0.	12.	92.	121.	27.	21.	173.
SUB TOTAL		0.	5007.	7450.	10314.	3937.	3322.	30429.
<b>6 WATER SUPPLY</b>								
DEEP WELL	8.000	0.	479.	1383.	2531.	801.	905.	6099.
RESERVOIR (RES)	1.000	0.	156.	274.	336.	125.	105.	996.
RESERVOIR (IND)	2.000	0.	1151.	2128.	2480.	919.	762.	7440.
ELEVATED TANK(RES)	1.000	0.	117.	352.	219.	86.	114.	888.
ELEVATED TANK(IND)	2.000	0.	1087.	2168.	2181.	771.	747.	6974.
AC PIPE 100	1738.000	0.	198.	9.	122.	16.	21.	365.
AC PIPE 150	1575.000	0.	187.	14.	192.	25.	31.	450.
AC PIPE 200	2720.000	0.	362.	35.	503.	65.	82.	1047.
AC PIPE 250	5363.000	0.	837.	86.	1260.	166.	204.	2553.
AC PIPE 300	7328.000	0.	1385.	154.	2206.	286.	359.	4389.

MAJOR ITEM UNIT:THOUTHAND BAHTS

ITEM	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
AC PIPE 400	200.000	0.	57.	6.	91.	12.	15.	181.
AC PIPE 500	200.000	0.	83.	10.	145.	19.	24.	280.
ACCESSORIES	1.000	0.	6.	387.	50.	42.	157.	621.
DCIP 100	176.000	0.	15.	58.	24.	12.	12.	122.
DCIP 150	92.000	0.	13.	42.	18.	9.	9.	89.
DCIP 200	112.000	0.	23.	64.	27.	13.	13.	141.
DCIP 300	656.000	0.	220.	587.	254.	123.	121.	1305.
DCIP 500	180.000	0.	247.	316.	137.	65.	65.	830.
DCIP SUB TOTAL		0.	6622.	8094.	12755.	3556.	3744.	34772.
<b>7 SEWAGE SYSTEM</b>								
RC PIPE 300	875.000	0.	235.	32.	109.	27.	24.	427.
RC PIPE 400	820.000	0.	254.	45.	169.	39.	36.	543.
RC PIPE 500	1240.000	0.	476.	82.	298.	71.	65.	993.
RC PIPE 600	2365.000	0.	1147.	258.	731.	189.	171.	2496.
RC PIPE 800	1495.000	0.	1322.	277.	722.	193.	173.	2687.
RC PIPE 1000	280.000	0.	391.	67.	195.	49.	45.	747.
MISCELLANEOUS	1.000	0.	34.	236.	223.	115.	67.	674.
TREATMENT PLANT S1	1.000	0.	1366.	13083.	5484.	4649.	2731.	27313.
TREATMENT PLANT S2	1.000	540.	729.	7370.	2542.	2482.	1458.	15121.
TREATMENT PLANT S3	1.000	540.	465.	4510.	1810.	1582.	930.	9837.
TREATMENT PLANT S4	1.000	540.	310.	2840.	1375.	1052.	620.	8737.
SUB TOTAL		1620.	6729.	28400.	13656.	10447.	6321.	67574.
<b>8 POWER SUPPLY</b>								
HIGH VOLT LINE	11015.000	0.	1619.	710.	303.	143.	143.	2919.
LOW VOLT LINE	2166.000	0.	318.	80.	35.	16.	16.	466.
SUB TOTAL		0.	1938.	791.	338.	159.	159.	3385.
<b>9 TELECOMMUNICATION</b>								
TELEPHONE LINE 100P	3595.000	0.	528.	334.	106.	63.	63.	1096.
TELEPHONE LINE 200P	4840.000	0.	711.	310.	97.	58.	58.	1234.
EXCHANGE STATION	1.000	0.	69.	619.	83.	109.	109.	990.
SUB TOTAL		0.	1309.	1265.	286.	230.	230.	3321.
<b>10 ADMINISTRATION</b>								
HEAT BUILD	1.000	0.	615.	959.	1709.	470.	403.	4155.
CONT D	1.000	0.	126.	192.	665.	130.	123.	1235.
CONT D	1.000	0.	132.	609.	203.	115.	118.	1176.
WORK SHOP BUILD	1.000	0.	166.	262.	521.	139.	111.	1190.
CONT D	1.000	0.	31.	50.	199.	37.	35.	354.
CONT D	1.000	0.	31.	160.	27.	27.	27.	272.
HEAT OFFICE EX WORK	1.000	0.	770.	504.	880.	226.	254.	2635.
FS/SECURITY OFF.	1.000	0.	53.	92.	160.	44.	38.	387.
CONT D	1.000	0.	11.	40.	40.	12.	11.	114.
SPORTS FIELD/PARK	1.000	0.	1740.	502.	2378.	381.	473.	5874.
VEHICLES	1.000	0.	0.	2056.	0.	0.	0.	2056.
SUB TOTAL		0.	3676.	5426.	6783.	1572.	1593.	19049.
<b>11 COMMERCIAL BUILD</b>								
COMMERCIAL BUILD	1.000	0.	305.	469.	881.	241.	212.	2108.

MAJOR ITEM UNIT: THOUTHAND BAHTS

ITEM	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
CONT D	1.000	0.	125.	488.	339.	120.	120.	1192.
EXTERNAL WORKS	1.000	0.	503.	500.	483.	196.	215.	1896.
SUB TOTAL	0.	0.	933.	1457.	1703.	557.	546.	5196.
12 STANDARD FACTORIES								
S/F TYPE A	24.000	0.	3011.	4681.	9260.	2369.	2036.	21357.
(CONT D)	24.000	0.	1005.	3200.	3937.	1042.	1008.	10192.
EXTERNAL	24.000	0.	1883.	1659.	1453.	465.	696.	6156.
S/F TYPE B	10.000	0.	1894.	3099.	5737.	1487.	1269.	13485.
(CONT D)	10.000	0.	613.	1944.	2407.	635.	615.	6215.
EXTERNAL	10.000	0.	1278.	1102.	1060.	335.	470.	4245.
SUB TOTAL	0.	0.	9684.	15686.	23854.	6333.	6094.	61651.
13 ENGINEERING SERVICE								
ENGINEERING FOR O/O	0.900	5427.	7077.	0.	0.	2430.	11016.	25950.
SUPERVISION	64.800	3791.	1017.	0.	0.	0.	0.	4808.
SUB TOTAL	0.	9218.	8094.	0.	0.	2430.	11016.	30758.
14 OTHERS								
OTHERS	0.872	741.	3270.	5934.	6361.	2079.	2471.	20858.
SUB TOTAL	0.	741.	3270.	5934.	6361.	2079.	2471.	20858.
GRAND TOTAL	0.	11579.	69110.	127223.	137769.	44758.	51369.	441807.

COST FOR HOUSING AREA

MAJOR ITEM UNJT:THOUTHAND BAHTS

ITEM	QUANTITY	F.L.	O.L.	F.M.	D.M.	TAX	D/P	TOTAL
<b>1 LAND ACQUISITION</b>								
LAND ALONG ROAD	24.700	0.	0.	0.	4322.	0.	0.	4322.
LAND	240.300	0.	0.	0.	2163.	0.	0.	2163.
SUB TOTAL					6485.	0.	0.	6485.
<b>2 LAND PREPARATION</b>								
SITE CLEARING	260.300	0.	42.	167.	42.	42.	42.	333.
SUB TOTAL					42.	42.	42.	333.
<b>3 ROAD NETWORK</b>								
ACCESS/PRIMARY ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
SECONDARY ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
TERTIARY ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
SERVICE ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
ROAD IMPROVEMENT	0.000	0.	0.	0.	0.	0.	0.	0.
MAIN ROAD	3716.000	0.	4001.	2456.	3545.	1009.	1148.	12159.
FEEDER ROAD	3194.000	0.	2336.	1795.	2192.	681.	782.	7766.
DUPL. X BOX 5x3.5	40.000	0.	236.	436.	510.	182.	150.	1515.
BOX 5x3	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL			6576.	4684.	6247.	1872.	2060.	21439.
<b>4 FLOOD CONTROL</b>								
DIKE	1220.000	0.	51.	409.	94.	119.	94.	769.
HUND	1220.000	0.	110.	809.	274.	243.	200.	1634.
DEWATER PUMP	1.000	0.	591.	5250.	798.	618.	1602.	8458.
SUB TOTAL			751.	6468.	1165.	981.	1896.	11262.
<b>5 DRAINAGE SYSTEM</b>								
BOX 4x1.5	0.000	0.	0.	0.	0.	0.	0.	0.
BRANCH CHANNEL	0.000	0.	0.	0.	0.	0.	0.	0.
U-DITCH 1.2x1.2	0.000	0.	0.	0.	0.	0.	0.	0.
U-DITCH 1.0x1.0	0.000	0.	0.	0.	0.	0.	0.	0.
U-DITCH 0.8x0.8	3778.000	0.	751.	507.	1591.	527.	470.	3844.
BOX 1.2 x 1.2	0.000	0.	0.	0.	0.	0.	0.	0.
BOX 1.0 x 1.0	0.000	0.	0.	0.	0.	0.	0.	0.
BOX 0.8 x 0.8	170.000	0.	49.	83.	98.	37.	31.	297.
DIKE	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL			800.	590.	1689.	564.	500.	4144.
<b>6 WATER SUPPLY</b>								
DEEP WELL	1.000	0.	60.	173.	316.	100.	113.	762.
RESERVOIR (RES)	1.000	0.	156.	274.	336.	125.	105.	996.
RESERVOIR (IND)	0.000	0.	0.	0.	0.	0.	0.	0.
ELEVATED TANK(RES)	1.000	0.	117.	352.	219.	86.	114.	889.
ELEVATED TANK(IND)	0.000	0.	0.	0.	0.	0.	0.	0.
AC PIPE 100	778.000	0.	89.	4.	54.	7.	9.	163.
AC PIPE 150	1575.000	0.	187.	14.	192.	25.	31.	450.
AC PIPE 200	2.75.000	0.	10.	1.	14.	2.	2.	29.
AC PIPE 250	173.000	0.	27.	3.	41.	5.	7.	82.
AC PIPE 300	1748.000	0.	330.	37.	526.	68.	86.	1047.

MAJOR ITEM UNIT:THROUGHAND BAHTS

ITEM	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
AC PIPE 400	0.000	0.	0.	0.	0.	0.	0.	0.
AC PIPE 500	0.000	0.	0.	0.	0.	0.	0.	0.
ACCESSORIES	0.100	0.	1.	30.	3.	4.	16.	62.
DCIP 100	56.000	0.	5.	19.	8.	4.	4.	39.
DCIP 150	92.000	0.	13.	42.	18.	9.	9.	89.
DCIP 200	0.000	0.	0.	0.	0.	0.	0.	0.
DCIP 300	116.000	0.	39.	104.	45.	22.	21.	231.
DCIP 500	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL	0.000	0.	1033.	1061.	1771.	456.	516.	4839.
<b>7 SEWAGE SYSTEM</b>								
RC PIPE 300	160.000	0.	43.	6.	20.	5.	4.	78.
RC PIPE 400	300.000	0.	93.	17.	62.	14.	13.	199.
RC PIPE 500	500.000	0.	192.	33.	120.	29.	26.	400.
RC PIPE 600	260.000	0.	126.	24.	80.	21.	19.	274.
RC PIPE 800	0.000	0.	0.	0.	0.	0.	0.	0.
RC PIPE 1000.	0.600	0.	0.	0.	0.	0.	0.	0.
MISCELLEMIOUS.	0.100	0.	3.	24.	22.	11.	7.	67.
TREATMENT PLANT S1	0.000	0.	0.	0.	0.	0.	0.	0.
TREATMENT PLANT S2	0.000	0.	0.	0.	0.	0.	0.	0.
TREATMENT PLANT S3	0.000	0.	0.	0.	0.	0.	0.	0.
TREATMENT PLANT S4	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL	0.000	0.	457.	107.	304.	80.	69.	1010.
<b>8 POWER SUPPLY</b>								
HIGH VOLT LINE	350.000	0.	51.	23.	10.	5.	5.	93.
LOW VOLT LINE	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL	0.000	0.	51.	23.	10.	5.	5.	93.
<b>9 TELECOMMUNICATION</b>								
TELEPHONE LINE 100P	1270.000	0.	187.	119.	37.	22.	22.	387.
TELEPHONE LINE 200P	0.000	0.	0.	0.	0.	0.	0.	0.
EXCHANGE STATION	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL	0.000	0.	187.	119.	37.	22.	22.	387.
<b>10 ADMINISTRATION</b>								
IEAT BUILD	0.000	0.	0.	0.	0.	0.	0.	0.
CONT 0	0.000	0.	0.	0.	0.	0.	0.	0.
CONT 0	0.000	0.	0.	0.	0.	0.	0.	0.
WORK SHOP BUILD	0.000	0.	0.	0.	0.	0.	0.	0.
CONT 0	0.000	0.	0.	0.	0.	0.	0.	0.
CONT 0	0.000	0.	0.	0.	0.	0.	0.	0.
IEAT OFFICE EX WORK	0.000	0.	0.	0.	0.	0.	0.	0.
FS/SECURITY OFF.	0.000	0.	0.	0.	0.	0.	0.	0.
CONT 0	0.000	0.	0.	0.	0.	0.	0.	0.
SPORTS FIELD/PARK	0.000	0.	0.	0.	0.	0.	0.	0.
VEHICLES	0.000	0.	0.	0.	0.	0.	0.	0.
SUB TOTAL	0.000	0.	0.	0.	0.	0.	0.	0.
<b>11 COMMERCIAL BUILD</b>								
COMMERCIAL BUILD	0.000	0.	0.	0.	0.	0.	0.	0.





COST FOR INDUSTRIAL AREA

MAJOR ITEM UNIT:THOUTHAND BAHTS

ITEM	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
<b>1 LAND ACQUISITION</b>								
LAND ALONG ROAD	122.000	0.	0.	0.	21350.	0.	0.	21350.
LAND	1697.700	0.	0.	0.	15279.	0.	0.	15279.
SUB TOTAL		0.	0.	0.	36629.	0.	0.	36629.
<b>2 LAND PREPARATION</b>								
SITE CLEARING	1779.900	0.	285.	1139.	285.	285.	285.	2278.
SUB TOTAL		0.	285.	1139.	285.	285.	285.	2278.
<b>3 ROAD NETWORK</b>								
ACCESS/PRIMARY ROAD	1395.000	0.	1261.	4169.	2241.	1286.	1206.	10164.
SECONDARY ROAD	5816.000	0.	11962.	16073.	13125.	5556.	5504.	52220.
TERTIARY ROAD	4125.000	0.	6036.	6793.	6205.	2462.	2497.	23993.
SERVICE ROAD	180.000	0.	41.	74.	52.	24.	25.	216.
ROAD IMPROVEMENT	1168.000	0.	1709.	1924.	1757.	697.	707.	6794.
MAIN ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
FEEDER ROAD	0.000	0.	0.	0.	0.	0.	0.	0.
DUPL.X BOX 5X3.5	50.000	0.	299.	543.	638.	227.	187.	1894.
BOX 5X3	25.000	0.	72.	132.	154.	56.	46.	460.
SUB TOTAL		0.	21380.	29707.	24172.	10308.	10174.	95741.
<b>4 FLOOD PROTECTION</b>								
DIKE	10730.000	0.	450.	3600.	825.	1050.	825.	6750.
RUND	5460.000	0.	490.	3622.	1266.	1089.	896.	7322.
DEWATER PUMP	3.000	0.	1772.	15769.	2393.	1855.	4806.	26575.
SUB TOTAL		0.	2712.	22971.	4444.	3994.	6527.	40647.
<b>5 DRAINAGE SYSTEM</b>								
BOX 4X1.5	410.000	0.	634.	1188.	1322.	490.	403.	4037.
BRANCH CHANREL	9665.000	0.	104.	835.	191.	244.	191.	1566.
U-DITCH 1.2X1.2	1920.000	0.	759.	1272.	1545.	588.	462.	4655.
U-DITCH 1.0X1.0	6575.000	0.	2180.	3501.	4448.	1659.	1390.	13179.
U-DITCH 0.8X0.8	2470.000	0.	498.	336.	1054.	349.	311.	2548.
BOX 1.2 X 1.2	20.000	0.	8.	14.	16.	6.	5.	50.
BOX 1.0 X 1.0	20.000	0.	7.	12.	14.	5.	4.	43.
BOX 0.8 X 0.8	20.000	0.	6.	10.	12.	4.	4.	35.
DIKE	275.000	0.	12.	92.	21.	27.	21.	173.
SUB TOTAL		0.	4207.	7260.	8624.	3373.	2822.	26285.
<b>6 WATER SUPPLY</b>								
DEEP WELL	7.000	0.	419.	1218.	2215.	701.	792.	5337.
RESERVOIR (RES)	0.000	0.	0.	0.	0.	0.	0.	0.
RESERVOIR (IND)	2.000	0.	1151.	2128.	2480.	919.	762.	7440.
ELEVATED TANK(RES)	0.000	0.	0.	0.	0.	0.	0.	0.
ELEVATED TANK(IND)	2.000	0.	1087.	2184.	2181.	771.	747.	6974.
AC PIPE 100	960.000	0.	109.	5.	67.	9.	12.	202.
AC PIPE 150	0.000	0.	0.	0.	0.	0.	0.	0.
AC PIPE 200	2645.000	0.	352.	34.	489.	63.	78.	1018.
AC PIPE 250	5190.000	0.	810.	83.	1220.	161.	197.	2470.
AC PIPE 300	5560.000	0.	1055.	117.	1680.	218.	273.	3342.

ITEM	QUANTITY	F.L.	D.L.	F.M.	O.M.	TAX	O/P	TOTAL
AC PIPE 400	200.000	0.	57.	6.	91.	12.	15.	181.
AC PIPE 500	200.000	0.	83.	10.	145.	19.	24.	280.
ACCESSORIES	0.900	0.	5.	348.	27.	38.	141.	559.
DCIP 100	120.000	0.	10.	40.	16.	9.	8.	83.
DCIP 150	0.000	0.	0.	0.	0.	0.	0.	0.
DCIP 200	112.000	0.	23.	64.	27.	13.	13.	141.
DCIP 300	540.000	0.	181.	486.	299.	101.	99.	1074.
DCIP SUB TOTAL	180.000	0.	247.	316.	137.	65.	65.	830.
			5589.	7034.	10984.	3098.	3227.	29933.
7 SEWAGE SYSTEM								
RC PIPE 300	715.000	0.	192.	26.	89.	22.	29.	349.
RC PIPE 400	520.000	0.	161.	29.	107.	25.	23.	344.
RC PIPE 500	740.000	0.	284.	49.	178.	42.	39.	592.
RC PIPE 600	2105.000	0.	1021.	229.	651.	168.	152.	2221.
RC PIPE 800	1495.000	0.	1322.	277.	732.	193.	173.	2687.
RC PIPE 1000	280.000	0.	391.	67.	195.	49.	45.	747.
MISCELLANEOUS	0.900	0.	30.	212.	200.	103.	61.	607.
TREATMENT PLANT S1	1.000	0.	1366.	13083.	5484.	4649.	2731.	27313.
TREATMENT PLANT S2	1.000	540.	729.	7370.	2542.	2482.	1458.	15121.
TREATMENT PLANT S3	1.000	540.	465.	4510.	1810.	1582.	930.	9837.
TREATMENT PLANT S4	1.000	540.	310.	2840.	1375.	1052.	620.	6737.
SUB TOTAL	1620.	1620.	6272.	28693.	13352.	10367.	6252.	66556.
8 POWER SUPPLY								
HIGH VOLT LINE	10665.000	0.	1568.	688.	293.	139.	139.	2826.
LOW VOLT LINE	2166.000	0.	318.	80.	35.	16.	16.	466.
SUB TOTAL		0.	1886.	768.	328.	155.	155.	3292.
9 TELECOMMUNICATION								
TELEPHONE LINE 100P	2325.000	0.	342.	217.	69.	41.	41.	709.
TELEPHONE LINE 200P	4840.000	0.	711.	310.	97.	58.	58.	1234.
EXCHANGE STATION	1.000	0.	69.	619.	83.	109.	109.	990.
SUB TOTAL		0.	1122.	1147.	249.	208.	208.	2933.
10 ADMINISTRATION								
IEAT BUILD	1.000	0.	615.	958.	1709.	470.	403.	4155.
CONT 0	1.000	0.	126.	192.	665.	130.	123.	1235.
CONT 0	1.000	0.	132.	609.	203.	115.	118.	1176.
WORK SHOP BUILD	1.000	0.	166.	262.	521.	111.	111.	1199.
CONT 0	1.000	0.	31.	50.	199.	37.	35.	354.
CONT 0	1.000	0.	31.	160.	27.	27.	27.	272.
IEAT OFFICE EX WORK	1.000	0.	770.	504.	880.	226.	254.	2635.
FS/SECURITY OFF.	1.000	0.	53.	92.	160.	44.	38.	387.
CONT 0	1.000	0.	11.	40.	40.	12.	11.	114.
SPORTS FIELD/PARK	1.000	0.	1740.	502.	2378.	381.	473.	5474.
VEHICLES	1.000	0.	0.	2056.	0.	0.	0.	2056.
SUB TOTAL		0.	3676.	5426.	6783.	1572.	1593.	19049.
11 COMMERCIAL BUILD								
COMMERCIAL BUILD	1.000	0.	305.	469.	881.	241.	212.	2108.

MAJOR ITEM	UNIT: THROUGH AND HAHTS	QUANTITY	F.L.	D.L.	F.M.	D.M.	TAX	O/P	TOTAL
CONT D		1.000	0.	125.	488.	339.	120.	120.	1197.
EXTERNAL WORKS		1.000	0.	503.	500.	483.	196.	215.	1896.
SUB TOTAL		0.	0.	933.	1457.	1703.	557.	546.	5196.
12 STANDARD FACTORIFS									
S/F TYPE A		24.000	0.	3011.	4681.	9260.	2369.	2036.	21357.
(CONT D)		24.000	0.	1005.	3200.	3937.	1042.	1008.	10192.
EXTERNAL		24.000	0.	1883.	1650.	1453.	465.	696.	6156.
S/F TYPE H		10.000	0.	1894.	3099.	5737.	1487.	1269.	13485.
(CONT D)		10.000	0.	613.	1944.	2407.	635.	615.	6215.
EXTERNAL		10.000	0.	1278.	1102.	1060.	335.	470.	4245.
SUB TOTAL		0.	0.	9684.	15686.	23854.	6333.	6094.	61651.
13 ENGINEERING SERVICE									
ENGINEERING FOR D/D		1.000	6030.	7680.	0.	0.	2700.	12240.	28650.
SUPERVISION		72.000	4212.	1130.	0.	0.	0.	0.	5362.
SUB TOTAL			10242.	8810.	0.	0.	2700.	12240.	33992.
14 OTHERS									
OTHERS		1.000	850.	3750.	6807.	7295.	2384.	2834.	23920.
SUB TOTAL			850.	3750.	6807.	7295.	2384.	2834.	23920.
GRAND TOTAL			12712.	40204.	141312.	156454.	49356.	58067.	498104.

THE QUALIFICATION OF MANAGEMENT ADVISOR

1. Number of Staff

1 person

2. Term

1982.1 - 1982.12 (1 year)

3. Qualification

An economist with considerable experience in the operation of industrial estates

4. Duty Station

IEAT Office

5. Assignment

- 1) To assess the state of the management and operation of the SIE Project and to grasp and analyze any problems that may exist in connection therewith.
- 2) To advise and assist the SIE Estate Manager and staff in the performance of their day-to-day jobs.
- 3) To give advice on standard factory design, the selection of appropriate industries and enterprises.

THE QUALIFICATION OF TECHNICAL ADVISOR

1. Number of Staff

1 person

2. Term

1982.1 - 1982.12 (1 year)

3. Quarification

Environmental and sewage treatment specialist

4. Duty Station

IEAT Office

5. Job

His job is to advice about next items:

- 1) Technique of industrial waste water investigation
- 2) Investigation of waste water treatment mechanics and techniques
- 3) Analytical techniques of water quarity and biological feature
- 4) Technique of the data arrange, analysis and keeping

INCOME STATEMENT 1980 - 1989 (1)

\*\* CASE 1 - 0 \*\*

	INCOME STATEMENT (11)										1000 BAFT										
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
REVENUE	0.	0.	178183.	227056.	124330.	67400.	40267.	51302.	62337.	73372.											
LAND SALES	0.	0.	178183.	227056.	122257.	47954.	0.	0.	0.	0.											
LAND LEASED	0.	0.	0.	0.	2073.	4147.	4147.	4147.	4147.	4147.											
FACTORY & COMMERCIAL RENTALS	0.	0.	0.	0.	0.	9786.	19572.	19572.	19572.	19572.											
MAINTENANCE & SERVICE CHARGE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.											
WATER SUPPLY & SEWAGE DISPOSAL	0.	0.	0.	0.	0.	5130.	15350.	25650.	35910.	46170.											
COST	423.	650.	14427.	27453.	28527.	26699.	62478.	71275.	80053.	85010.											
OPERATING COST	423.	423.	1751.	2619.	3466.	9316.	19248.	29257.	39266.	49275.											
SALARIES & WAGES	235.	235.	706.	1177.	1648.	2120.	2355.	2355.	2355.	2355.											
ADMINISTRATION	188.	188.	545.	942.	1318.	1696.	1884.	1884.	1884.	1884.											
PROMOTION	0.	0.	500.	500.	500.	500.	0.	0.	0.	0.											
REPAIR & MAINTENANCE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.											
WATER & SEWAGE	0.	0.	0.	0.	0.	4617.	13851.	23085.	32219.	41553.											
INTEREST	0.	227.	4219.	14250.	19169.	15037.	11684.	10473.	9282.	8190.											
ON LONG TERM FOREIGN DEBT	0.	227.	980.	3902.	7787.	9800.	10622.	10374.	9282.	8190.											
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.											
ON SHORT TERM DEBT	0.	0.	3239.	10347.	11382.	5237.	1062.	95.	0.	0.											
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.											
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.											
COST OF LAND SOLD	0.	0.	8457.	10584.	5892.	2346.	0.	0.	0.	0.											
INCOME BEFORE TAX	-423.	-650.	163756.	199603.	95803.	40701.	-22210.	-19973.	-17756.	-15638.											
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	6860.	8742.	4707.	1846.	0.	0.	0.	0.											
INCOME AFTER TAX	-423.	-650.	156895.	150861.	91096.	38855.	-22210.	-15973.	-17756.	-15638.											
(LESS) DIVIDEND	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.											
INCOME AFTER TAX & DIVIDEND	-423.	-650.	156895.	150861.	91096.	38855.	-22210.	-15973.	-17756.	-15638.											
CUMULATIVE	-423.	-1073.	155822.	346603.	437779.	476634.	454424.	434451.	416854.	401056.											
PROFIT RATIO (BEFORE TAX) %	0.	0.	52.	88.	77.	60.	-55.	-35.	-28.	-21.											
PROFIT RATIO (AFTER TAX) %	0.	0.	88.	84.	73.	58.	-55.	-35.	-28.	-21.											
BREAK EVEN POINT	0.	0.	8.	12.	23.	34.	190.	177.	166.	156.											

INCOME STATEMENT 1990 - 1994 (2)

\*\* CASE 1 - 0 \*\*

	1990	1991	1992	1993	1994	1000 \$AFT
REVENUE	78888.	78888.	78888.	78888.	78888.	78888.
LAND SALES	0.	0.	0.	0.	0.	0.
LAND LEASED	4147.	4147.	4147.	4147.	4147.	4147.
FACTORY & COMMERCIAL RENTALS	19572.	19572.	19572.	19572.	19572.	19572.
MAINTENANCE & SERVICE CHARGE	3869.	3869.	3869.	3869.	3869.	3869.
WATER SUPPLY & SEWAGE DISPOSAL	51300.	51300.	51300.	51300.	51300.	51300.
COST	92921.	83514.	82422.	81330.	80238.	
OPERATING COST	54278.	54278.	54278.	54278.	54278.	54278.
SALARIES & WAGES	2355.	2355.	2355.	2355.	2355.	2355.
ADMINISTRATION	1884.	1884.	1884.	1884.	1884.	1884.
PROMOTION	0.	0.	0.	0.	0.	0.
REPAIR & MAINTENANCE	3869.	3869.	3869.	3869.	3869.	3869.
WATER & SEWAGE	46170.	46170.	46170.	46170.	46170.	46170.
INTEREST	7098.	6006.	4914.	3622.	2730.	
ON LONG TERM FOREIGN DEBT	7098.	6006.	4914.	3622.	2730.	
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	
ON SHORT TERM DEBT	0.	0.	0.	0.	0.	
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.	
DEPRECIATION	31545.	23230.	23230.	23230.	23230.	23230.
COST OF LAND SOLD	0.	0.	0.	0.	0.	0.
INCOME BEFORE TAX	-14033.	-4626.	-3534.	-2442.	-1350.	
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	0.	0.	0.	0.
INCOME AFTER TAX	-14033.	-4626.	-3534.	-2442.	-1350.	
(LESS) DIVIDEND	0.	0.	0.	0.	0.	0.
INCOME AFTER TAX & DIVIDEND	-14033.	-4626.	-3534.	-2442.	-1350.	
CUMULATIVE	387023.	382397.	378864.	376422.	375072.	
PROFIT RATIO (BEFORE TAX) %	-18.	-6.	-4.	-3.	-2.	
PROFIT RATIO (AFTER TAX) %	-18.	-6.	-4.	-3.	-2.	
BREAK EVEN POINT	149.	116.	112.	109.	105.	

CASH FLOW STATEMENT 1980 - 1989 (1)

\*\* CASE 1 - 0 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
CASH FLOW STATEMENT ( 1 ) 1000 MAFY										
<b>SOURCES OF CASH</b>										
CASH GENERATED FROM OPERATION	49577.	22350.	236541.	390032.	219778.	115349.	37852.	12892.	13789.	15907.
INCOME AFTER TAX & DIVIDEND	-423.	-650.	165352.	201445.	96988.	41201.	9335.	11572.	13789.	15907.
DEPRECIATION	-423.	-650.	156495.	190861.	91096.	38855.	-22210.	-19973.	-17756.	-15638.
LAND SOLD AT COST	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.
FINANCIAL RESOURCES	50000.	23000.	30000.	137000.	85000.	30000.	17000.	0.	0.	0.
GOVERNMENT CONTRIBUTION	50000.	19000.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	13000.	30000.	137000.	85000.	30000.	17000.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>APPLICATIONS OF CASH</b>										
REPAYMENT OF LONG TERM DEBT	47426.	23723.	168427.	321946.	234508.	95412.	22257.	32520.	31200.	31200.
FOREIGN DEBT	0.	0.	0.	0.	0.	0.	0.	21200.	31200.	31200.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	21200.	31200.	31200.
INVESTMENT IN FIXED ASSET	47426.	23723.	65238.	270360.	196718.	51264.	10740.	0.	0.	0.
LAND ACQUISITION	47426.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	24726.	139271.	0.	0.	0.	0.	0.	0.
BUILDING	0.	0.	0.	32445.	54159.	35685.	10740.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	23723.	10628.	3090.	3288.	849.	0.	0.	0.	0.
OTHERS	0.	0.	29884.	0.	0.	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
<b>CASH SURPLUS</b>										
BEGINNING CASH BALANCE	2151.	-1373.	130114.	68085.	-14730.	19938.	15595.	-19628.	-17431.	-15293.
ENDING CASH BALANCE	0.	2151.	777.	130891.	198976.	184247.	204184.	219779.	200151.	182740.
DEBT-SERVICE COVERAGE	2151.	777.	130891.	198976.	184247.	204184.	219779.	200151.	182740.	167447.
	0.0	-1.86	41.82	15.75	6.31	3.86	1.80	0.52	0.57	0.61



CASH FLOW STATEMENT 1990 - 1994 (2)

1000 RAPT  
CASH FLOW STATEMENT ( 2 )

	1990	1991	1992	1993	1994
SOURCES OF CASH	17512.	18604.	19656.	20788.	21880.
CASH GENERATED FROM OPERATION	17512.	19604.	19656.	20788.	21880.
INCOME AFTER TAX & DIVIDEND	-14033.	-4626.	-3536.	-2442.	-1350.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
LAND SOLD AT COST	0.	0.	0.	0.	0.
FINANCIAL RESOURCES	0.	0.	0.	0.	0.
GOVERNMENT CONTRIBUTION	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	31200.	31200.	31200.	31200.	31200.
REPAYMENT OF LONG TERM DEBT	31200.	31200.	31200.	31200.	31200.
FOREIGN DEBT	31200.	31200.	31200.	31200.	31200.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	0.	0.	0.	0.	0.
LAND ACQUISITION	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	0.	0.	0.
BUILDING	0.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	0.	0.	0.	0.
OTHERS	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	0.
CASH SURPLUS	-13688.	-12596.	-11504.	-10412.	-9320.
BEGINNING CASH BALANCE	167447.	153759.	141163.	129659.	119247.
ENDING CASH BALANCE	153759.	141163.	129659.	119247.	109927.
DEBT-SERVICE COVERAGE *	0.64	0.66	0.68	0.70	0.73

BALANCE SHEET 1980 - 1989 (1)

\*\* CASE 1 - 0 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BALANCE SHEET ( 1 ) 1000 RMBT										
<b>ASSETS</b>										
<b>CURRENT ASSETS</b>	49577.	71926.	302010.	681458.	819764.	844471.	827743.	735250.	726294.	679456.
CASH & DEPOSITS	2151.	777.	17600.	253751.	241231.	217021.	221098.	200151.	182740.	167447.
MORTGAGE RECEIVABLE	2151.	777.	130891.	198976.	184247.	204184.	219779.	200151.	182740.	167447.
OTHERS	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
<b>FIXED ASSETS</b>	47426.	71149.	127931.	387707.	578533.	627450.	606645.	575100.	543555.	512010.
LAND	47426.	47426.	72153.	368977.	446248.	460978.	471719.	471719.	471719.	471719.
BUILDING	0.	0.	0.	32445.	86605.	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	0.	23723.	34351.	37441.	40729.	41577.	41577.	41577.	41577.	41577.
OTHERS	0.	0.	29884.	29884.	25984.	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
(LESS) COST OF LAND SOLD	0.	0.	8457.	19041.	24933.	27275.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	49577.	71927.	302010.	681458.	819764.	844471.	827743.	735251.	726294.	679456.
<b>LIABILITIES</b>	0.	13000.	86188.	274775.	321985.	307897.	313320.	286800.	249600.	218400.
CURRENT LIABILITIES	0.	0.	43188.	94775.	56985.	12837.	32520.	31200.	31200.	31200.
FOREIGN DEBT MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	13000.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
<b>FIXED LIABILITIES</b>	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>EQUITIES</b>	49577.	58927.	215822.	406683.	497779.	536634.	514424.	494451.	476694.	461056.
GOVERNMENT CONTRIBUTION	50000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	-423.	-1073.	155822.	346683.	437779.	476634.	454424.	434451.	416694.	401056.
<b>CURRENT RATIO</b>	0.	0.	403.	310.	423.	1691.	680.	642.	566.	537.
<b>DEBT EQUITY RATIO</b>	0.	22.	40.	68.	65.	57.	61.	57.	52.	47.

BALANCE SHEET 1990 - 1994 (2)

\*\* CASE 1 - 0 \*\*

1000 BAHT

BALANCE SHEET ( 2 )

	1990	1991	1992	1993	1994
<b>ASSETS</b>					
CURRENT ASSETS	634223.	598997.	563664.	530022.	497472.
CASH & DEPOSITS	153759.	141163.	129659.	119247.	106927.
MORTGAGE RECEIVABLE	153759.	141163.	129659.	119247.	106927.
	0.	0.	0.	0.	0.
FIXED ASSETS	480464.	457235.	434005.	410775.	387546.
LAND	471719.	471719.	471719.	471719.	471719.
BUILDING	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	41577.	41577.	41577.	41577.	41577.
OTHERS	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	153726.	180955.	204186.	227415.	250644.
(LESS) COST OF LAND SOLD	21279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	634223.	598997.	563664.	530022.	497472.
LIABILITIES	187200.	156000.	124800.	93600.	62400.
CURRENT LIABILITIES	31200.	31200.	31200.	31200.	31200.
FOREIGN DEBT MATURING	31200.	31200.	31200.	31200.	31200.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	0.	0.	0.
FIXED LIABILITIES	156000.	124800.	93600.	62400.	62400.
LONG TERM FOREIGN DEBT	156000.	124800.	93600.	62400.	62400.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
EQUITIES	447023.	442997.	438864.	436422.	435072.
GOVERNMENT CONTRIBUTION	65700.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	381323.	382997.	378864.	376422.	375072.
CURRENT RATIO	493.	452.	416.	382.	0.
DEBT EQUITY RATIO	42.	35.	28.	21.	14.

DISCOUNTED CASH FLOW

\* CASE 1 - 0 \*\*

YEAR	COST(I)	REVENUE(I)	OPER. CTAX(I)	BENEFIT(I)	DIS. RATIO(I)	B/C RATIO(I)	NET PV(I)
1980	47425.5	0.0	423.0	-423.0	1	1.136	87575.8
1981	23722.9	0.0	423.0	-423.0	2	1.116	72563.1
1982	65238.3	178182.7	1731.0	169571.6	3	1.098	59333.8
1983	270360.3	227055.7	2619.0	215655.1	4	1.081	47662.1
1984	196718.1	124330.2	3466.0	116157.3	5	1.065	37354.1
1985	51263.5	67400.3	9316.4	56237.7	6	1.051	28240.9
1986	10740.1	40267.3	19248.3	21019.0	7	1.037	20175.7
1987	0.0	51302.2	29257.2	22045.0	8	1.025	19032.2
1988	0.0	62337.1	39266.1	23071.0	9	1.012	6659.9
1989	0.0	73371.9	49275.0	24056.9	10	1.002	1081.1
1990	0.0	78888.1	54278.1	24610.0	11	0.992	-3908.2
1991	0.0	78888.1	54278.1	24610.0	12	0.982	-8341.2
1992	0.0	78888.1	54278.1	24610.0	13	0.972	-12282.8
1993	0.0	78888.1	54278.1	24610.0	14	0.965	-15789.8
1994	0.0	78888.1	54278.1	24610.0	15	0.957	-18912.1
					16	0.948	-21593.2
					17	0.942	-24171.4
					18	0.935	-26381.0
					19	0.925	-28351.7
					20	0.922	-30109.8
					21	0.916	-31678.7
					22	0.911	-33079.4
					23	0.905	-34329.9
					24	0.900	-35446.6
					25	0.895	-36444.0
					26	0.890	-37334.4
					27	0.885	-38129.8
					28	0.881	-38840.4
					29	0.876	-39474.5
					30	0.872	-40040.7

INTERNAL RATE OF RETURN = 10.3 % REMAINDER = -442.66406

INCOME STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 1 \*\*

	INCOME STATEMENT (1)										1000 BAHT
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
REVENUE	0.	0.	178183.	227056.	124330.	67400.	40267.	51302.	62337.	73374.	
LAND SALES	0.	0.	178183.	227056.	122257.	47954.	0.	0.	0.	0.	
LAND LEASED	0.	0.	0.	0.	2073.	4147.	4147.	4147.	4147.	4147.	
FACTORY & COMMERCIAL RENTALS	0.	0.	0.	0.	0.	9786.	19572.	15572.	19572.	19572.	
MAINTENANCE & SERVICE CHARGE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.	
WATER SUPPLY & SEWAGE DISPOSAL	0.	0.	0.	0.	0.	5130.	15390.	25650.	35910.	46170.	
COST	423.	748.	14847.	29150.	32015.	31274.	67655.	76434.	84709.	93083.	
OPERATING COST	423.	423.	1751.	2619.	3466.	9316.	19248.	29257.	39266.	49275.	
SALARIES & WAGES	235.	235.	706.	1177.	1648.	2120.	2355.	2355.	2355.	2355.	
ADMINISTRATION	188.	188.	545.	942.	1318.	1696.	1884.	1884.	1884.	1884.	
PROMOTION	0.	0.	500.	500.	500.	500.	0.	0.	0.	0.	
REPAIR & MAINTENANCE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.	
WATER & SEWAGE	0.	0.	0.	0.	0.	4617.	13851.	23085.	32319.	41553.	
INTEREST	0.	325.	4639.	15947.	22657.	19612.	16862.	15631.	13857.	12262.	
ON LONG TERM FOREIGN DEBT	0.	325.	1400.	5600.	11275.	14375.	15800.	15532.	13897.	12262.	
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
ON SHORT TERM DEBT	0.	0.	3239.	10347.	11382.	5237.	1062.	99.	0.	0.	
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.	
COST OF LAND SOLD	0.	0.	8457.	10584.	5892.	2346.	0.	0.	0.	0.	
INCOME BEFORE TAX	-423.	-748.	153336.	197906.	92315.	36126.	-21388.	-25132.	-22372.	-19711.	
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	6860.	8742.	4707.	1846.	0.	0.	0.	0.	
INCOME AFTER TAX	-423.	-748.	156475.	189164.	87608.	34280.	-27388.	-25132.	-22372.	-19711.	
(LESS) DIVIDEND	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
INCOME AFTER TAX & DIVIDEND	-423.	-748.	156475.	189164.	87608.	34280.	-27388.	-25132.	-22372.	-19711.	
CUMULATIVE	-423.	-1171.	155304.	344468.	432077.	466357.	438969.	413837.	391465.	371755.	
PROFIT RATIO (BEFORE TAX) %	0.	0.	92.	87.	74.	54.	-68.	-49.	-36.	-27.	
PROFIT RATIO (AFTER TAX) %	0.	0.	88.	83.	70.	51.	-68.	-49.	-36.	-27.	
BREAK EVEN POINT	0.	0.	0.	13.	26.	42.	210.	197.	183.	171.	

INCOME STATEMENT 1990 - 1994 (2)

INCOME STATEMENT ( 2 ) 1000 BAHT

	1990	1991	1992	1993	1994
REVENUE	78888.	78888.	78888.	78888.	78888.
LAND SALES	0.	0.	0.	0.	0.
LAND LEASED	4147.	4147.	4147.	4147.	4147.
FACTORY & COMMERCIAL RENTALS	19572.	19572.	19572.	19572.	19572.
MAINTENANCE & SERVICE CHARGE	3869.	3869.	3869.	3869.	3869.
WATER SUPPLY & SEWAGE DISPOSAL	51300.	51300.	51300.	51300.	51300.
COST	96451.	86500.	84865.	83230.	81595.
OPERATING COST	54278.	54278.	54278.	54278.	54278.
SALARIES & WAGES	2355.	2355.	2355.	2355.	2355.
ADMINISTRATION	1884.	1884.	1884.	1884.	1884.
PROMOTION	0.	0.	0.	0.	0.
REPAIR & MAINTENANCE	3869.	3869.	3869.	3869.	3869.
WATER & SEWAGE	46170.	46170.	46170.	46170.	46170.
INTEREST	10627.	8992.	7357.	5722.	4087.
ON LONG TERM FOREIGN DEBT	10627.	8992.	7357.	5722.	4087.
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
ON SHORT TERM DEBT	0.	0.	0.	0.	0.
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
COST OF LAND SOLD	0.	0.	0.	0.	0.
INCOME BEFORE TAX	-17563.	-7612.	-5577.	-6342.	-2707.
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	0.	0.	0.
INCOME AFTER TAX	-17563.	-7612.	-5577.	-6342.	-2707.
(LESS) DIVIDEND	0.	0.	0.	0.	0.
INCOME AFTER TAX & DIVIDEND	-17563.	-7612.	-5577.	-6342.	-2707.
CUMULATIVE	354192.	346580.	340603.	336261.	333553.
PROFIT RATIO (BEFORE TAX) %	-22.	-10.	-8.	-6.	-3.
PROFIT RATIO (AFTER TAX) %	-22.	-10.	-8.	-6.	-3.
BREAK EVEN POINT	162.	127.	121.	119.	110.

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## CASH FLOW STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 1 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
CASH FLOW STATEMENT ( I ) 1000 BAHU										
SOURCES OF CASH	49577.	22252.	238121.	389334.	220290.	115774.	37674.	7733.	9174.	11834.
CASH GENERATED FROM OPERATION	-423.	-748.	164932.	199748.	93500.	36626.	4157.	6414.	9174.	11834.
INCOME AFTER TAX & DIVIDEND	-423.	-748.	156475.	189164.	87608.	34280.	-27388.	-25132.	-22372.	-19711.
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.
LAND SOLD AT COST	0.	0.	8457.	10584.	5892.	2346.	0.	0.	0.	0.
FINANCIAL RESOURCES	50000.	23000.	30000.	138000.	85000.	35000.	22000.	0.	0.	0.
GOVERNMENT CONTRIBUTION	50000.	10000.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	13000.	30000.	138000.	89000.	35000.	22030.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	47426.	23723.	108427.	321946.	234508.	95412.	22257.	34020.	32700.	32700.
REPAYMENT OF LONG TERM DEBT	0.	0.	0.	0.	0.	0.	0.	32700.	32700.	32700.
FOREIGN DEBT	0.	0.	0.	0.	0.	0.	0.	22700.	32700.	32700.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	47426.	23723.	65238.	270360.	196718.	51264.	10740.	0.	0.	0.
LAND ACQUISITION	47426.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	24726.	234825.	139271.	14730.	10740.	0.	0.	0.
BUILDING	0.	0.	0.	32445.	54159.	35685.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	23723.	10628.	3090.	3288.	849.	0.	0.	0.	0.
OTHERS	0.	0.	25884.	0.	0.	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
CASH SURPLUS	2151.	-1471.	129594.	67388.	-14217.	20363.	15417.	-26286.	-23527.	-20866.
BEGINNING CASH BALANCE	0.	2151.	680.	130374.	197761.	183544.	203907.	219324.	193037.	169511.
ENDING CASH BALANCE	2151.	680.	130374.	197761.	183544.	203907.	219324.	193037.	169511.	148645.
DEBT-SERVICE COVERAGE *	0.C	-1.30	38.03	14.07	5.33	2.96	1.25	0.46	0.50	0.54

CASH FLOW STATEMENT 1990 - 1994 (2)

\*\* CASE 3 - 1 \*\*

1000 BAHT

CASH FLOW STATEMENT ( 2 )

	1990	1991	1992	1993	1994
SOURCES OF CASH	13982.	15618.	17253.	18888.	20523.
CASH GENERATED FROM OPERATION	13982.	15618.	17253.	18888.	20523.
INCOME AFTER TAX & DIVIDEND	-17503.	-7612.	-5977.	-4342.	-2707.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
LAND SOLD AT COST	0.	0.	0.	0.	0.
FINANCIAL RESOURCES	0.	0.	0.	0.	0.
GOVERNMENT CONTRIBUTION	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	32700.	32700.	32700.	32700.	32700.
REPAYMENT OF LONG TERM DEBT	32700.	32700.	32700.	32700.	32700.
FOREIGN DEBT	32700.	32700.	32700.	32700.	32700.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	0.	0.	0.	0.	0.
LAND ACQUISITION	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	0.	0.	0.
BUILDING	0.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	0.	0.	0.	0.
OTHERS	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	0.
CASH SURPLUS	-18718.	-17082.	-15447.	-13812.	-12177.
BEGINNING CASH BALANCE	148645.	129928.	112845.	97398.	83585.
ENDING CASH BALANCE	125928.	112845.	97398.	83585.	71408.
DEBT-SERVICE COVERAGE	0.57	0.59	0.61	0.64	0.67



## BALANCE SHEET 1980 - 1989 (1)

\*\* CASE 3 - 1 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BALANCE SHEET ( 1 ) 1000 BAHT										
<b>ASSETS</b>	49577.	71829.	301493.	680243.	819061.	844193.	827288.	768137.	713065.	660655.
CURRENT ASSETS	2151.	680.	173562.	292536.	240529.	216743.	220643.	153037.	169511.	148645.
CASH & DEPOSITS	2151.	680.	130374.	197761.	183544.	203907.	219224.	193037.	169511.	148645.
MORTGAGE RECEIVABLE	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED ASSETS	47426.	71149.	127931.	387707.	578532.	627450.	606645.	575100.	543555.	512010.
LAND	47426.	47426.	72153.	306977.	446248.	460978.	471719.	471719.	471719.	471719.
BUILDING	0.	0.	0.	32445.	86605.	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	0.	23723.	34351.	37441.	40729.	41577.	41577.	41577.	41577.	41577.
OTHERS	0.	0.	29884.	29884.	29884.	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	63090.	94635.	126181.
(LESS) COST OF LAND SOLD	0.	0.	8457.	19041.	24933.	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	49577.	71829.	301493.	680243.	819061.	844193.	827288.	768137.	713065.	660655.
LIABILITIES	0.	13000.	86188.	275775.	326985.	317837.	328320.	294300.	261600.	228900.
CURRENT LIABILITIES	0.	0.	43188.	94775.	56985.	12837.	34020.	32700.	32700.	32700.
FOREIGN DEBT MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED LIABILITIES	0.	13000.	43000.	181000.	270000.	305000.	294300.	261600.	228900.	196200.
LONG TERM FOREIGN DEBT	0.	13000.	43000.	181000.	270000.	305000.	294300.	261600.	228900.	196200.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EQUITIES	49577.	58829.	215304.	404468.	492077.	526357.	498569.	473837.	451465.	431755.
GOVERNMENT CONTRIBUTION	50000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	-423.	-1171.	155304.	344468.	432077.	466357.	438969.	413837.	391465.	371755.
CURRENT RATIO	0.	0.	402.	305.	422.	1688.	649.	590.	518.	455.
DEBT EQUITY RATIO	0.	22.	40.	68.	66.	60.	66.	62.	58.	53.

BALANCE SHEET 1990 - 1994 (2)

\*\* CASE 3 - 1 \*\*

1000 BAHT

BALANCE SHEET ( 2 )

1990 1991 1992 1993 1994

ASSETS	1990	1991	1992	1993	1994
CURRENT ASSETS	610392.	570080.	531403.	494360.	458953.
CASH & DEPOSITS	129928.	112845.	97398.	83585.	71408.
MORTGAGE RECEIVABLE	125928.	112845.	97398.	83585.	71408.
	0.	0.	0.	0.	0.
FIXED ASSETS	480464.	457235.	436005.	410775.	387546.
LAND	471719.	471719.	471719.	471719.	471719.
BUILDING	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	41577.	41577.	41577.	41577.	41577.
OTHERS	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	157726.	180955.	204185.	227415.	250644.
(LESS) COST OF LAND SOLD	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.

LIABILITIES & EQUITIES	1990	1991	1992	1993	1994
LIABILITIES	196200.	163500.	130800.	98100.	65400.
CURRENT LIABILITIES	32700.	32700.	32700.	32700.	32700.
FOREIGN DEBT MATURING	32700.	32700.	32700.	32700.	32700.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	0.	0.	0.
FIXED LIABILITIES	163500.	130800.	98100.	65400.	65400.
LONG TERM FOREIGN DEBT	163500.	130800.	98100.	65400.	65400.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
EQUITIES	414192.	406580.	400603.	396261.	393553.
GOVERNMENT CONTRIBUTION	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	354192.	346580.	340603.	336261.	333553.
CURRENT RATIO %	397.	345.	298.	256.	0.
DEBT EQUITY RATIO %	47.	40.	33.	25.	17.



INCOME STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 2 \*\*

	INCOME STATEMENT ( 1 )										1000 BAHT
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	
REVENUE	0.	0.	178183.	227056.	124330.	67400.	40267.	51302.	62337.	73372.	7
LAND SALES	0.	0.	178183.	227056.	122257.	47954.	0.	0.	0.	0.	0.
LAND LEASED	0.	0.	0.	0.	2073.	4147.	4147.	4147.	4147.	4147.	0.
FACTORY & COMMERCIAL RENTALS	0.	0.	0.	0.	0.	9786.	19572.	19572.	19572.	19572.	0.
MAINTENANCE & SERVICE CHARGE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.	0.
WATER SUPPLY & SEWAGE DISPOSAL	0.	0.	0.	0.	0.	5130.	15390.	25650.	35910.	46170.	0.
COST	423.	845.	15300.	30960.	35650.	36139.	73305.	82143.	85817.	97590.	
OPERATING COST	423.	423.	1751.	2615.	3466.	9316.	19248.	28257.	39266.	49275.	
SALARIES & WAGES	235.	235.	706.	1177.	1648.	2120.	2355.	2355.	2355.	2355.	
ADMINISTRATION	188.	188.	545.	942.	1318.	1696.	1884.	1884.	1884.	1884.	
PROMOTION	0.	0.	500.	500.	500.	500.	0.	0.	0.	0.	
REPAIR & MAINTENANCE	0.	0.	0.	0.	0.	383.	1158.	1923.	2708.	3483.	
WATER & SEWAGE	0.	0.	0.	0.	0.	4617.	13851.	23085.	32319.	41553.	
INTEREST	0.	422.	5092.	17757.	26332.	24477.	22512.	21341.	19006.	16770.	
ON LONG TERM FOREIGN DEBT	0.	422.	1852.	7410.	14950.	19240.	21450.	21242.	19006.	16770.	
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
ON SHORT TERM DEBT	0.	0.	3239.	10347.	11382.	5237.	1062.	95.	0.	0.	
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.	
COST OF LAND SOLD	0.	0.	8457.	10584.	5892.	2346.	0.	0.	0.	0.	
INCOME BEFORE TAX	-423.	-845.	162882.	196096.	88640.	31261.	-33038.	-30841.	-27480.	-24218.	
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	6860.	8742.	4707.	1846.	0.	0.	0.	0.	
INCOME AFTER TAX	-423.	-845.	156023.	187354.	83933.	29415.	-33038.	-30841.	-27480.	-24218.	
(LESS) DIVIDEND	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	
INCOME AFTER TAX & DIVIDEND	-423.	-845.	156023.	187354.	83933.	29415.	-33038.	-30841.	-27480.	-24218.	
CUMULATIVE	-423.	-1268.	154754.	342108.	426042.	455457.	422419.	391578.	364057.	339879.	
PROFIT RATIO (BEFORE TAX) %	0.	0.	91.	86.	71.	46.	-82.	-60.	-44.	-33.	
PROFIT RATIO (AFTER TAX) %	0.	0.	88.	83.	68.	44.	-82.	-60.	-44.	-33.	
BREAK EVEN POINT	0.	0.	9.	14.	29.	50.	233.	219.	202.	187.	

## INCOME STATEMENT 1990 - 1994 (2)

\*\* LAST 3 - 2 \*\*

INCOME STATEMENT ( 2 1 ) 1000 BAHT

	1990	1991	1992	1993	1994
REVENUE	78888.	78888.	78888.	78888.	78888.
LAND SALES	0.	0.	0.	0.	0.
LAND LEASED	4147.	4147.	4147.	4147.	4147.
FACTORY & COMMERCIAL RENTALS	19572.	19572.	19572.	19572.	19572.
MAINTENANCE & SERVICE CHARGE	3869.	3869.	3869.	3869.	3869.
WATER SUPPLY & SEWAGE DISPOSAL	51300.	51300.	51300.	51300.	51300.
COST	100357.	99806.	87570.	85334.	83098.
OPERATING COST	54278.	54278.	54278.	54278.	54278.
SALARIES & WAGES	2355.	2355.	2355.	2355.	2355.
ADMINISTRATION	1884.	1884.	1884.	1884.	1884.
PROMOTION	0.	0.	0.	0.	0.
REPAIR & MAINTENANCE	3869.	3869.	3869.	3869.	3869.
WATER & SEWAGE	46170.	46170.	46170.	46170.	46170.
INTEREST	14534.	12298.	10062.	7826.	5590.
ON LONG TERM FOREIGN DEBT	14534.	12298.	10062.	7826.	5590.
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
ON SHORT TERM DEBT	0.	0.	0.	0.	0.
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
COST OF LAND SOLD	0.	0.	0.	0.	0.
INCOME BEFORE TAX	-21469.	-10918.	-8682.	-6446.	-4210.
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	0.	0.	0.
INCOME AFTER TAX	-21469.	-10918.	-8682.	-6446.	-4210.
(LESS) DIVIDEND	0.	0.	0.	0.	0.
INCOME AFTER TAX & DIVIDEND	-21469.	-10918.	-8682.	-6446.	-4210.
CUMULATIVE	318410.	307493.	298811.	292365.	288155.
PROFIT RATIO (BEFORE TAX) %	-27.	-14.	-11.	-8.	-5.
PROFIT RATIO (AFTER TAX) %	-27.	-14.	-11.	-8.	-5.
BREAK EVEN POINT	176.	138.	131.	123.	115.

## CASH FLOW STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 2 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
CASH FLOW STATEMENT ( 1 ) 1000 BAH)										
SOURCES OF CASH	49577.	22155.	238668.	389524.	219615.	115909.	38024.	2024.	4065.	7327.
CASH GENERATED FROM OPERATION	-423.	-845.	164480.	197938.	89825.	31761.	-1493.	704.	4065.	7327.
INCOME AFTER TAX & DIVIDEND	-423.	-845.	156023.	187354.	83933.	29415.	-33038.	-30841.	-27480.	-24218.
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.
LAND SOLD AT COST	0.	0.	8457.	10584.	5892.	2346.	0.	0.	0.	0.
FINANCIAL RESOURCES	50000.	23000.	31000.	140000.	92000.	40000.	28000.	0.	0.	0.
GOVERNMENT CONTRIBUTION	50000.	10000.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	13000.	31000.	140000.	92000.	40000.	28000.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	47426.	23723.	198427.	321946.	234508.	95412.	22257.	35720.	34400.	34400.
REPAYMENT OF LONG TERM DEBT	0.	0.	0.	0.	0.	0.	0.	34400.	34400.	34400.
FOREIGN DEBT	0.	0.	0.	0.	0.	0.	0.	34400.	34400.	34400.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	47426.	23723.	65238.	270360.	196718.	51264.	10740.	0.	0.	0.
LAND ACQUISITION	47426.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	24728.	234825.	139271.	14730.	10740.	0.	0.	0.
BUILDING	0.	0.	0.	32445.	54159.	35685.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	23723.	10628.	3090.	3288.	849.	0.	0.	0.	0.
OTHERS	0.	0.	25884.	0.	0.	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
CASH SURPLUS	2151.	-1568.	130242.	67578.	-14892.	20498.	15767.	-33656.	-30335.	-27073.
BEGINNING CASH BALANCE	0.	2151.	582.	130824.	198401.	183509.	204007.	215774.	186078.	155743.
ENDING CASH BALANCE	2151.	582.	130828.	198401.	183509.	204007.	219778.	186078.	155743.	128670.
DEBT-SERVICE COVERAGE	0.0	-1.00	34.65	12.64	4.59	2.37	0.93	0.40	0.43	0.47

## CASH FLOW STATEMENT 1990 - 1994 (2)

\*\* CASE 3 - 2 \*\*

1000 BAHT

## CASH FLOW STATEMENT ( 2 )

	1990	1991	1992	1993	1994
SOURCES OF CASH					
CASH GENERATED FROM OPERATION	10076.	12312.	14548.	16784.	19020.
INCOME AFTER TAX & DIVIDEND	-21462.	-10918.	-8682.	-6446.	-4210.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
LAND SOLD AT COST	0.	0.	0.	0.	0.
FINANCIAL RESOURCES	0.	0.	0.	0.	0.
GOVERNMENT CONTRIBUTION	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	34400.	34400.	34400.	34400.	34400.
REPAYMENT OF LONG TERM DEBT	34400.	34400.	34400.	34400.	34400.
FOREIGN DEBT	34400.	34400.	34400.	34400.	34400.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	0.	0.	0.	0.	0.
LAND ACQUISITION	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	0.	0.	0.
BUILDING	0.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	0.	0.	0.	0.
OTHERS	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	0.
CASH SURPLUS	-24324.	-22088.	-19852.	-17616.	-15380.
BEGINNING CASH BALANCE	128670.	104346.	82258.	62406.	44790.
ENDING CASH BALANCE	104346.	82258.	62406.	44790.	29410.
DEBT-SERVICE COVERAGE	0.50	0.53	0.55	0.58	0.62

BALANCE SHEET 1980 - 1989 (1)

\*\* CASE 3 - 2 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
BALANCE SHEET (1) 1000 BAHT										
<b>ASSETS</b>	49577.	71731.	301943.	680883.	819026.	844293.	827738.	761177.	699297.	640679.
CURRENT ASSETS	2151.	582.	174012.	293176.	240494.	216843.	221093.	186078.	155743.	128670.
CASH & DEPOSITS	2151.	582.	130824.	198401.	183509.	204007.	219774.	186078.	155743.	128670.
MORTGAGE RECEIVABLE	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED ASSETS	47426.	71149.	127931.	387707.	578532.	627450.	606645.	575100.	543555.	512010.
LAND	47426.	47426.	72153.	306977.	446248.	460978.	471719.	471719.	471719.	471719.
BUILDING	0.	0.	0.	32445.	86605.	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	0.	23723.	34351.	37441.	40729.	41577.	41577.	41577.	41577.	41577.
OTHERS	0.	0.	29884.	29884.	29884.	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	63090.	94655.	125181.
(LESS) COST OF LAND SOLD	0.	0.	6457.	19041.	24933.	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	49577.	71732.	301943.	680883.	819026.	844293.	827738.	761178.	699297.	640679.
LIABILITIES	0.	13000.	87188.	278775.	332985.	328837.	345320.	305600.	275200.	240800.
CURRENT LIABILITIES	0.	0.	43188.	94775.	56985.	12837.	35720.	34400.	34400.	34400.
FOREIGN DEBT MATURING	0.	0.	0.	0.	0.	0.	34400.	34400.	34400.	34400.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED LIABILITIES	0.	13000.	44000.	184000.	276000.	316000.	309600.	275200.	240800.	206400.
LONG TERM FOREIGN DEBT	0.	13000.	44000.	184000.	276000.	316000.	309600.	275200.	240800.	206400.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EQUITIES	49577.	58732.	214754.	402108.	486042.	515457.	482419.	451578.	424097.	399879.
GOVERNMENT CONTRIBUTION	50000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	-423.	-1268.	154754.	342108.	426042.	455457.	422419.	351578.	364097.	339879.
CURRENT RATIO %	0.	0.	403.	309.	422.	1689.	619.	541.	453.	374.
DEBT EQUITY RATIO %	0.	22.	41.	69.	69.	64.	72.	69.	65.	60.



## BALANCE SHEET 1990 - 1994 (2)

\*\* CASE 3 - 2 \*\*

BALANCE SHEET ( 2 ) 1000 BAHT

	1990	1991	1992	1993	1994
<b>ASSETS</b>	584810.	539492.	496411.	455565.	416955.
<b>CURRENT ASSETS</b>	104346.	82258.	62406.	44790.	29410.
CASH & DEPOSITS	104346.	82258.	62406.	44790.	29410.
MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
<b>FIXED ASSETS</b>	480464.	457235.	434005.	410775.	387546.
LAND	471719.	471719.	471719.	471719.	471719.
BUILDING	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	41577.	41577.	41577.	41577.	41577.
OTHERS	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	157726.	180955.	204185.	227415.	250644.
(LESS) COST OF LAND SOLD	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	584810.	539493.	496411.	455565.	416955.
<b>LIABILITIES</b>	206400.	172000.	137600.	103200.	68800.
<b>CURRENT LIABILITIES</b>	34400.	34400.	34400.	34400.	0.
FOREIGN DEBT MATURING	34400.	34400.	34400.	34400.	0.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	0.	0.	0.
<b>FIXED LIABILITIES</b>	172000.	137600.	103200.	68800.	68800.
LONG TERM FOREIGN DEBT	172000.	137600.	103200.	68800.	68800.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
<b>EQUITIES</b>	378410.	367493.	358811.	352365.	348155.
GOVERNMENT CONTRIBUTION	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	318410.	307493.	298811.	292365.	288155.
<b>CURRENT RATIO</b> †	303.	239.	181.	130.	0.
<b>DEBT EQUITY RATIO</b> ‡	55.	47.	38.	29.	20.

DISCOUNTED CASH FLOW

\*\* CASE 3 - 2 \*\*

DISCOUNTED CASH FLOW									
YEAR	COST(I)	REVENUE(I)	OP.E.TAX(I)	BENEFIT(I)	DIS.RATIO(I)	B/C RATIO(I)	NET PV(I)		
1980	47426.5	0.0	423.0	-423.0	1	1.136	87575.8		
1981	23722.9	0.0	423.0	-423.0	2	1.116	72563.1		
1982	65238.3	178182.7	1751.0	169571.6	3	1.098	59333.8		
1983	270360.3	227055.7	2619.0	215695.1	4	1.081	47662.1		
1984	196718.1	124330.2	3466.0	116157.3	5	1.065	37354.1		
1985	51263.5	67400.3	9316.4	56237.7	6	1.051	28240.9		
1986	10740.1	40267.3	19248.3	21019.0	7	1.037	20175.7		
1987	0.0	51302.2	29257.2	22045.0	8	1.025	13032.2		
1988	0.0	62337.1	39266.1	23071.0	9	1.013	6693.9		
1989	0.0	73371.9	49275.0	24096.9	10	1.002	1081.1		
1990	0.0	78888.1	54278.1	24610.0	11	0.992	-3908.2		
1991	0.0	78888.1	54278.1	24610.0	12	0.982	-8341.2		
1992	0.0	78888.1	54278.1	24610.0	13	0.973	-12282.8		
1993	0.0	78888.1	54278.1	24610.0	14	0.965	-15789.8		
1994	0.0	78888.1	54278.1	24610.0	15	0.957	-18912.1		
					16	0.945	-21693.2		
					17	0.942	-24171.4		
					18	0.935	-26381.0		
					19	0.925	-28351.7		
					20	0.922	-30109.8		
					21	0.916	-31678.7		
					22	0.911	-33079.4		
					23	0.905	-34329.9		
					24	0.900	-35446.6		
					25	0.895	-36444.0		
					26	0.890	-37334.4		
					27	0.885	-38129.8		
					28	0.881	-38840.4		
					29	0.876	-39474.5		
					30	0.872	-40040.7		
INTERNAL RATE OF RETURN = 10.3 % REMAINDER = -442.66406									

## INCOME STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 3 \*\*

	INCOME STATEMENT ( 1 )									
	1000 B&M									
	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
REVENUE	0.	0.	178183.	227056.	124330.	67400.	40267.	51302.	62337.	73372.
LAND SALES	0.	0.	178183.	227056.	122257.	47954.	0.	0.	0.	0.
LAND LEASED	0.	0.	0.	0.	2073.	4147.	4147.	4147.	4147.	4147.
FACTORY & COMMERCIAL RENTALS	0.	0.	0.	0.	0.	9786.	19572.	19572.	19572.	19572.
MAINTENANCE & SERVICE CHARGE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.
WATER SUPPLY & SEWAGE DISPOSAL	0.	0.	0.	0.	0.	5130.	15390.	25850.	35910.	46170.
COST	423.	943.	15727.	32750.	35460.	41259.	79375.	88337.	95359.	102480.
OPERATING COST	423.	423.	1751.	2619.	3466.	9316.	19248.	23257.	39266.	49275.
SALARIES & WAGES	235.	235.	706.	1177.	1648.	2120.	2359.	2355.	2355.	2355.
ADMINISTRATION	188.	188.	545.	942.	1318.	1696.	1884.	1884.	1884.	1884.
PROMOTION	0.	0.	500.	500.	500.	500.	0.	0.	0.	0.
REPAIR & MAINTENANCE	0.	0.	0.	0.	0.	383.	1158.	1933.	2708.	3483.
WATER & SEWAGE	0.	0.	0.	0.	0.	4617.	13851.	23085.	32319.	41553.
INTEREST	0.	520.	5519.	19547.	30102.	29597.	28582.	27535.	24548.	21660.
ON LONG TERM FOREIGN DEBT	0.	520.	2280.	9200.	18720.	24360.	27520.	27436.	24548.	21660.
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
ON SHORT TERM DEBT	0.	0.	3239.	10347.	11382.	5237.	1062.	99.	0.	0.
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.
COST OF LAND SOLD	0.	0.	8457.	10584.	5892.	2346.	0.	C.	0.	0.
INCOME BEFORE TAX	-423.	-943.	162556.	194306.	84870.	26141.	-39108.	-37035.	-37032.	-29108.
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	6860.	8742.	4707.	1846.	0.	0.	0.	0.
INCOME AFTER TAX	-423.	-943.	155595.	185564.	80163.	24295.	-39108.	-27035.	-33022.	-29108.
(LESS) DIVIDEND	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
INCOME AFTER TAX & DIVIDEND	-423.	-943.	155595.	185564.	80163.	24295.	-39108.	-27035.	-33022.	-29108.
CUMULATIVE	-423.	-1366.	154229.	399793.	419957.	444252.	405144.	368109.	335086.	309978.
PROFIT RATIO (BEFORE TAX) ‡	0.	0.	91.	86.	68.	39.	-97.	-72.	-53.	-40.
PROFIT RATIO (AFTER TAX) ‡	0.	0.	87.	82.	64.	36.	-97.	-72.	-53.	-40.
BREAK EVEN POINT	0.	0.	9.	14.	32.	58.	258.	243.	223.	204.

INCOME STATEMENT 1990 - 1994 (2)

\*\* CASE 3 - 3 \*\*

INCOME STATEMENT ( 2 ) 1000\_BAHT

	1990	1991	1992	1993	1994
REVENUE	78888.	78888.	78888.	78888.	78888.
LAND SALES	0.	0.	0.	0.	0.
LAND LEASED	4147.	4147.	4147.	4147.	4147.
FACTORY & COMMERCIAL RENTALS	19572.	19572.	19572.	19572.	19572.
MAINTENANCE & SERVICE CHARGE	3869.	3869.	3869.	3869.	3869.
WATER SUPPLY & SEWAGE DISPOSAL	51300.	51300.	51300.	51300.	51300.
COST	104595.	93392.	90504.	87616.	84728.
OPERATING COST	54278.	54278.	54278.	54278.	54278.
SALARIES & WAGES	2355.	2355.	2355.	2355.	2355.
ADMINISTRATION	1884.	1884.	1884.	1884.	1884.
PROMOTION	0.	0.	0.	0.	0.
REPAIR & MAINTENANCE	3869.	3869.	3869.	3869.	3869.
WATER & SEWAGE	46170.	46170.	46170.	46170.	46170.
INTEREST	18772.	15884.	12996.	10108.	7220.
ON LONG TERM FOREIGN DEBT	18772.	15884.	12996.	10108.	7220.
ON LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
ON SHORT TERM DEBT	0.	0.	0.	0.	0.
(LESS) ON DEPOSIT	0.	0.	0.	0.	0.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
COST OF LAND SOLO	0.	0.	0.	0.	0.
INCOME BEFORE TAX	-25707.	-14504.	-11616.	-8728.	-5840.
(LESS) COMMERCIAL & LOCAL TAX	0.	0.	0.	0.	0.
INCOME AFTER TAX	-25707.	-14504.	-11616.	-8728.	-5840.
(LESS) DIVIDEND	0.	0.	0.	0.	0.
INCOME AFTER TAX & DIVIDEND	-25707.	-14504.	-11616.	-8728.	-5840.
CUMULATIVE	280271.	265768.	254152.	245424.	235584.
PROFIT RATIO (BEFORE TAX) %	-33.	-18.	-15.	-11.	-7.
PROFIT RATIO (AFTER TAX) %	-33.	-18.	-15.	-11.	-7.
BREAK EVEN POINT	191.	151.	141.	131.	121.

## CASH FLOW STATEMENT 1980 - 1989 (1)

\*\* CASE 3 - 3 \*\*

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
CASH FLOW STATEMENT ( 1 ) 1000 BAHT										
SOURCES OF CASH	49577.	22057.	238241.	389734.	219845.	115789.	37954.	-4170.	-1477.	2437.
CASH GENERATED FROM OPERATION	-423.	-943.	164052.	196148.	86055.	26641.	-7563.	-5490.	-1477.	2437.
INCOME AFTER TAX & DIVIDEND	-423.	-943.	155595.	185564.	80163.	24295.	-39108.	-37035.	-38022.	-29108.
DEPRECIATION	0.	0.	0.	0.	0.	0.	31545.	31545.	31545.	31545.
LAND SOLD AT COST	0.	0.	8457.	10564.	5892.	2346.	0.	0.	0.	0.
FINANCIAL RESOURCES	50000.	23000.	31000.	142000.	96000.	45000.	34000.	0.	0.	0.
GOVERNMENT CONTRIBUTION	50000.	10000.	0.	0.	0.	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	13000.	31000.	142000.	96000.	45000.	34000.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
APPLICATIONS OF CASH	47426.	23723.	108427.	321946.	234508.	95412.	22257.	37420.	36100.	36100.
REPAYMENT OF LONG TERM DEBT	0.	0.	0.	0.	0.	0.	0.	36100.	36100.	36100.
FOREIGN DEBT	0.	0.	0.	0.	0.	0.	0.	36100.	36100.	36100.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	47426.	23723.	65238.	270360.	196718.	51264.	10740.	0.	0.	0.
LAND ACQUISITION	47426.	0.	0.	0.	0.	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	24726.	234825.	139271.	14730.	10740.	0.	0.	0.
BUILDING	0.	0.	0.	32445.	54158.	35685.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	23723.	10628.	3090.	3288.	849.	0.	0.	0.	0.
OTHERS	0.	0.	29884.	0.	0.	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	43188.	51586.	0.	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	37790.	44148.	11517.	1320.	0.	0.
CASH SURPLUS	2151.	-1666.	129814.	67788.	-14662.	20378.	15697.	-41590.	-37577.	-33663.
BEGINNING CASH BALANCE	0.	2151.	485.	130299.	198086.	183426.	203802.	219499.	177909.	140332.
ENDING CASH BALANCE	2151.	485.	130299.	198086.	183424.	203802.	219499.	177909.	140332.	106669.
DEBT-SERVICE COVERAGE	0.0	-0.81	31.97	11.48	4.02	1.96	0.74	0.35	0.38	0.42

CASH FLOW STATEMENT 1990 - 1994 (2)

\*\* CASE 3 - 3 \*\*

1000 BAFT

CASH FLOW STATEMENT ( 2 )

	1990	1991	1992	1993	1994
SOURCES OF CASH	5838.	8726.	11614.	14502.	17390.
CASH GENERATED FROM OPERATION	5838.	8726.	11614.	14502.	17390.
INCOME AFTER TAX & DIVIDEND	-25707.	-14504.	-11616.	-8728.	-5840.
DEPRECIATION	31545.	23230.	23230.	23230.	23230.
LAND SOLD AT COST	0.	0.	0.	0.	0.
FINANCIAL RESOURCES	0.	0.	0.	0.	0.
GOVERNMENT CONTRIBUTION	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT	0.	0.	0.	0.	0.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
DECREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
INCREASE IN OPERATING FUND	0.	0.	0.	0.	0.
PAYMENT BY OTHER STAGES	0.	0.	0.	0.	0.

APPLICATIONS OF CASH	36100.	36100.	36100.	36100.	36100.
REPAYMENT OF LONG TERM DEBT	36100.	36100.	36100.	36100.	36100.
FOREIGN DEBT	36100.	36100.	36100.	36100.	36100.
FOREIGN DEBT (*)	0.	0.	0.	0.	0.
INVESTMENT IN FIXED ASSET	0.	0.	0.	0.	0.
LAND ACQUISITION	0.	0.	0.	0.	0.
LAND DEVELOPMENT	0.	0.	0.	0.	0.
BUILDING	0.	0.	0.	0.	0.
ENGINEERING & ARCH. SERVICE	0.	0.	0.	0.	0.
OTHERS	0.	0.	0.	0.	0.
INCREASE IN MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
DECREASE IN OPERATING FUND	0.	0.	0.	0.	0.
CASH SURPLUS	-30262.	-27374.	-24486.	-21598.	-18710.
BEGINNING CASH BALANCE	106669.	76407.	49033.	24547.	2949.
ENDING CASH BALANCE	76407.	49033.	24547.	2949.	-15761.
DEBT-SERVICE COVERAGE	0.45	0.47	0.50	0.53	0.57

BALANCE SHEET 1980 - 1989 (1)

\*\* CASE 3 - 3 \*\*

BALANCE SHEET ( 1 ) 1000 BAHT

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
<b>ASSETS</b>										
CURRENT ASSETS	49577.	71634.	301418.	680568.	818941.	844088.	827463.	753008.	683886.	618678.
CASH & DEPOSITS	2151.	485.	173487.	292861.	240409.	216698.	220818.	177905.	140332.	106669.
MORTGAGE RECEIVABLE	2151.	485.	130299.	198086.	183424.	203802.	219499.	177905.	140332.	106669.
	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED ASSETS	47426.	71149.	127931.	387707.	578532.	627450.	606645.	575100.	543555.	512010.
LAND	47426.	47426.	72153.	306977.	446248.	460978.	471719.	471715.	471719.	471715.
BUILDING	0.	0.	0.	32445.	86605.	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	0.	23723.	34351.	37441.	40729.	41577.	41577.	41577.	41577.	41577.
OTHERS	0.	0.	29884.	29884.	29884.	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
(LESS) COST OF LAND SOLD	0.	0.	8457.	19041.	24933.	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>										
LIABILITIES	0.	13000.	87188.	280775.	338985.	339837.	362320.	324900.	288800.	252700.
CURRENT LIABILITIES	0.	0.	43188.	94775.	56985.	12837.	37420.	36100.	36100.	36100.
FOREIGN DEBT MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
FOREIGN DEBT (#) MATURING	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	43188.	94775.	56985.	12837.	1320.	0.	0.	0.
FIXED LIABILITIES	0.	13000.	44000.	186000.	282000.	327000.	324900.	288800.	252700.	216600.
LONG TERM FOREIGN DEBT	0.	13000.	44000.	186000.	282000.	327000.	324900.	288800.	252700.	216600.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
EQUITIES	49577.	58634.	214229.	399793.	479957.	504252.	465144.	428109.	395086.	365978.
GOVERNMENT CONTRIBUTION	50000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	-423.	-1366.	154229.	339793.	419957.	444252.	405144.	368109.	335086.	305978.
CURRENT RATIO †	0.	0.	402.	305.	422.	1688.	590.	453.	389.	295.
DEBT EQUITY RATIO ‡	0.	22.	41.	70.	71.	67.	78.	76.	73.	69.

## BALANCE SHEET 1990 - 1994 (2)

\*\* CASE 3 - 3 \*\*

BALANCE SHEET ( 2 ) 1000 BAHT

	1990	1991	1992	1993	1994
<b>ASSETS</b>	556871.	506267.	458552.	413724.	371784.
<b>CURRENT ASSETS</b>	76407.	49033.	24547.	2949.	-15761.
CASH & DEPOSITS	76407.	49033.	24547.	2949.	-15761.
MORTGAGE RECEIVABLE	0.	0.	0.	0.	0.
<b>FIXED ASSETS</b>	480464.	457235.	434005.	410775.	387546.
LAND	471719.	471719.	471719.	471719.	471719.
BUILDING	122289.	122289.	122289.	122289.	122289.
ENGINEERING & ARCH. SERVICE	41577.	41577.	41577.	41577.	41577.
OTHERS	29884.	29884.	29884.	29884.	29884.
(LESS) CUM. DEPRECIATION	157726.	180955.	204185.	227415.	250644.
(LESS) COST OF LAND SOLD	27279.	27279.	27279.	27279.	27279.
(LESS) TRANSFER TO OTHERS	0.	0.	0.	0.	0.
<b>LIABILITIES &amp; EQUITIES</b>	556871.	506268.	458552.	413724.	371784.
<b>LIABILITIES</b>	216600.	180500.	144400.	108300.	72200.
<b>CURRENT LIABILITIES</b>	36100.	36100.	36100.	36100.	0.
FOREIGN DEBT MATURING	36100.	36100.	36100.	36100.	0.
FOREIGN DEBT (*) MATURING	0.	0.	0.	0.	0.
SHORT TERM DEBT	0.	0.	0.	0.	0.
<b>FIXED LIABILITIES</b>	180500.	144400.	108300.	72200.	72200.
LONG TERM FOREIGN DEBT	180500.	144400.	108300.	72200.	72200.
LONG TERM FOREIGN DEBT (*)	0.	0.	0.	0.	0.
<b>EQUITIES</b>	340271.	325768.	314152.	305424.	299584.
GOVERNMENT CONTRIBUTION	60000.	60000.	60000.	60000.	60000.
RETAINED EARNINGS	280271.	265768.	254152.	245424.	239584.
<b>CURRENT RATIO</b> †	212.	136.	68.	8.	0.
<b>DEBT EQUITY RATIO</b> ‡	64.	55.	46.	35.	24.



DISCOUNTED CASH FLOW

\*\* CASE 3 - 3 \*\*

DISCOUNTED CASH FLOW									
YEAR	COST(I)	REVENUE(I)	OPExTAX(I)	BENEFIT(I)	DIS.RATIO(I)	R/C RATIO(I)	NET PV(I)		
1980	47426.5	0.0	423.0	-423.0	1	1.136	87575.8		
1981	23722.9	0.0	423.0	-423.0	2	1.114	72563.1		
1982	65238.3	178182.7	1751.0	169871.6	3	1.098	59333.8		
1983	270360.3	227055.7	2615.0	215695.1	4	1.081	47662.1		
1984	196718.1	124330.2	3466.0	116157.3	5	1.065	37354.1		
1985	51263.5	67400.3	9316.4	56237.7	6	1.051	28240.9		
1986	10740.1	40267.3	19248.3	21019.0	7	1.037	20175.7		
1987	0.0	51302.2	29257.2	22045.0	8	1.025	13032.2		
1988	0.0	62337.1	39266.1	23071.0	9	1.013	6699.9		
1989	0.0	73371.9	49275.0	24096.9	10	1.002	1081.1		
1990	0.0	78888.1	54278.1	24610.0	11	0.992	-3908.2		
1991	0.0	78888.1	54278.1	24610.0	12	0.982	-8341.2		
1992	0.0	78888.1	54278.1	24610.0	13	0.973	-12282.8		
1993	0.0	78888.1	54278.1	24610.0	14	0.965	-15789.8		
1994	0.0	78888.1	54278.1	24610.0	15	0.957	-18912.1		
					16	0.945	-21693.2		
					17	0.942	-24171.4		
					18	0.935	-26381.0		
					19	0.929	-28351.7		
					20	0.922	-30109.8		
					21	0.916	-31678.7		
					22	0.911	-33079.4		
					23	0.905	-34329.9		
					24	0.900	-35446.6		
					25	0.895	-36444.0		
					26	0.890	-37334.4		
					27	0.885	-38129.8		
					28	0.881	-38840.4		
					29	0.876	-39474.5		
					30	0.872	-40040.7		
INTERNAL RATE OF RETURN = 10.3 %			REMAINDER =	-442.66406					

ANNEX 11-1 ECONOMIC COST FOR SIE

Unit: 1000 Baht

	Construction Cost for SIE	Tax	Transportation Expense	Economic Cost for SIE	Economic Cost for Industrial Area	Economic Cost for Housing Area
1980	47,426	-	-	47,426	39,600	7,826
1981	23,723	Δ2,026	-	21,697	18,126	3,571
1982	65,238	Δ7,172	Δ332	57,734	48,232	9,502
1983	270,360	Δ28,930	Δ1,647	239,783	200,320	39,463
1984	196,718	Δ21,626	Δ1,151	173,941	145,314	28,627
1985	51,265	Δ5,439	Δ285	45,541	38,046	7,495
1986	10,740	Δ1,678	Δ67	8,995	7,588	1,407
Total	665,470	Δ66,871	Δ3,482	595,117	497,226	97,891

Note: 1. Tax = (Tax of Base Cost) x 1,336

2. Transportation Expense = (Material Cost of Base Cost)  
x 1,336 x 0.01

ANNEX 11-2 CONSTRUCTION COST FOR SIE FACTORIES

	Share of Industrial Area (%)	Employees (Number)	Investment per Employee (Baht 1,000/Employee)	Investment (Baht 1,000)
Textile & Apparel	30	5,080	128	650,000
Metal & Machinery	20	3,387	340	1,151,000
Foods	15	2,540	230	584,000
Chemical Products	10	1,693	380	643,000
Rubber	5	847	205	174,000
Wood & Furniture	5	847	205	174,000
Non-metal Products	7	1,185	131	155,000
Paper Products	3	508	205	104,000
Others	3	508	205	174,000
Total	100	16,930		3,805,000

Note: 1. Industrial area: 1,254 Rai

2. Employees per Rai: 13.5

3. Investment per employee: from BOI

## CALCULATING OF ECONOMIC INTERNAL RATE OF RETURN

## CALCULATIOC OF ECONOMIC INTERNAL RATE OF RETURN

( Unit: 1,000 Baht )

YEAR	COST(I)	BENEFIT(I)	DIS. RATIO(I)	R/C RATIO(I)	NET PV(I)
1980	40023.0	0.0			9024647.0
1981	18549.0	3534.0	1	3.552	7741393.0
1982	30488.0	45080.0	2	3.014	6642116.0
1983	712349.0	103200.0	3	3.096	5698446.0
1984	658190.0	100170.0	4	2.894	4886862.0
1985	556772.0	195170.0	5	2.708	4187488.0
1986	536246.0	372640.0	6	2.537	3583765.0
1987	283962.0	555900.0	7	2.379	3061742.0
1988	39266.0	778260.0	8	2.234	2609679.0
1989	54278.0	1000620.0	9	2.100	2217562.0
			10	1.977	
1990	54278.0	1111800.0	11	1.863	1876995.0
1991	54278.0	1111800.0	12	1.757	1580815.0
1992	54278.0	1111800.0	13	1.660	1322960.0
1993	54278.0	1111800.0	14	1.570	1098198.0
1994	54278.0	1111800.0	15	1.487	902083.0
1995	54278.0	1111800.0	16	1.410	730845.0
1996	54278.0	1111800.0	17	1.338	581276.0
1997	54278.0	1111800.0	18	1.272	450419.0
1998	54278.0	1111800.0	19	1.210	335995.0
1999	54278.0	1111800.0	20	1.153	235827.0
			21	1.099	148304.0
			22	1.050	71659.0
			23	1.003	4621.0
			24	0.960	-53984.0
			25	0.919	-105189.0
			26	0.882	-149869.0
			27	0.846	-188819.4
			28	0.813	-222712.8
			29	0.782	-252143.7
			30	0.752	-277645.1

INTERNAL RATE OF RETURN = 23.2

REMAINDER = -6140.03516





JICA