

*V. SURVEY RESULT OF WATER QUALITY
FOR CHANNEL AND GROUNDWATER*

DATA LAPANGAN SUNGAI DI DKI JAKARTA

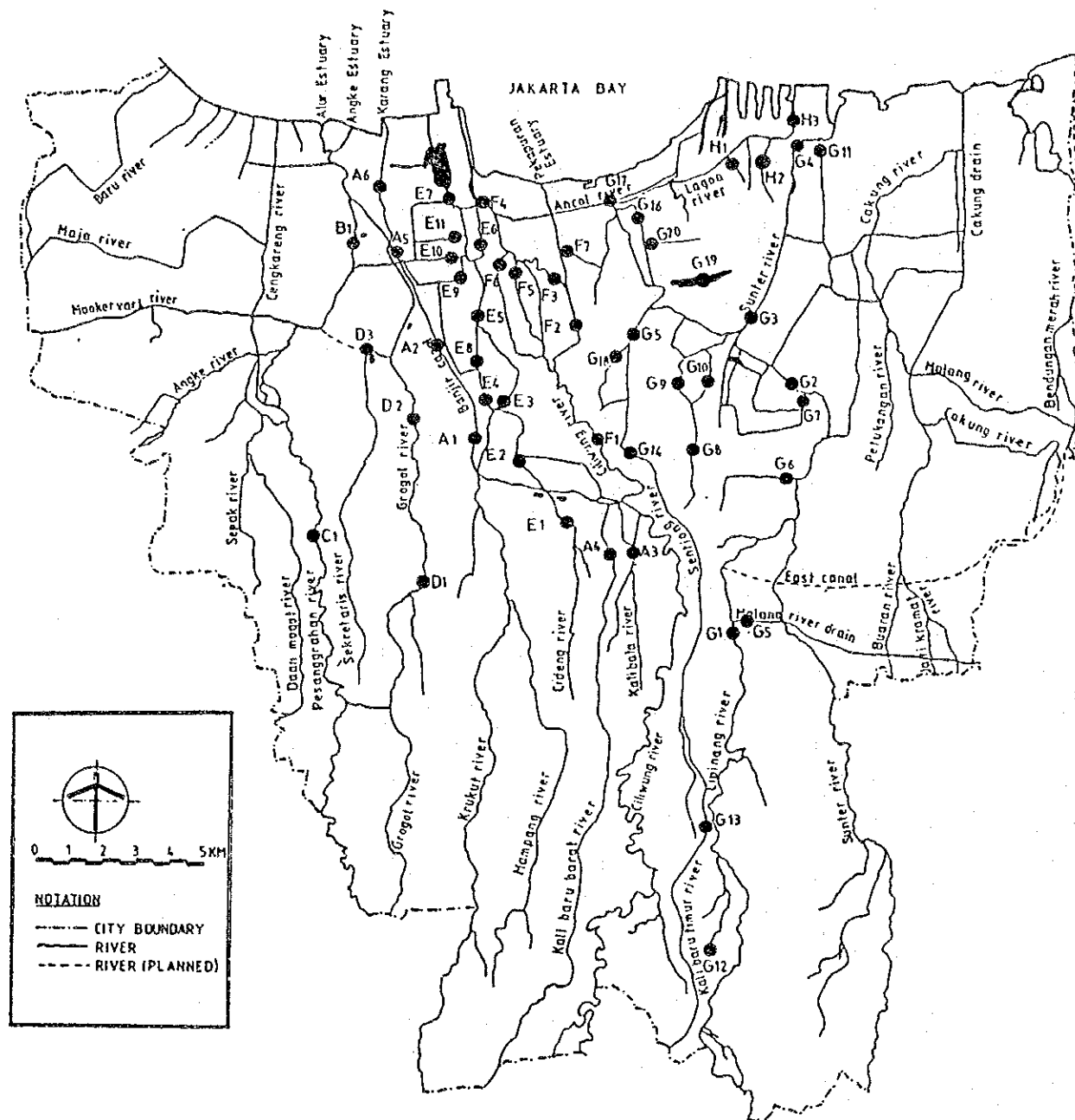


FIG. 1. -LOCATION OF RIVER WATER QUALITY OBSERVATION OF JICA

NO/KODE	LOKASI	TANGGAL/JAM	SUHU UDARA/CUACA
A1	JEMBATAN JL.K.S.TUBUN	16-10-89/10.25	30°C / CERAH
A2	JEMBATAN JL.KYAI TAPA	16-10-89/11.35	32°C / CERAH
A3	JEMBATAN JL.BERKAH I.TEBET	18-10-89/11.00	31°C / CERAH
A4	JEMBATAN PAL BATU	18-10-89/10.40	34°C / CERAH
A5	JEMBATAN TELUK BONG	17-10-89/11.05	36°C / CERAH
A6	JEMBATAN JL.RAYA PLUIT	19-10-89/09.45	36°C / CERAH
B1	JEMBATAN JL.TEGAL ALUR. KAPUK	17-10-89/12.05	36°C / CERAH
C1	JEMBATAN CIPULIR.LEMIGAS	17-10-89/13.30	36°C / CERAH
D1	JEMBATAN JL.SIMPRUK	17-10-89/15.00	36°C / CERAH
D2	JEMBATAN JL.NELLI MURNI	17-10-89/14.15	37°C / CERAH
D3	JEMBATAN GROGOL INN	17-10-89/12.50	37°C / CERAH
E1	JEMBATAN JL.KEBON OBAT	18-10-89/11.30	34°C / CERAH
E2	JEMBATAN JL.KEBON KACANG	16-10-89/09.40	36°C / CERAH
E3	JEMBATAN JL.KEBON SIRIH	16-10-89/10.35	35°C / CERAH
E4	JEMBATAN JL.JATI BARU	16-10-89/10.35	31°C / CERAH
E5	JEMBATAN JL.TANAH SAREAL	16-10-89/11.12	35°C / CERAH
E6	JEMBATAN JL.ASEMKA	19-10-89/11.15	32°C / CERAH
E7	JEMBATAN JL.PLUIT SELATAN	19-10-89/10.00	32°C / CERAH
E8	JEMBATAN JL.SURYOPRANOTO	16-10-89/11.00	31°C / CERAH
E9	JEMBATAN JL.K.H.MANSYUR	19-10-89/11.07	33°C / CERAH
E10	JEMBATAN JL.PETUKANGAN	19-10-89/10.55	32°C / CERAH
E11	JEMBATAN JL.BANDENGAN UTARA	19-10-89/10.35	32°C / CERAH
F1	JEMBATAN JL.RADEN SALEH	17-10-89/10.25	35°C / CERAH
F2	JEMBATAN JL.JEMBATAN TINGGI	17-10-89/10.20	30°C / CERAH
F3	JEMBATAN JL.RAYA MANGGA BESAR	17-10-89/11.05	32°C / CERAH
F4	JEMBATAN JL.PASAR IKAN	19-10-89/10.10	32°C / CERAH
F5	JEMBATAN JL.TANGKI MANGGA BESAR	17-10-89/11.45	34°C / CERAH
F6	JEMBATAN JL.BUMI RAYA	17-10-89/11.30	30°C / CERAH
F7	JEMBATAN JL.GUNUNG SAHARI	17-10-89/10.05	35°C / CERAH
G1	JEMBATAN JL.INSPEKSI	18-10-89/10.05	35°C / CERAH
G2	JEMBATAN JLKELAPA GADING	19-10-89/10.20	35°C / CERAH
G3	JEMBATAN JL.PERINTIS KEMERDEKA- AN.	16-10-89/10.15	35°C / CERAH
G4	JEMBATAN JL.CIKAJANG RAWABADAK	16-10-89/12.30	33°C / CERAH
G5	JEMBATAN JL.JEMBATAN SERONG	18-10-89/10.50	33°C / CERAH
G6	JEMBATAN JL.JATINEGARA KAUM	19-10-89/10.50	33°C / CERAH
G7	JEMBATAN JL.KAYU PUTIH UTARA	19-10-89/10.30	35°C / CERAH
G8	JEMBATAN JL.UTAN KAYU	19-10-89/11.30	35°C / CERAH
G9	JEMBATAN JL.CEMPAKA PUTIH TENG- AH.	19-10-89/09.40	33°C / CERAH
G10	JEMBATAN JL.CEMPAKA PUTIH	19-10-89/10.45	33°C / CERAH
G11	JEMBATAN JL.AMPERA	16-10-89/12.45	34°C / CERAH
G12	JEMBATAN JL.RAYA BOGOR	18-10-89/09.45	35°C / CERAH
G13	JEMBATAN PT.KIWI	18-10-89/09.45	33°C / CERAH
G14	JEMBATAN JL.SALEMBA TENGAH	19-10-89/09.30	35°C / CERAH
G15	JEMBATAN JL.BENDUNGAN JAGO	18-10-89/09.40	33°C / CERAH
G16	JEMBATAN JL.PODOMORO	18-10-89/10.15	34°C / CERAH
G17	JEMBATAN JL.RAYA ANCOL	18-10-89/10.35	35°C / CERAH
G18	JEMBATAN JL.JEMB.PASAR NAMBKA	18-10-89/09.30	33°C / CERAH
G19	JEMBATAN JL.SUNTER	18-10-89/09.50	34°C / CERAH
G20	JEMBATAN JL.DANAU SUNTER	18-10-89/10.00	34°C / CERAH
H1	JEMBATAN JL.WARAKAS.TJ.PRIOK	16-10-89/11.00	34°C / CERAH
H2	JEMBATAN JL.KEBON BAWANG	16-10-89/10.45	35°C / CERAH
H3	JEMBATAN JL.RAYA FLABUAN	16-10-89/11.30	36°C / CERAH

METODA ANALISA

NO	JENIS ANALISA	METODA/PERALATAN
1.	SUHU	LANGSUNG/THERMOMETER
2.	WARNA	APHA PLATINUM-COBALT STANDARD
3.	ZAT PADAT TERSUSPENSI	PHOTOMETRIC METHOD
4.	pH	pH METER
5.	DISOLVED OKSIGEN (DO)	AZIDE MODIFICATION WINKLER METHOD.
6.	BOD (20 °C, 5 HARI)	DILUTION METHOD
7.	COD (DICHROMAT)	DICHROMATE REFLUX METHOD
8.	CHLORIDA	MERCURIC NITRATE METHOD
9.	AMMONIA	NESSLER METHOD
10.	NITRAT	BRUCINE METHOD
11.	NITRIT	DIAZOTIZATION METHOD
12.	PHOSPHAT	ASCORBIC ACID METHOD
13.	CADMIUM	ATOMIC ABSORPTION SPECTROPHOTOMETER
14.	CHROMIUM	ATOMIC ABSORPTION SPECTROPHOTOMETER
15.	MERCURY	ATOMIC ABSORPTION SPECTROPHOTOMETER
16.	FECAL COLIFORM	MULTIPLE TUBE FERMENTATION TECHNIC

HASIL ANALISA SUNGAI

NO	PARAMETER	SATUAN	A1	A2	A3	A4	A5	A6	B1	C1	D1	D2	D3	E1
I.	<u>KIMIAWI:</u>													
1.	SUHU	°C	29.0	29.0	31.0	30.0	31.0	30.0	30.0	29.0	30.0	32.0	32.0	30.0
2.	WARNA	Pt-Co	70.0	40.0	90.0	22.0	97.0	120.0	90.0	96.0	55.0	105.0	125.0	72.0
3.	ZAT PADAT TERSUSPENSI	mg/L	530.0	480.0	140.0	23.0	20.0	22.0	20.0	40.0	40.0	120.0	30.0	40.0
4.	pH		6.80	6.74	6.77	6.82	7.17	7.49	7.06	6.94	6.90	6.57	7.20	6.80
5.	DISOLVED OKXYGEN (DO)	mg/L	0.30	0.0	0.0	0.0	0.0	0.0	0.5	2.2	0.0	0.0	0.0	0.0
6.	BOD (20°C, 5 HARI)	mg/L	30.0	28.0	105.0	40.0	86.0	130.0	27.0	14.0	34.0	89.0	75.0	165.0
7.	COD (BICHROMAT)	mg/L	39.79	45.28	176.99	57.62	102.90	246.96	49.39	28.81	59.72	172.87	102.90	189.34
8.	CHLORIDA	mg/L	15.0	20.0	100.0	15.0	405.0	2600.0	125.0	15.0	70.0	80.0	120.0	75.0
9.	AMMONIA	mg/L	1.22	1.56	17.91	1.63	22.42	15.46	26.83	0.43	20.76	22.34	19.34	16.38
10.	NITRAT	mg/L	0.54	0.18	0.32	0.24	*	1.12	*	2.42	*	*	*	*
11.	NITRIT	mg/L	0.054	0.045	0.078	0.023	0.012	0.030	0.010	0.036	0.019	0.019	0.007	0.035
12.	PHOSPHAT	mg/L	0.081	0.110	4.788	0.114	4.998	4.124	0.353	0.105	3.933	4.839	4.267	7.577
13.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
14.	CHROMIUM	mg/L	*	0.05	0.07	*	*	0.06	0.05	*	*	*	*	*
15.	MERCURY	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
II.	<u>MIKROBIOLOGI</u>													
1.	FECAL COLIFORM	/100 CC	5 150.10	6 9.10	5 110.10	5 240.10	5 75.10	5 240.10	5 43.10	3 240.10	5 240.10	6 75.10	6 13.10	5 240.10

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUNGAI

NO	PARAMETER	SATUAN	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	F1	F2
I.	<u>KIMIAWI:</u>													
1.	SUHU	°C	30.0	32.0	29.0	30.0	30.0	29.0	29.0	30.0	30.0	30.0	30.0	29.0
2.	WARNA	Pt-Co	60.0	48.0	45.0	47.0	38.0	50.0	21.0	168.0	130.0	93.0	22.0	36.0
3.	ZAT PADAT TERSUSPENSI	mg/L	50.0	130.0	22.0	16.0	20.0	30.0	10.0	90.0	500.0	24.0	50.0	20.0
4.	pH		6.90	6.96	6.90	6.93	7.22	7.28	6.65	7.35	7.68	6.73	6.88	6.89
5.	DISOLVED OXYGEN (DO)	mg/L	0.0	0.0	0.0	0.0	1.5	0.80	1.0	0.0	0.0	0.0	0.2	0.9
6.	BOD (20°C, 5 HARI)	mg/L	112.0	66.0	114.0	22.0	44.0	10.0	17.5	180.0	140.0	136.0	10.20	12.50
7.	COD (BICROMAT)	mg/L	173.70	74.91	156.41	35.89	66.99	11.17	36.69	236.89	315.05	232.10	17.55	18.35
8.	CHLORIDA	mg/L	65.0	25.0	37.5	52.5	50.0	100.0	25.0	520.0	600.0	170.0	15.0	15.0
9.	AMMONIA	mg/L	23.0	11.47	12.79	16.43	6.43	9.46	4.65	46.25	34.45	30.87	1.52	1.85
10.	NITRAT	mg/L	0.22	0.37	0.17	0.10	1.34	0.26	0.25	0.25	0.14	0.25	0.48	*
11.	NITRIT	mg/L	0.016	0.004	0.010	0.017	0.009	0.003	0.006	0.033	0.016	0.029	0.058	0.107
12.	PHOSPHAT	mg/L	4.597	0.810	2.702	3.032	1.399	0.648	0.667	6.655	5.245	3.755	0.129	0.279
13.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
14.	CHROMIUM	mg/L	0.05	*	0.09	*	*	*	*	0.09	0.05	0.05	*	*
15.	MERCURY	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
II.	<u>MIKROBIOLOGI</u>													
1.	FECAL COLIFORM	/100 CC	⁵ 240.10	⁶ 93.10	⁵ 460.10	⁶ 240.10	⁴ 240.10	⁵ 93.10	⁴ 1100.10	⁶ 240.10	⁶ 240.10	⁷ 1100.10	⁵ 23.10	⁴ 460.10

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUNGAI

NO	PARAMETER	SATUAN	F3	F4	F5	F6	F7	G1	G2	G3	G4	G5	G6	G7
I.	KIMIAWI:													
1.	SUHU	°C	30.0	29.0	30.0	29.0	30.0	30.0	30.5	30.0	31.0	32.0	32.0	31.5
2.	WARNA	Pt-Co	31.0	28.0	32.0	53.0	78.0	56.0	50.0	76.0	50.0	55.0	125.0	137.0
3.	ZAT PADAT TERSUSPENSI	mg/L	40.0	50.0	20.0	80.0	30.0	10.0	38.0	120.0	10.0	16.0	45.0	63.0
4.	pH		6.92	7.09	6.78	6.11	6.66	7.37	7.11	7.17	6.65	7.20	6.50	7.40
5.	DISOLVED OKXYGEN (DO)	mg/L	0.30	0.0	0.0	1.1	1.05	0.0	0.0	0.0	0.0	5.4	0.0	0.0
6.	BOD (20°C, 5 HARI)	mg/L	13.0	12.0	10.70	26.60	9.60	48.0	24.60	27.80	11.70	17.5	63.50	97.10
7.	COD (BICHROMAT)	mg/L	24.73	24.73	19.14	35.89	13.56	76.57	44.77	36.69	19.14	20.74	172.28	172.28
8.	CHLORIDA	mg/L	30.0	100.0	65.0	15.0	550.0	45.0	30.0	25.0	4650.0	20.0	120.0	100.0
9.	AMMONIA	mg/L	2.45	2.60	6.54	1.01	1.75	11.28	4.67	2.67	4.66	0.29	22.24	13.98
10.	NITRAT	mg/L	0.82	0.77	*	0.09	*	*	0.19	0.23	0.21	0.45	0.16	0.14
11.	NITRIT	mg/L	0.008	0.028	0.006	0.028	0.004	0.011	0.003	0.004	0.006	*	0.025	0.021
12.	PHOSPHAT	mg/L	0.276	0.284	5.181	0.092	0.254	1.768	0.578	0.499	0.993	0.099	5.065	5.603
13.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
14.	CHROMIUM	mg/L	*	*	*	0.05	*	*	*	*	*	*	*	*
15.	MERCURY	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
II.	MIKROBIOLOGI													
1.	FECAL COLIFORM	/100 CC	460.10 ⁴	150.10 ⁵	1100.10 ⁵	43.10 ⁴	460.10 ⁵	93.10 ⁵	20.10 ⁵	240.10 ⁴	150.10 ⁴	43.10 ³	1100.10 ⁸	240.10 ⁷

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUNGAI

NO	PARAMETER	SATUAN	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19
I.	<u>KIMIAWI:</u>													
1.	SUHU	°C	32.0	29.8	30.5	31.0	30.0	31.0	28.9	30.0	31.0	32.0	30.0	32.0
2.	WARNA	Pt-Co	158.0	97.0	78.0	22.0	82.0	49.0	79.0	15.0	17.0	13.0	14.0	115.0
3.	ZAT PADAT TERSUSPENSI	mg/L	380.0	90.0	63.0	38.0	20.0	400.0	40.0	20.0	10.0	5.0	38.0	40.0
4.	pH		6.90	7.35	6.80	6.80	7.20	5.60	7.10	7.45	6.95	7.48	7.60	7.85
5.	DISOLVED OKXYGEN (DO)	mg/L	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	1.5	4.5	0.0	2.6
6.	BOD (20°C,5 HARI)	mg/L	168.0	50.5	24.0	160.0	76.0	167.0	65.0	72.0	125.0	255.0	70.40	80.0
7.	COD (BICHRMAT)	mg/L	342.97	108.47	31.11	387.63	164.31	236.09	148.35	127.40	278.32	321.44	112.90	109.76
8.	CHLORIDA	mg/L	110.0	40.0	100.0	5200.0	30.0	10.0	90.0	305.0	13100.0	10200.0	135.0	385.0
9.	AMMONIA	mg/L	37.07	23.68	9.50	2.85	2.90	0.48	14.75	27.09	1.79	3.02	30.23	8.18
10.	NITRAT	mg/L	0.13	0.09	0.18	0.23	*	*	0.44	*	0.23	0.28	0.09	0.39
11.	NITRIT	mg/L	0.017	0.026	0.012	0.004	0.025	0.041	0.013	0.035	0.005	0.023	0.046	0.024
12.	PHOSPHAT	mg/L	5.900	4.210	0.835	0.493	0.493	3.378	5.303	5.483	2.503	0.497	6.715	0.176
13.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
14.	CHROMIUM	mg/L	0.07	0.06	*	0.05	0.05	0.06	*	*	*	0.08	0.05	*
15.	MERCURY	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
II.	<u>MIKROBIOLOGI</u>													
1.	FECAL COLIFORM	/100 CC	150.10 ⁸	460.10 ⁶	460.10 ⁶	460.10 ⁴	240.10 ⁵	240.10 ⁵	460.10 ⁶	150.10 ⁷	240.10 ⁴	23.10 ³	1100.10 ⁵	43.10 ⁴

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUNGAI

NO	PARAMETER	SATUAN	B20	H1	H2	H3
I.	<u>KIMIAWI:</u>					
1.	SUHU	°C	30.0	30.0	29.0	32.0
2.	WARNA	Pt-Co	73.0	95.0	71.0	38.0
3.	ZAT PADAT TERSUSPENSI	mg/L	60.0	16.0	20.0	10.0
4.	pH		7.26	7.67	7.29	7.40
5.	DISOLVED OKXYGEN (DO)	mg/L	0.0	0.0	0.0	0.0
6.	BOD (20°C, 5 HARI)	mg/L	250.0	75.0	78.40	145.0
7.	COD (BICHRMAT)	mg/L	534.69	113.68	174.05	230.50
8.	CHLORIDA	mg/L	5900.0	250.0	250.0	9600.0
9.	AMMONIA	mg/L	19.81	26.78	24.85	0.68
10.	NITRAT	mg/L	0.17	0.16	0.15	0.25
11.	NITRIT	mg/L	0.030	0.019	0.067	0.047
12.	PHOSPHAT	mg/L	0.147	8.129	7.716	4.426
13.	CADMIUM	mg/L	*	*	*	*
14.	CHROMIUM	mg/L	0.09	0.05	0.05	0.06
15.	MERCURY	mg/L	*	*	*	*
II.	<u>MIKROBIOLOGI</u>					
1.	FECAL COLIFORM	/100 CC	460.10 ⁴	43.10 ⁶	240.10 ⁵	43.10 ³

KETERANGAN : *) : TIDAK TERDETEKSI.

DATA SUMUR DI DKI JAKARTA

NO/KODE	NAMA PEMILIK	ALAMAT	KELURAHAN	TANGGAL/JAM PENAMATAN SUMUR	SUHU UDARA/CUACA LOKASI SUMUR	TINGGI MUKA AIR/DIAMETER SUMUR
S1	H.SUPARNO	JL.WARUNG SILA RT05/RW07 NO.11	CIGANJUR	25-10-89/11.45	30° C / CERAH	5.90 m / 0.75 m
S2	ASHAT	RT 01/ RW 07	JAGAKARSA	25-20-89/12.00	32° C / CERAH	8.70 m / 0.77 m
S3	IBU NONI	RT 10/RW 08. NO.15	PEJATEN BARAT	25-20-89/09.30	30° C / CERAH	2.35 m / 0.75 m
S4	PAKRODJI	JL.ASEM DUA NO.14	CIPETE SELATAN	26-10-89/09.40	30° C / CERAH	7.40 m / 0.95 m
S5	SALIM	JL.BINTARO PERMAI 11/25 RT.05/RW.10	BINTARO	26-10-89/11.00	28° C / MENDUNG	10.70 m / 0.84 m
S6	DUL JAMIL	RT.10/RW.10	MENTANG DALAM	27-10-89/10.00	28,1° C / HUJAN	2.20 m / 0.90 m
S7	IBU ZAENAH	JL.BAKRUMHUDA 41.RT.02/09	SENAYAN	27-10-89/10.00	28° C / HUJAN	8.50 m / 0.60 m
S8	SABENI	JL.H.AMSOR NO.1.RT.07/09	CIPULIR	26-10-89/11.20	30° C / MENDUNG	9.52 m / 0.75 m
S9	IBU NURROH	PEKEMBANGAN TIMUR RT09/01	GELORA	24-10-89/14.30	32° C / CERAH	5.70 m / 0.80 m
S10	TAHID	JL.CEMPAKA PUTIH UTARA IIA.	HARAPAN MULYA	27-10-89/09.30	30° C / CERAH	SUMUR POMPA (12 m)
S11	SUTARDJO	PASAR BARU TIMUR DALAM NO.1 RT.10/ RW 04	PASAR BARU	24-10-89/12.55	32° C / CERAH	2.53 m / 0.80 m
S12	DAHLAN	RT 011/RW.07.NO.54	DURI KEPA	26-10-89/11.30	32° C / CERAH	10.5 m / 0.65 m
S13	HASAN	RT.002/RW.04. NO.13	KEDDYA	24-10-89/12.15	32° C / CERAH	2.60 m / 0.70 m
S14	SUDARSONO	RT.015/RW.05. NO.15	JELAMBAR	23-10-89/12.15	33° C / CERAH	2.80 m / 0.90 m
S15	SAMAN	RT 08/RW 10	CENSKARENG	24-10-89/11.00	33° C / CERAH	2.30 m / 0.70 m
S16	IBU SIROH	JL.KALIDERES	KALIDERES	24-10-89/10.30	30° C / CERAH	8.50 m / 0.70 m
S17	NIRIN	RT 11/RW04	KAMAL MUARA	23-10-89/10.45	33° C / CERAH	3.37 m / 0.70 m
S18	SUMUR UMUM	KEBON SAYUR, RT01/RW10	KAPUK	26-10-89/09/10	34° C / CERAH	2.90 m / 0.60 m
S19	IBU MERRO	RT 03/RW 07. NO.13C	SUNTER JAYA	27-10-89/10.10	29° C / HUJAN	SUMUR POMPA (15 m)
S20	HERMAHAN	JL.RAWA BADAK BARAT NO.33	RAWA BADAK	23-10-89/11.30	34° C / CERAH	0.13 m / 0.62 m
S21	BURHAN	MARUNDA PULO RT.01/RW 01	MARUNDA	23-10-89/12.40	34,5° C / CERAH	SUMUR POMPA (84 m)
S22	ABDUL PAKIH	JL.CACING RT 17/RW 04	CAKUNG BARAT	26-10-89/14.15	33° C / CERAH	9.55 m / 0.65 m
S23	NAZARUDDIN	JL.PEMUDA RT 05/RW 02	RAWANANGUN	25-10-89/10.45	32° C / CERAH	1.45 m / 1.0 m
S24	KADAR	KEBON KELAPA RT 01/RW 09	UTAN KAYU SELATAN	25-10-89/10.00	32° C / CERAH	4.90 m / 1.0 m
S25	H.AMMI	RT 13/RW 08	MALAKA	27-10-89/11.25	30° C / MENDUNG	10.22 m / 0.75 m
S26	ENTONG	RT 02/RW 08. NO.24	HALIM PERDANA KUSUMA	26-10-89/13.45	30° C / MENDUNG	4.91 m / 0.80 m
S27	ABDUL AZIS	RT 05/RW 09 . NO.18	LUBANG BUAYA	23-10-89/10.13	31° C / CERAH	1.40 m / 0.80 m
S28	HANI	RT 07/RW 03	BEDONG	23-10-89/13.05	31° C / CERAH	11.0 m / 0.60 m
S29	IBU HANI	RT 03/RW 02. NO.7	CIPAYUNG	23-10-89/11.10	31° C / CERAH	10.0 m / 0.80 m
S30	IBU YANTI	RT 10/RW 01. NO.17	PEKAYON	23-10-89/11.50	31° C / CERAH	9.10 m / 0.70 m

KETERANGAN : S1 - S30 : HANYA PENGUKURAN MUKA AIR DAN DIAMETER SUMUR

HASIL ANALISA SUMUR

NO	PARAMETER	SATUAN	K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
I.	<u>KIMIAWI:</u>													
1.	SUHU	°C	28.0	27.0	27.2	27.0	28.0	29.4	29.0	28.0	29.0	29.0	29.0	28.0
2.	WARNA	Pt-Co	30.0	7.0	25.0	30.0	30.0	5.0	10.0	20.0	15.0	50.0	75.0	20.0
3.	ZAT PADAT TERSUSPENSI	mg/L	37.0	40.0	18.0	40.0	37.0	20.0	45.0	20.0	10.0	20.0	40.0	30.0
4.	pH		5.89	5.20	5.61	6.96	5.95	7.07	6.70	7.42	7.61	7.55	6.50	5.33
5.	DISOLVED OKXYGEN (DO)	mg/L	4.0	4.2	2.1	5.3	3.6	6.4	2.5	4.0	2.5	2.5	2.15	2.1
6.	BOD (20°C, 5 HARI)	mg/L	10.30	6.3	8.0	12.0	10.5	8.5	11.6	6.4	6.4	6.0	3.1	2.4
7.	COD (BICROMAT)	mg/L	25.87	16.46	18.03	42.34	29.01	14.73	22.48	16.28	15.50	16.28	10.85	7.75
8.	CHLORIDA	mg/L	5.0	45.0	15.0	40.0	75.0	25.0	27.5	55.0	380.0	115.0	70.0	20.0
9.	AMMONIA	mg/L	*	0.05	1.69	0.06	*	*	1.50	*	*	1.66	0.03	*
10.	NITRAT	mg/L	5.42	4.96	6.36	4.80	1.81	4.27	5.43	6.54	0.11	4.45	6.55	7.26
11.	NITRIT	mg/L	0.005	0.004	0.012	0.013	0.030	0.003	0.175	0.033	*	0.149	0.022	0.007
12.	PHOSPHAT	mg/L	0.003	0.003	0.047	0.170	0.505	0.194	0.019	3.075	0.210	0.613	0.059	0.008
13.	FLOURIDA	mg/L	0.09	*	*	0.10	*	*	0.08	0.64	0.60	*	*	*
14.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
15.	CHROMIUM	mg/L	*	*	*	*	*	0.05	*	*	*	*	*	*
16.	MERCURY	mg/L	0.0026	0.0012	0.0021	0.0033	*	*	*	*	*	*	*	*
II.	<u>MIKROBIOLOGI:</u>													
1.	FECAL COLIFORM	/100CC	240	23.10	23.10	7.10 ³	75.10 ²	3	460.10 ³	5.10	5	460	150	43.10

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUMUR

NO	PARAMETER	SATUAN	K13	K14	K15	K16	K17	K18	K19	K20	K21	K22	K23	K24
I.	<u>KIMIAWI:</u>													
1.	SUHU	°C	27.8	28.5	28.5	29.0	29.0	29.0	28.5	29.0	30.0	29.0	29.0	27.8
2.	WARNA	Pt-Co	18.0	35.0	25.0	32.0	39.0	43.0	150.0	71.0	55.0	71.0	98.0	190.0
3.	ZAT PADAT TERSUSPENSI	mg/L	10.0	30.0	70.0	65.0	70.0	60.0	70.0	50.0	120.0	120.0	60.0	220.0
4.	pH		7.09	7.20	3.80	7.15	6.80	7.45	7.09	7.50	7.82	7.30	7.39	7.39
5.	DISOLVED OKXYGEN (DO)	mg/L	3.6	1.8	4.0	1.3	2.8	0.85	4.5	6.0	2.3	1.9	2.0	3.3
6.	BOD (20°C,5 HARI)	mg/L	1.20	4.0	5.10	15.0	6.30	25.10	26.20	3.20	62.0	6.0	5.0	3.0
7.	COD (BICROMAT)	mg/L	3.88	9.30	11.63	29.46	14.73	50.39	54.34	6.20	175.19	21.71	16.30	7.75
8.	CHLORIDA	mg/L	120.0	135.0	50.0	40.0	190.0	850.0	900.0	2.5	4150.0	1050.0	287.5	32.5
9.	AMMONIA	mg/L	0.25	1.72	0.17	5.60	1.13	10.74	0.22	0.12	3.32	1.62	0.12	0.09
10.	NITRAT	mg/L	0.53	2.36	6.10	0.54	0.34	0.50	2.26	0.31	0.36	1.64	3.87	6.81
11.	NITRIT	mg/L	0.014	0.045	0.006	0.022	0.017	0.021	0.009	0.009	0.024	0.028	0.009	0.036
12.	PHOSPHAT	mg/L	0.228	0.017	0.010	0.337	0.949	0.780	0.031	0.197	0.045	0.020	0.234	0.052
13.	FLOURIDA	mg/L	*	0.69	0.10	*	0.15	0.48	0.22	0.33	0.70	0.59	0.45	0.05
14.	CADMIUM	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
15.	CHROMIUM	mg/L	*	*	0.05	*	*	*	*	*	*	*	*	*
16.	MERCURY	mg/L	*	*	*	*	*	*	*	*	*	*	*	*
II.	<u>MIKROBIOLOGI:</u>													
1.	FECAL COLIFORM	/100CC	150	150.10	43.10	460.10	43.10 ²	460.10 ³	150	75.10	240.10 ²	23.10 ²	240	23.10 ²

KETERANGAN : *) : TIDAK TERDETEKSI.

HASIL ANALISA SUMUR

NO	PARAMETER	SATUAN	K25	K26	K27	K28	K29	K30		
I.	KIMIAWI:									
1.	SUHU	°C	29.0	26.8	29.0	28.0	28.0	30.0		
2.	WARNA	Pt-Co	34.0	30.0	32.0	47.0	19.0	30.0		
3.	ZAT PADAT TERSUSPENSI	mg/L	30.0	40.0	32.0	47.0	30.0	30.0		
4.	pH		6.28	6.20	6.75	6.70	6.96	7.14		
5.	DISOLVED OKXYGEN (DO)	mg/L	2.10	2.65	1.70	2.40	4.45	3.55		
6.	BOD (20°C,5 HARI)	mg/L	4.0	20.60	17.0	7.40	7.0	7.5		
7.	COD (BICROMAT)	mg/L	9.30	48.06	34.88	13.18	26.36	22.48		
8.	CHLORIDA	mg/L	25.0	15.0	2.5	97.5	25.0	72.5		
9.	AMMONIA	mg/L	0.27	*	0.17	0.23	0.16	*		
10.	NITRAT	mg/L	8.05	3.33	0.86	7.86	1.64	6.90		
11.	NITRIT	mg/L	0.032	0.005	0.003	0.010	0.006	0.009		
12.	PHOSPHAT	mg/L	0.051	0.011	0.006	0.015	0.110	0.029		
13.	FLOURIDA	mg/L	0.11	0.09	*	0.83	0.08	0.09		
14.	CADMIUM	mg/L	*	*	*	*	*	*		
15.	CHROMIUM	mg/L	*	*	*	*	*	*		
16.	MERCURY	mg/L	*	*	*	*	*	*		
II.	MIKROBIOLOGI:									
1.	FECAL COLIFORM	/100CC	23	240	93.10	43.10	43.10	23.10		

KETERANGAN : *) : TIDAK TERDETEKSI.

*VI. SURVEY RESULT OF MARINE WATER
AND SEDIMENT QUALITY
IN JAKARTA BAY*

1. Introduction

Sea water and sediments samples have been collected from 20 different places along the sea shore of Jakarta bay.

2. Parameters used for laboratory analysis

The following parameters have been used for laboratory analysis :

a. Sea water samples (at 0.5 m depth and intermediate depth)

- water temperature
- colour
- transparency
- electric conductivity
- pH
- DO

- Cl
- NH₄-N
- NO₂-N
- NO₃-N
- K-N
- T-P
- Cd
- Cr
- Cu
- Hg
- Pb

b. Seabed sediment

- IL (ignition Loss)
- Cd
- Cr
- Cu
- Hg
- Pb

3. Survey location

Location of those 20 sampling points which have been collected is presented in the attached Fig.1, where it shows that the nearest distance of the sample location from survey station at Muara Baru is shown at point CB which is approximately 2 km away, whereas the farthest distance is shown at point E1 which is approximately 30 km away.

4. Sample collection

Sea water samples collected are taken from 2 levels, 20 samples have been taken from the surface level which is approximately 0.5 m deep, and another 20 samples have been taken from the intermediate level. Whereas for seabed sediments have been taken 10 samples. Fig.1 shows the location where those samples have been taken.

5. The method in determining the depth of the sea and samples locations.

Echo sounder have been used to measure the depth of the sea. This equipment is already fixed into the boat used by the Institute of Oceanography during the survey.

To determine the coordinate location of the samples taken during the survey, a compass have been used to make reference angles tied into 2 different natural landmarks or object available on the area such as island etc.

The procedures to plot those reference is shown in *Table 1*.

. Analysis method

Method used for the laboratory analysis is shown in *Table 2*.

. Result of Laboratory analysis

Result of the laboratory analysis conducted by the Institute of Oceanography with reference to the above parameters is shown in *Table 3 - 8*.

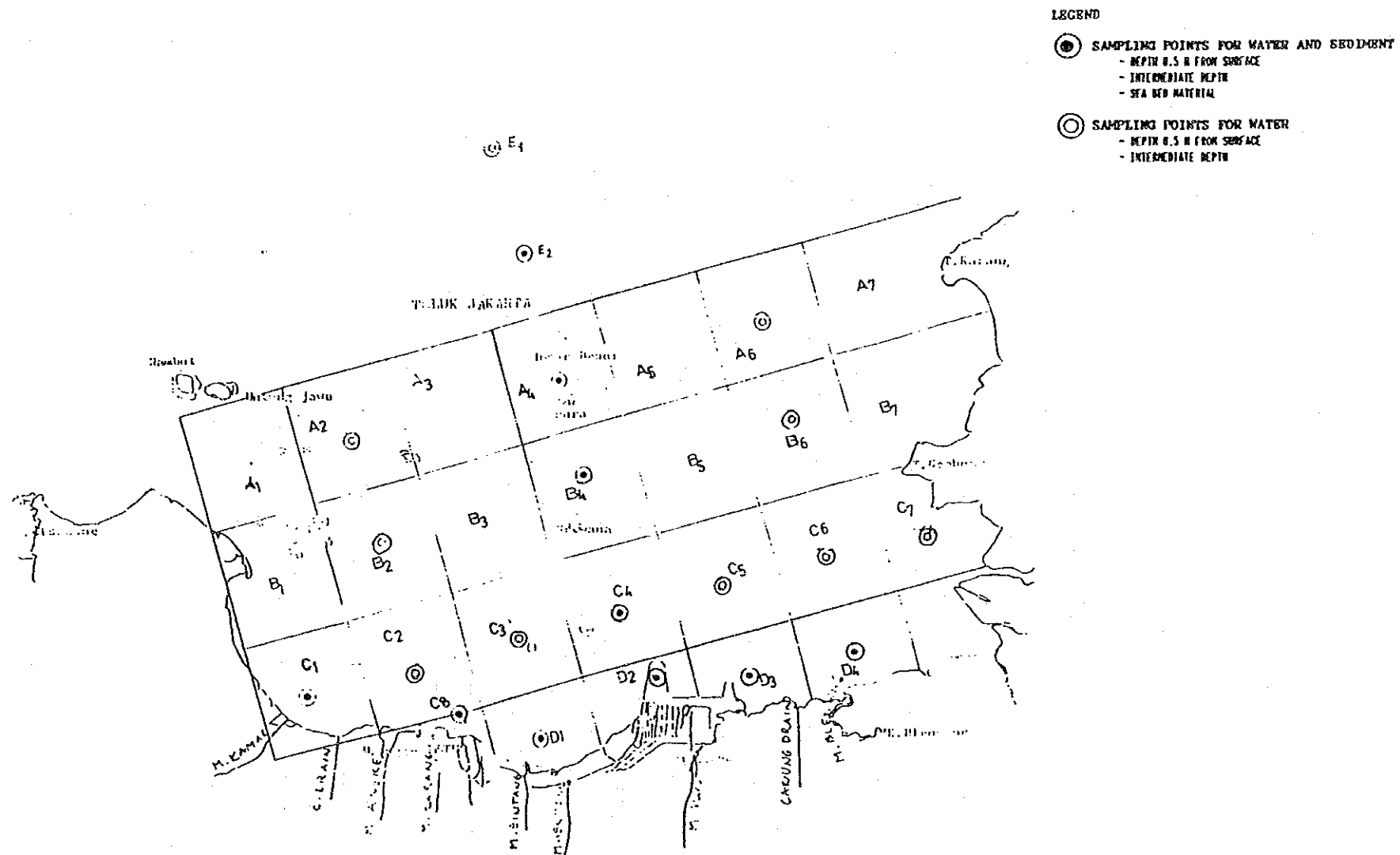


FIGURE | SAMPLING POINT

METHOD TO DETERMINE THE ACTUAL LOCATION OF SAMPLING POINT

Method in determining actual location in the sea based on the map as follow :

1. Bearing two objects or landmarks which are available and have been shown on the map.
The point was made based on the crossing of those two lines which is represent the location point.
2. The location point is also measured based on the speed of the ship and the echo sounder.

The followings are the bearing data used to determine location points :

- | | | | | |
|-----|----|--------------------------------------|---|---------------------------------------|
| 1. | A2 | P.Ayer Besar 112° | - | P.Kelor 199° |
| 2. | A4 | P.Wanara 178° | - | P.Ayer Besar 244° |
| 3. | A6 | P.Nirwana 227° | - | P.Damar Besar 268° |
| 4. | B2 | P.Kelor 290° | - | P.Ayer Besar 20° |
| 5. | B4 | P.Nirwana 202° | - | P.Talak 232° |
| 6. | B6 | P.Nirwana 250° | - | P.Damar Besar 295° |
| 7. | C1 | P.Ayer Besar 26° | - | Pelampung P.L.T.U.M. 76° |
| 8. | C2 | Pelampung P.L.T.U.M. 90° | - | P.Ayer Besar 360° |
| 9. | C3 | Pelampung P.L.T.U.M. 252° | - | Lampu Karang, Tenggara 193° |
| 10. | C4 | Lampu.Hijau.Pintu Pel.Tg. Priok 148° | - | Lampu.Karantina Pl.Sk. 230° |
| 11. | C5 | P.Nirwana 298° | - | Lampu.Hijau.Pintu Pel. Tg. Priok 208° |
| 12. | C6 | P.Damar Besar 310° | - | P.Nirwana 275° |
| 13. | C7 | Tanjung. Gembong 10° | - | P.Damar Besar 300° |
| 14. | C8 | Pelampung P.L.T.U.M. 320° | - | Lampu. Karang, Tenggara 15° |
| 15. | D1 | Pel.Marina 180° | - | Lampu.Karantina Pel. Sk. 275° |
| 16. | D2 | Lampu.Hijau.Pintu Pel.Tg.Priok 305° | - | Lampu.Merah.Pintu Pel.Tg.Priok 343° |
| 17. | D3 | Bogasari 180° | - | Syahbandar Pel.Tg. Priok 230° |
| 18. | D4 | Tg. Gembong 25° | - | P.Damar Besar 318° |
| 19. | E1 | P.Damar Besar 163° | - | P.Utung Jawa 240° |
| 20. | E2 | P.Damar Besar 158° | - | P.Utung Jawa 253° |

Table 1. Sampling Points Coornidates/

Koordinat titik sampling untuk pengambilan sampel air laut dan sampel sediment.

Sampling Points	Longitude	Latitude
1. A ₂	106° - 45' - 25" E	5° - 59' - 36" S
2. A ₄	106° - 50' - 45" E	5° - 58' - 18" S
3. A ₆	106° - 55' - 20" E	5° - 57' - 12" S
4. B ₂	106° - 46' - 05" E	6° - 02' - 00" S
5. B ₄	106° - 51' - 15" E	6° - 01' - 00" S
6. B ₆	106° - 55' - 55" E	5° - 59' - 54" S
7. C ₁	106° - 44' - 25" E	6° - 05' - 06" S
8. C ₂	106° - 46' - 45" E	6° - 04' - 18" S
9. C ₃	106° - 48' - 55" E	6° - 03' - 12" S
10. C ₄	106° - 51' - 50" E	6° - 03' - 24" S
11. C ₅	106° - 53' - 35" E	6° - 03' - 12" S
12. C ₆	106° - 56' - 30" E	6° - 02' - 18" S
13. C ₇	106° - 58' - 30" E	6° - 02' - 00" S
14. C ₈	106° - 47' - 40" E	6° - 05' - 45" S
15. D ₁	106° - 49' - 35" E	6° - 06' - 24" S
16. D ₂	106° - 53' - 00" E	6° - 05' - 06" S
17. D ₃	106° - 54' - 30" E	6° - 05' - 06" S
18. D ₄	106° - 57' - 00" E	6° - 04' - 42" S
19. E ₁	106° - 49' - 30" E	5° - 54' - 18" S
20. E ₂	106° - 50' - 00" E	5° - 56' - 06" S

Table 2. ANALYSIS METHOD

No.	Parameter	Unit	Analysis Method	Equipment
Phisic :				
1.	Color	Color unit	Colorimetric/spectrophotometric	Colorimeter/Spectrophotometer
2.	Odour	-	Organoleptic	
3.	Transparancy	Meter (m)	Visual	Secchi dish
4.	Turbidity	Nephelometric TurbidityUnit	Nephelometric/Hellige Turbidimetric	Nephelometer/Hellige Turbidimeter
5.	Suspended solid	mg/l	Gravimetric	Electronic scale
6.	Temperature	°C	Elongation	Thermometer
Chemical :				
1.	pH	-	Electrometric	pH-meter
2.	Salinity	-	Conductivitymetric	Salinometer/Titration
3.	(DO)	mg/l	Titrimetric Winkler	Titration
4.	BOD	mg/l	Titrimetric Winkler 5 day incubation	BOD bottle, Incubator Titration
5.	COD	mg/l	Titrimetric Frank J. Baumann (Reflux)	Titration COD Determination
6.	Acidity	mg/l	Potentiometric	pH-meter "La Motte"
7.	Calcium (Ca ²⁺)	mg/l	EDTA Titrimetric	Titration
8.	Magnesium (Mg ²⁺)	mg/l	EDTA Titrimetric	Titration
9.	Sulfate (SO ₄ ²⁻)	mg/l	Gravimetric	Electronic scale
10.	Phospate	ug/l	Ascorbic acid method	Spectrophotometer
11.	Amonia (NH ₃ -N)	ug/l	Indophenol blue	Spectrophotometer
12.	Nitrit (NO ₂ -N)	ug/l	Diazotation	Spectrophotometer
13.	Nitrat (NO ₃ -N)	ug/l	Column Reduction/Diazotation	Spectrophotometer
14.	Cianide (CN)	mg/l	Spectrophotometric	Spectrophotometer
15.	Sulfide (H ₂ S)	mg/l	Colorimetric	Spectrophotometer
16.	Oil	mg/l	Spectrofluorimetric	Spectrophotometer
17.	Phenol	mg/l	Spectrofluorimetric	Spectrophotometer
18.	Pesticide Organochlorine	mg/l	Liquid gas chromatographic Liquid gas chromatographic	Liquid gas chromatograph Gas chromatograph and detector (GLC-ECD)
19.	Heavy metal (Pb, Cd, Cu, Cr, ...)	mg/l	APCD-HIBX Extraction Spectrophotometric	Flame AAS
20.	Mercury (Hg)	mg/l	KMnO ₄ , H ₂ O ₄ , Oxidation Spectrophotometric	Flame less AAS
21.	Ignition loss	mg/g	Gravimetric	Electronic scale
22.	Phosporus	mg/l	Vis. Spectrophotometric	Spectrophotometer
23.	Nitrogen	mg/l	Vis. Spectrophotometric	Spectrophotometer
24.	Chloride	mg/l	EDTA Titrimetric	Titration

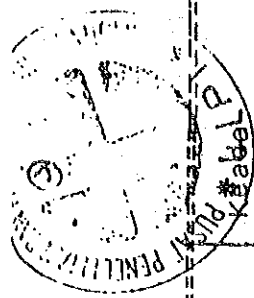


Table 3. Result of the Site Investigation for Sea Water at Jakarta Bay, 5th November 1989/
 Hasil pengukuran suhu air laut, suhu udara, transparency, dan kecepatan angin
 di perairan T, Jakarta, tgl. 5 s/d 6 Nopember 1989.

Stasiun Sampling	Time/Jam (WIB)	Depth/Kedalaman		Water Temp./Suhu air (°C)		Air Temp./Suhu udara (°C)	Transparency (meter)	Wind/Angin		Cuaca/Weather
		Laut (m)	Obs. (m)	(°C)	(°C)			Kecepatan Velocity (m/s)	Arah/Dirac. (°)	
A4	11.09	22	0.5	29.83	30.0	8.0	7.0	45	cerah/bright	
			11.0	29.60						
E2	12.10	26	0.5	29.79	31.0	12.5	5.0	60	cerah/bright	
			13.0	29.59						
E1	12.51	29	0.5	29.72	29.8	16.0	4.0	60	cerah/bright	
			14.0	29.54						
A2	14.16	18	0.5	29.94	30.0	5.5	5.0	45	cerah/bright	
			9.0	29.46						
B2	14.51	14	0.5	29.92	30.0	6.0	5.0	45	cerah/bright	
			7.0	29.63						
C1	15.28	6	0.5	30.14	30.0	3.0	5.0	30	cerah/bright	
			3.0	29.89						
C2	16.06	9	0.5	30.26	29.5	3.0	4.0	20	cerah/bright	
			4.5	30.09						
C8	16.50	5	0.5	30.32	29.5	2.5	4.0	20	cerah/bright	
			2.5	30.13						

Result of the Site Investigation for Sea Water at Jakarta Bay, 6th November 1989/

Stasiun Sampling	Time/Jam (WIB)	Depth/Kedalaman		Water Temp./Suhu air (°C)		Air Temp./Suhu udara (°C)	Transparency (meter)	Wind/Angin		Cuaca/Weather
		Laut (m)	Obs. (m)	(°C)	(°C)			Kecepatan Velocity (m/s)	Arah/Dirac. (°)	
C3	07.52	14.0	0.5	29.72	28.60	6.5	2.0	160	bright	
			7.0	29.57						
B4	08.51	18.5	0.5	29.65	29.8	8.5	1.0	80	bright	
			9.0	29.54						
A6	09.55	20.0	0.5	29.53	30.2	10.5	0	-	bright	
			10.0	29.48						
B6	10.32	18.5	0.5	29.77	31.8	8.5	0	-	bright	
			9.0	29.33						
C7	11.36	10.5	0.5	30.80	30.5	5.0	1.0	10	bright	
			5.0	30.08						
C6	12.01	14.5	0.5	30.70	30.0	4.5	4.0	10	bright	
			7.0	30.09						
D4	12.56	4.0	0.5	31.30	30.50	3.5	6.0	10	bright	
			2.0	30.70						



Stasiun Sampling	Time/ Jam (WIB)	Leptih/ Kedalaman		Water Temp./ Suhu air (°C)	Air Temp./ suhu udara (°C)	Transparency (meter)	Wind/ Angin		an Cuaca/Weather
		Sea (m)	Laut /: Obs. (m)				Kecepatan Velocity (m/S)	Arah/ Dires. ()	
D ₃	13.40	4	0.5	31.36	30.0	0.75	6.0	360	bright/ Cerah
			2.0	31.11					
C ₅	14.07	14	0.5	30.60	30.0	3.50	6.0	20	bright/ Cerah
			7.0	29.89					
D ₂	14.41	7	0.5	30.48	30.0	0.50	6.0	20	bright
			3.5	30.26					
C ₄	15.14	13	0.5	30.50	29.50	2.50	5.0	20	bright
			6.5	29.85					
D ₁	16.09	4	0.5	30.62	29.50	2.0	4.0	360	bright/ Cerah
			2.0	30.61					

Table 7

Laboratory Analysis Result for Sea Water Samples
from Jakarta Bay, November 1989

Sampling Points	Water Depth (meter)	Conductivity (ns)	pH	Oxygen (ppm)	Chloride (ppm)	K-N (ppm)	T-P (ppm)
A2	0,5	54,4	8,17	5,16	19988	0,09032	0,3274
	9,0	55,2	8,20	5,16	18224	0,07923	0,2765
A4	0,5	53,6	8,15	4,18	17970	0,08345	0,1242
	11,0	56,3	7,73	4,57	17440	0,07932	0,4131
A6	0,5	55,9	8,16	5,93	19050	0,08486	0,0272
	10,0	56,0	8,14	6,03	18867	0,07942	0,1765
B2	0,5	54,0	8,31	4,57	17881	0,06579	0,0423
	7,0	54,1	8,19	4,86	17244	0,08151	0,2719
B4	0,5	54,1	8,19	6,03	18518	0,09245	0,0821
	9,0	55,4	8,19	6,03	17979	0,02170	0,1631
B6	0,5	55,7	8,13	6,42	19264	0,06755	0,2623
	9,0	55,5	8,19	6,62	20638	0,07142	0,2041
C1	0,5	54,2	8,29	7,39	17734	0,07413	0,1241
	3,0	54,4	8,37	4,86	18134	0,08622	0,0170
C2	0,5	55,5	8,13	5,64	19400	0,09379	ltd
	4,5	55,0	8,18	5,55	18134	0,08072	0,0425
C3	0,5	55,9	8,12	5,54	18175	0,07928	0,3807
	7,0	52,2	8,19	5,84	17420	0,07284	0,2921
C4	0,5	57,7	8,22	7,78	19294	0,07124	0,2564
	6,5	54,5	8,13	5,35	18623	0,08274	0,2971
C5	0,5	55,0	8,25	-	18929	0,07928	0,3263
	7,0	53,6	8,13	5,64	17951	0,07928	0,3807
C6	0,5	54,9	8,14	5,93	19249	0,06811	0,2969
	7,0	57,0	8,13	5,93	19966	0,08598	ltd
C7	0,5	54,2	8,08	5,93	17930	0,08275	0,2170
	5,0	58,5	8,09	5,74	18623	0,07034	0,1903
C8	0,5	54,4	8,12	4,28	21127	0,09715	0,1903
	2,5	53,7	8,09	5,06	18077	0,08142	0,2434
D1	0,5	54,0	8,17	7,78	17707	0,07506	0,0477
	2,0	54,0	8,19	7,78	18318	0,08709	0,0816
D2	0,5	53,2	8,23	-	18501	0,08965	0,1723
	3,5	55,3	8,10	6,81	17479	0,08040	0,4079
D3	0,5	52,8	8,41	-	18199	0,08004	0,3456
	2,0	54,2	8,43	-	19051	0,08272	0,2142
D4	0,5	56,7	8,12	6,13	18868	0,07921	0,4012
	2,0	55,2	8,15	6,42	19722	0,08132	0,3741
E1	0,5	52,6	7,84	4,20	18618	0,06890	0,1825
	14,0	54,3	8,06	4,57	20233	0,07258	0,2175
E2	0,5	54,3	8,11	5,66	18749	0,07579	0,2103
	13,0	55,9	8,14	4,57	18929	0,09011	0,1231

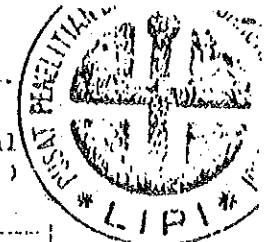
Notes: ltd = Undetected

Table 8

Laboratory Analysis Result for Sea water
from Jakarta Bay, November 1989.

Sampling Points	Water Depth (m)	PARAMETER			PO4 Total (ug At/l)
		NO3-N (ug At/l)	NO2-N (ug At/l)	NH4-N (ug At/l)	
A4	0,5	0,99	0,24	2,25	1,04
	11,0	2,55	0,04	1,56	1,01
E2	0,5	3,32	0,24	2,69	1,17
	13,0	1,82	0,02	3,10	1,12
E1	0,5	1,26	0,02	0,79	1,29
	14,0	1,42	0,04	1,12	1,33
A2	0,5	1,58	0,04	1,88	2,50
	9,0	2,19	0,02	1,81	1,42
B2	0,5	1,91	0,06	3,40	1,00
	7,0	2,68	0,02	2,19	0,92
C1	0,5	0,59	0,06	0,25	0,79
	3,0	0,51	0,04	2,34	0,67
C2	0,5	0,67	0,02	2,99	0,83
	4,5	0,55	0,02	1,56	1,42
C8	0,5	0,67	0,08	3,20	0,54
	2,5	1,86	0,04	2,04	0,71
C3	0,5	2,33	0,04	2,92	0,62
	7,0	0,69	0,04	2,38	0,75
B4	0,5	0,79	0,08	2,61	1,00
	9,0	0,63	0,02	0,89	0,50
A6	0,5	0,71	0,04	2,44	0,92
	10,0	0,59	0,08	2,34	1,00
B6	0,5	0,20	0,08	2,12	0,92
	9,0	0,18	0,02	2,05	1,04
C7	0,5	3,10	0,20	3,30	0,88
	5,0	0,38	0,02	2,54	1,33
C6	0,5	0,99	0,02	2,39	0,88
	7,0	0,53	0,04	2,90	1,33
D4	0,5	0,32	0,12	1,70	3,71
	2,0	0,26	0,13	1,88	2,08
D3	0,5	1,16	0,12	1,78	1,17
	2,0	0,41	0,10	2,73	0,92
C5	0,5	1,01	0,04	1,63	2,75
	7,0	1,38	0,16	2,13	2,21
D2	0,5	1,34	0,06	2,24	1,67
	3,5	1,64	0,42	0,67	1,46
C4	0,5	0,28	0,12	2,86	1,00
	6,5	0,36	0,12	2,37	1,21
D1	0,5	0,28	0,08	0,83	1,71
	2,0	0,32	0,12	1,16	1,79

VI-7





Laboratory Analysis Result for Heavy Metals Concentration from Sea Water Sample at Jakarta Bay, November 1989.

No. Sta.	Water Depth meter	Hg ppm	Pb ppm	Cd ppm	Cu ppm	Cr ppm
A2	0,5 9,0	0,0038 0,0015	ttd ttd	ttd ttd	0,0385 0,0201	0,0031 0,0046
A4	0,5 11,0	0,0018 0,0015	0,0042 ttd	0,0010 ttd	0,0277 0,0487	0,0073 0,0061
A6	0,5 10,0	0,0007 0,0011	ttd ttd	0,0003 ttd	0,0252 0,025	0,0021 0,0031
B2	0,5 7,0	0,0010 0,0015	ttd ttd	ttd ttd	0,0191 0,0201	0,0091 0,0031
B4	0,5 9,0	0,0006 0,0010	ttd ttd	ttd ttd	0,0234 0,0271	0,0058 0,0046
B6	0,5 9,0	0,0020 0,0013	ttd ttd	ttd ttd	0,0385 0,0078	0,0061 0,0031
C1	0,5 3,0	0,0006 0,0005	ttd ttd	ttd ttd	0,0319 0,0104	0,0058 0,0046
C2	0,5 4,5	0,0009 0,0009	ttd ttd	ttd ttd	0,0336 0,0277	0,0046 0,0046
C3	0,5 7,0	0,0027 0,0026	ttd ttd	ttd ttd	0,0169 0,0207	0,0061 0,0016
C4	0,5 6,5	0,0015 0,0012	ttd ttd	ttd ttd	0,0207 0,0099	0,0046 0,0046
C5	0,5 7,0	0,0017 0,0011	ttd ttd	ttd ttd	0,0282 0,011	0,0061 0,0076
C6	0,5 7,0	0,0024 0,0021	ttd ttd	ttd 0,0003	0,0244 0,0072	0,0031 0,0061
C7	0,5 5,0	0,0008 0,0013	ttd ttd	ttd ttd	0,0185 0,0072	0,0046 0,0046
C8	0,5 2,5	0,0011 0,0026	ttd ttd	ttd ttd	0,053 0,0142	0,0061 0,0046
D1	0,5 2,0	0,0013 0,0009	ttd ttd	ttd ttd	0,039 0,0077	0,0061 0,0076
D2	0,5 3,5	0,0011 0,0007	ttd ttd	ttd ttd	0,0131 0,004	0,0046 0,0031
D3	0,5 2,0	0,0006 0,0008	ttd ttd	ttd ttd	0,0304 0,0088	0,0031 0,0076
D4	0,5 2,0	0,0025 0,0011	ttd ttd	ttd ttd	0,0228 0,011	0,0031 0,0031
E1	0,5 14,0	0,0015 0,0027	ttd ttd	ttd ttd	0,0525 0,0271	0,0076 0,0016
E2	0,5 13,0	0,0015 0,0022	ttd ttd	ttd ttd	0,0611 0,0471	0,0046 0,0031

Notes : ttd = Undetected

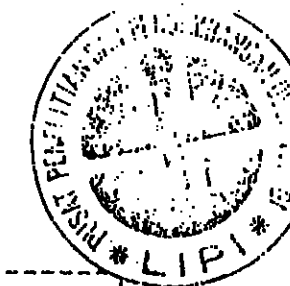


Table 7 LABORATORY ANALYSIS FOR SEABED SEDIMENT

No. Sta.	Hg ppm	Pb ppm	Cd ppm	Cu ppm	Cr ppm
C8	0,5077	101,016	2,9175	38,3362	18,4232
C4	1,1748	139,4608	2,5305	50,2266	20,5161
B4	0,4717	85,2988	2,5108	15,8618	23,7674
E2	0,3250	84,3952	1,9091	13,2349	27,2779
D2	1,6290	176,4985	2,1729	53,9186	20,4959
C1	0,3685	86,1392	1,8231	23,5228	18,2598
D3	0,1808	95,9329	2,5480	18,7909	20,6583
D1	0,8534	102,4511	2,3574	37,9983	17,1116
D4	0,4858	90,2477	2,4048	23,4488	19,7983
A4	0,1529	95,4603	2,1793	16,5541	27,4465

Table 8 SEDIMENT: IGNITION LOSS %

No. Sta.	Wet weight	Dry weight
C8	4.0	11.0
C4	3.4	10.6
B4	3.9	10.9
E2	3.9	11.7
D2	3.3	10.7
C1	8.1	23.2
D3	3.4	7.0
D1	4.3	11.3
D4	4.2	10.8
A4	4.2	11.1

*VII. SURVEY RESULT OF MARINE WATER
QUALITY IN JAKARTA BAY*

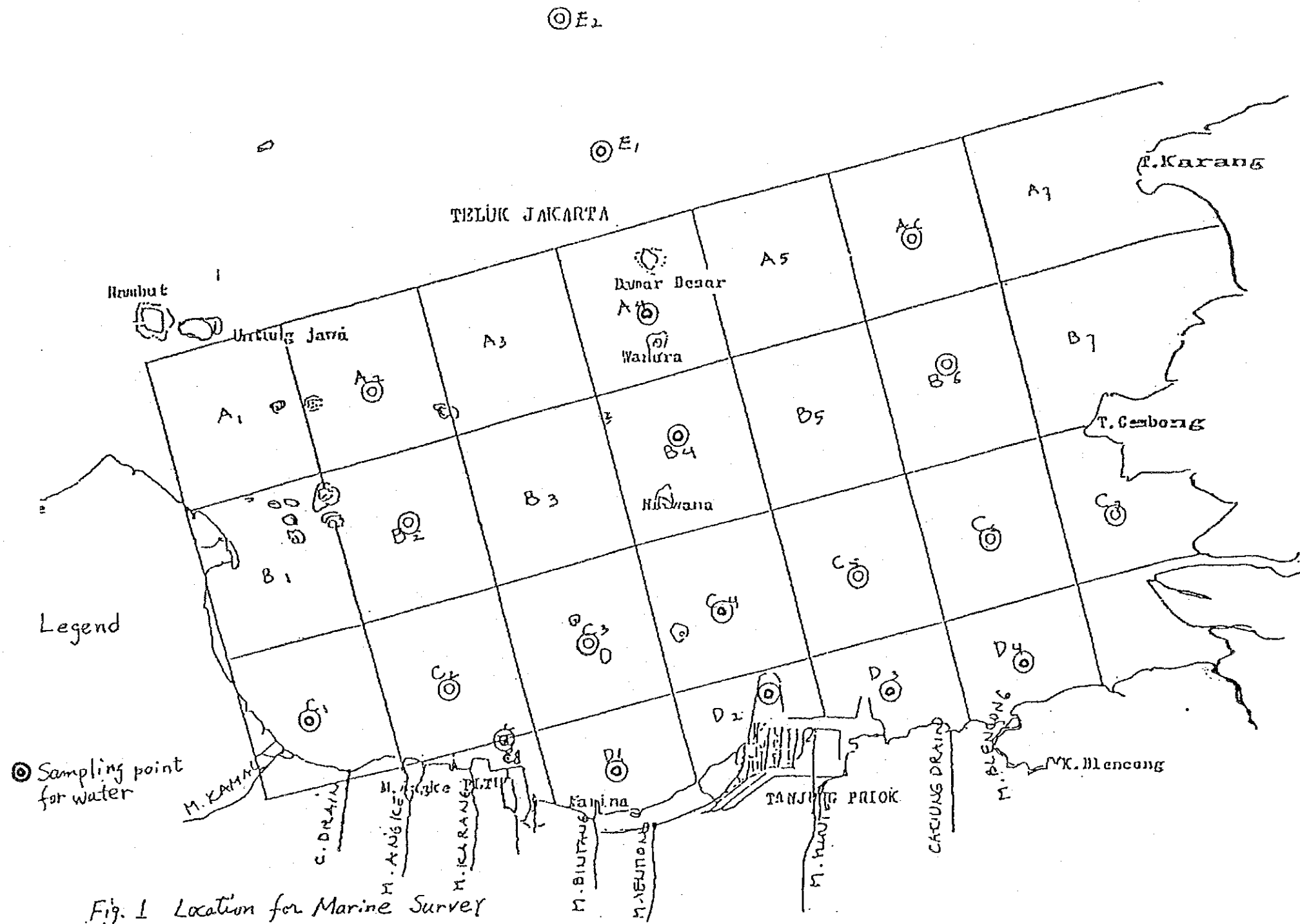


Fig. 1 Location for Marine Survey

SAMPLING POINT COORDINATES AND SAMPLING DATE

LOCATION	LONGITUDE	DAY AND TIME OF SAMPLING	WEATHER
1.A2	05-59-40" S / 106-45-45" E	14-2-1990 / 17.30	CLOUDY
2.A4	05-58-20" S / 106-50-45" E	14-2-1990 / 16.06	CLOUDY
3.A6	05-56-50" S / 106-56-10" E	14-2-1990 / 15.45	CLEAR
4.B2	06-01-50" S / 106-46-25" E	13-2-1990 / 15.40	CLEAR
5.B4	06-00-45" S / 106-51-45" E	13-2-1990 / 18.45	CLEAR
6.B6	05-59-00" S / 106-46-25" E	14-2-1990 / 13.35	CLEAR
7.C1	06-02-55" S / 106-44-15" E	13-2-1990 / 15.15	CLEAR
8.C2	06-05-20" S / 106-46-40" E	13-2-1990 / 13.20	CLEAR
9.C3	06-00-45" S / 106-51-45" E	13-2-1990 / 18.45	CLEAR
10.C4	06-03-25" S / 106-51-55" E	14-2-1990 / 10.10	CLOUDY
11.C5	06-00-20" S / 106-53-55" E	13-2-1990 / 19.28	CLEAR
12.C6	06-02-45" S / 106-55-05" E	14-2-1990 / 12.50	CLEAR
13.C7	05-58-30" S / 106-59-10" E	14-2-1990 / 12.30	CLEAR
14.C8	06-05-45" S / 106-47-40" E	14-2-1990 / 06.54	RAIN
15.D1	06-06-00" S / 106-50-00" E	14-2-1990 / 08.10	RAIN
16.D2	06-05-20" S / 106-52-50" E	14-2-1990 / 08.50	RAIN
17.D3	06-05-00" S / 106-55-10" E	14-2-1990 / 11.15	CLOUDY
18.D4	06-04-20" S / 106-58-05" E	14-2-1990 / 12.00	CLOUDY
19.E1	05-54-18" S / 106-49-30" E	14-2-1990 / 16.45	CLEAR
20.E2	05-56-06" S / 106-50-00" E	14-2-1990 / 17.15	CLEAR

SEAWATER DEPTH AND SEAWATER OBSERVATION DEPTH

LOCATION	SEAWATER DEPTH (metres)	OBSERVATION DEPTH (metres)	
		SURFACE LEVEL	INTERMEDIATE
1.A2	16,0	0,5	8,0
2.A4	17,5	0,5	8,5
3.A6	13,5	0,5	9,0
4.B2	11,0	0,5	7,5
5.B4	17,0	0,5	10,0
6.B6	12,5	0,5	8,0
7.C1	10,0	0,5	7,5
8.C2	10,0	0,5	5,0
9.C3	17,0	0,5	9,0
10.C4	13,0	0,5	6,0
11.C5	17,5	0,5	10,0
12.C6	11,5	0,5	7,5
13.C7	8,5	0,5	6,5
14.C8	8,5	0,5	6,5
15.D1	8,0	0,5	5,0
16.D2	6,5	0,5	3,5
17.D3	6,5	0,5	3,0
18.D4	8,0	0,5	5,0
19.E1	26,5	0,5	15,0
20.E2	28,0	0,5	15,0

LABORATORY ANALYSIS RESULT OF SEA WATER

LOCATION	pH		COD cr (mg/L)		D-COD cr (mg/L)		AMMONIA (mg/L)		CHLORIDE (mg/L)	
	I	II	I	II	I	II	I	II	I	II
1.A2	8,05	8,20	26,11	26,93	26,01	25,71	0,138	0,062	19.600,0	21.700,0
2.A4	8,23	8,26	26,93	28,56	25,33	27,45	0,132	0,105	18.600,0	18.950,0
3.A6	8,30	8,36	24,48	28,15	24,29	25,12	0,143	0,023	21.000,0	25.800,0
4.B2	8,31	8,35	24,59	28,76	21,63	27,18	0,177	0,056	18.200,0	20.200,0
5.B4	8,20	8,26	19,59	24,17	18,54	20,47	0,247	0,192	17.000,0	18.000,0
6.B6	8,21	8,25	19,17	27,09	25,39	21,63	0,122	0,029	16.000,0	18.200,0
7.C1	7,99	8,05	24,59	31,68	22,75	20,16	0,156	0,035	16.000,0	16.500,0
8.C2	8,23	8,25	18,34	25,84	18,32	24,60	0,178	0,116	16.000,0	18.000,0
9.C3	8,25	8,27	20,01	24,59	19,45	22,47	0,291	0,217	19.800,0	20.700,0
10.C4	8,05	8,08	22,26	30,66	18,48	29,92	0,415	0,150	14.400,0	16.800,0
11.C5	8,14	8,21	20,84	30,01	20,77	25,11	0,123	0,027	13.400,0	15.200,0
12.C6	8,15	8,19	19,17	27,09	19,16	25,39	0,055	0,026	16.400,0	21.800,0
13.C7	8,12	8,10	50,02	81,23	26,88	80,31	0,208	0,166	10.200,0	16.700,0
14.C8	8,05	8,09	22,09	31,01	20,17	29,30	0,518	0,210	12.300,0	18.600,0
15.D1	8,09	8,16	28,98	29,64	24,86	27,30	0,168	0,043	12.500,0	18.900,0
16.D2	8,07	8,10	28,14	31,08	23,10	22,68	0,151	0,041	15.600,0	15.900,0
17.D3	8,08	8,14	28,15	29,40	22,26	26,88	0,156	0,035	10.000,0	13.000,0
18.D4	7,96	8,04	24,78	24,72	20,52	26,73	0,188	0,031	8.600,0	16.000,0
19.E1	8,20	8,30	25,30	25,87	24,22	24,02	0,148	0,010	17.000,0	18.600,0
20.E2	8,24	8,26	26,52	26,52	25,34	24,73	0,154	0,033	19.800,0	21.800,0

NOTE : I : SURFACE LEVEL

II : INTERMEDIATE LEVEL

LABORATORY ANALYSIS RESULT OF SEA WATER

LOCATION	FECAL COLIFORM/100 cc	
	SURFACE LEVEL	INTERMEDIATE LEVEL
1. A2	36	20
2. A4	1100	20
3. A6	240.10	19.10
4. B2	120	4
5. B4	240	11
6. B6	1100.10 ²	9
7. C1	23.10	460.10
8. C2	120	4
9. C3	460.10	93.10
10. C4	1100	36
11. C5	240.10	11
12. C6	240.10 ²	3
13. C7	23.10 ²	43.10
14. C8	93.10 ²	93.10
15. D1	93.10	43.10
16. D2	1100.10 ²	43.10
17. D3	150.10	460
18. D4	150.10	1100.10
19. E1	150	43
20. E2	93.10	460

*VIII. SURVEY RESULT OF WASTEWATER
QUALITY*

1. Introduction

The wastewater sources have been surveyed are from the following facilities :

- 1) domestic wastewater (house hold)
- 2) human waste (house hold)
- 3) domestic wastewater from MCK and Kitchen near MCK
- 4) septic tank effluent (at MCK)
- 5) wastewater from commercial areas (commercial wastewater)

2. Locations and Time of Sampling and Field measurement

Date and locations of sampling and field measurement are shown in the following table :

TABLE - 1

No.	Type of Wastewater	Name of Area	Number of Site	Name of Block	Date of Sampling
1	Commercial	Block M	1	-	2nd & 3th Dec. 1989
		Kota	1	-	2nd & 3th Dec. 1989
		Pasar Baru	1	-	2nd & 3th Dec. 1989
2	Septic Tank (MCK)	Kel. Kebon Kacang	1	-	2nd & 3th Dec. 1989
		Kel. Guntur	1	-	3th & 4th Dec. 1989
		Kel. Karet	1	-	3th & 4th Dec. 1989
3	Domestic (house hold)	Perumahan Pluit	2	Block MA & Block NR	2nd & 3th Dec. 1989
		Perumahan Tanah Abang	2	Block 44 & Block 45	3th & 4th Dec. 1989
		Perumahan Klender	2	Block 63 & Block 70	3th & 4th Dec. 1989
4	Domestic (washing, bathing, kitchen)	Kel. Kebon Kacang	1	-	2nd & 3th Dec. 1989
		Kel. Guntur	1	-	3th & 4th Dec. 1989
		Kel. Karet	1	-	3th & 4th Dec. 1989
5	Human Waste	Perumahan Tanah Abang	2	Block 44 & Block 45	3th & 4th Dec. 1989
		Perumahan Klender	1	Block 70	4th & 5th Dec. 1989

3. Analysis Method

Method and procedures used for the laboratory analysis are shown in *Table 4*.

4. Water Quality Analysis

Water quality analysis have been conducted by Balai Besar Industri Kimia, Pekayon Pasar Rebo, PO. BOX 16 JATPK, Jakarta Timur.

The Laboratory analysis results is shown in *Table 5-8*

TABLE - 2 : OUTLINE OF WASTEWATER LOADING SURVEY

Type of Wastewater	Domestic (house hold)	Domestic (Bathing & Washing at MCK)	Domestic (kitchen wastewater near MCK)	Commercial	Human waste	Septic tank effl. (MCK)
Item						
Number of sites	6	3	3	3	3	3
Number of sampling Points	6	2 (bathing) ; 2 (washing)	3	3	3	3
Sampling mode (see table-3)	every 3 hrs for 24 hr period (9 times)	every 3 hrs for 24-hr period (9 times)	for 18-hr period; with 6-hr interval (4 times)	same quantity mixed	uniformly mixed	according to number of users
Composite sample Preparation	according to water consumption	according to number of users	same quantity mixed	same quantity mixed	uniformly mixed	according to number of users
Major field work items other than sampling	air temperature, water temperature at each sampling time					
	water meter reading	user counting			modification and recovery of existing discharge	user counting
Number of composite samples	6	2	3	12	3	3
Water quality analysis on composite sample	pH, BOD, COD, SS					
	pH, BOD, COD, SS, NH ₄ -N, inorg-N (NO ₂ + NO ₃), A-N, T-P fecal coliform					

nf:table-2

* : Bathing and Washing in 1 (one) outlet pipe at MCK Lebon Lacang

TABLE - 3 : TIMING OF SAMPLING

Type of Wastewater	Time of the day												Remark											
	00	02	04	06	08	10	12	14	16	18	20	22		24	00	00	00	00	00	00	00	00	00	12
Domestic (house hold)						△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△		
Human Waste																								whole quantity sampled
Septic tank effl. (MCK)						△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△		
Domestic (bathing & washing at MCK)						△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△		
Domestic (kitchen wastewater near the MCK)						△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△	△		
Commercial																								

Note : △ = Sampling
 ↔ = Period to be stationed

nf:table-3

Table 4. ANALYSIS METHOD

Nr.	Parameter	Analysis Method	Equipment
1.	pH	Electrometric	pH Meter
2.	COD	Titrimetric	Titration
3.	BOD	Titrimetric	Incubation Bottle, Low temperature Incubator
4.	SS	Gravimetric	Electronic Scale
5.	N-NH ₄	Spectrophotometric	Spectrophotometer
6.	P-total	Spectrophotometric	Spectrophotometer
7.	K-N	Kyeldahl	Kyeldahl bulb
8.	NO ₂ - N	Spectrophotometric	Spectrophotometer
9.	NO ₃ - N	Spectrophotometric	Spectrophotometer
10.	Fecal Coliform	Fermentation	Boric Acid Lactose Booth Media Incubation

NF:FMLR-22

Table 5 - Water Temperature, Air Temperature and pH Measurement

Nr.	Location	Code of Composite Sample/Sample	Water Temperature (C)	Air Temperature (C)	pH
1.	Perumnas Tanah Abang Block 44	TA 44	27	30	7,1
2.	Perumnas Tanah Abang Block 45	TA 45	27	30	7,1
3.	Perumnas Tanah Abang Block 44	TTA 44	27	30	7,1
4.	Perumnas Tanah Abang Block 45	TTA 45	27	30	7,1
5.	Perumnas Pluit Block NR	RT NR	30	32	6,4
6.	Perumnas Pluit Block MA	RT MA	30	32	6,5
7.	Perumnas Klender Block 63	Kld 63	28	29	6,3
8.	Perumnas Klender Block 70	Kld 70	28	29	6,2
9.	Perumnas Klender Block 65	Kld 65	28	29	7,3
0.	MCK Kel. Kebon Kacang (Septic Tank Effl.)	T Kb Kc	28	30	7,5
11.	MCK Kel. Kebon Kacang (Kitchen)	LD Kb Kc	28	30	7,2
12.	MCK Kel. Kebon Kacang (Bathing & Washing)	MC Kb Kc	28	29	7,1
13.	MCK Kel. Karet (Bathing)	KM	29	30	6,5
14.	MCK Kel. Karet (Washing)	KC	29	30	7,2
15.	MCK Kel. Karet (Septic Tank Effl.)	KT	28	29	7,8
16.	MCK Kel. Karet (Kitchen)	KD	29	30	6,7
17.	MCK Kel. Guntur (Bathing)	GM	29	30	7,2
18.	MCK Kel. Guntur (Washing)	GC	29	30	7,5
19.	MCK Kel. Guntur (Septic Tank Effl.)	GT	28	30	7,6
20.	MCK Kel. Guntur (Kitchen)	GD	29	31	6,5
21.	Blok M	CBM I	29	30	6,6
22.	Blok M	CBM II	28	29	6,4
23.	Blok M	CBM III	27	28	6,5
24.	Blok M	CBM IV	27	28	6,3
25.	Kota	CK I	30	32	6,6
26.	Kota	CK II	28	32	6,6
27.	Kota	CK III	29	30	6,8
28.	Kota	CK IV	28	29	6,8
29.	Pasar Baru I	PB I	29	30	7,5
30.	Pasar Baru II	PB II	28	30	6,4
31.	Pasar Baru III	PB III	28	29	6,9
32.	Pasar Baru IV	PB IV	27	28	7,4

Table 6 - COD, BOD and Suspended Solid Contents

Nr.	Location	Code of Composite Sample/Sample	COD (ppm)	BOD (ppm)	Suspended Solid (mg/l)
1.	Perumnas Tanah Abang Block 44	TA 44	590.0	560.0	20
2.	Perumnas Tanah Abang Block 45	TA 45	1,030.4	327.0	10
3.	Perumnas Tanah Abang Block 44	TTA 44	2,870.5	329.5	71.5
4.	Perumnas Tanah Abang Block 45	TTA 45	2,901.0	331.6	70.5
5.	Perumnas Pluit Block NR	RT NR	504.0	104.0	70
6.	Perumnas Pluit Block MA	RT MA	515.2	490.0	16
7.	Perumnas Klender Block 63	Kld 63	627.2	176	60
8.	Perumnas Klender Block 70	Kld 70	604.8	385	22
9.	Perumnas Klender Block 65	Kld 65	2,889.6	327.0	70.2
10.	MCK Kel. Kebon Kacang (Septic Tank Effl.)	T Kb Kc	2,017.5	436	786
11.	MCK Kel. Kebon Kacang (Kitchen)	LD Kb Kc	1,075.2	520	120
12.	MCK Kel. Kebon Kacang (Bathing & Washing)	MC Kb Kc	806.4	65	64
13.	MCK Kel. Karet (Bathing)	KM	290.4	246	63
14.	MCK Kel. Karet (Washing)	KC	784.0	98	178
15.	MCK Kel. Karet (Septic Tank Effl.)	KT	1,702.4	897	216
16.	MCK Kel. Karet (Kitchen)	KD	1,971.2	114	720
17.	MCK Kel. Guntur (Bathing)	GM	515.2	90	40
18.	MCK Kel. Guntur (Washing)	GC	470.4	90	80
19.	MCK Kel. Guntur (Septic Tank Effl.)	GT	1,142.4	400	338
20.	MCK Kel. Guntur (Kitchen)	GD	940.8	685	1112
21.	Blok M	CBM I	1,142.4	415	600
22.	Blok M	CBM II	2,396.8	385	654
23.	Blok M	CBM III	1,076	670	738
24.	Blok M	CBM IV	515.2	430	520
25.	Kota	CK I	450.8	268	148
26.	Kota	CK II	525	403	30
27.	Kota	CK III	873.2	450	280
28.	Kota	CK IV	485	112	60
29.	Pasar Baru	PB I	179.2	130	80
30.	Pasar Baru	PB II	370.2	247	80
31.	Pasar Baru	PB III	297.0	112	180
32.	Pasar Baru	PB IV	385.2	179	60

Table 7 - N-NH₄, T-P and K-N Contents

Nr.	Location	Code of Composite Sample/Sample	N-NH ₄ (ppm)	T-P (ppm)	K-N (%)
1.	Perumnas Tanah Abang Block 44	TA 44	0.62	27.006	1.5126
2.	Perumnas Tanah Abang Block 45	TA 45	1.18	30.503	0.8540
3.	Perumnas Tanah Abang Block 44	TTA 44	0.90	204.5	3,92
4.	Perumnas Tanah Abang Block 45	TTA 45	0.89	205.2	3,87
5.	Perumnas Pluit Block NR	RT NR	0.10	6.163	1.0420
6.	Perumnas Pluit Block MA	RT MA	1.02	19.188	0.6310
7.	Perumnas Klender Block 63	Kld 63	0.79	51.687	0.6580
8.	Perumnas Klender Block 70	Kld 70	0.46	5.700	0.6550
9.	Perumnas Klender Block 65	Kld 65	0.92	205.154	3.7250
10.	MCK Kel. Kebon Kacang (Septic Tank Effl.)	T Kb Kc	1.25	201.467	2.8010
11.	MCK Kel. Kebon Kacang (Kitchen)	LD Kb Kc	0.85	70	1.5260
12.	MCK Kel. Kebon Kacang (Bathing & Washing)	MC Kb Kc	0.80	17.553	0.7420
13.	MCK Kel. Karet (Bathing)	KM	0.56	11.548	0.9660
14.	MCK Kel. Karet (Washing)	KC	-	60.764	0.6940
15.	MCK Kel. Karet (Septic Tank Eff.)	KT	0.90	214.874	2.9140
16.	MCK Kel. Karet (Kitchen)	KD	0.35	400	0.5680
17.	MCK Kel. Guntur (Bathing)	GM	0.18	12.736	0.5650
18.	MCK Kel. Guntur (Washing)	GC	0.45	20.246	0.8520
19.	MCK Kel. Guntur (Septic Tank Eff)	GT	0.62	67.469	4.1460
20.	MCK Kel. Guntur (Kitchen)	GD	0.27	24.298	1.0329

Table 8 - NO₂-N, NO₃-N and Fecal Coliform Contents

Nr.	Location	Code of Composite Sample/Sample	NO ₂ -N (ppm)	NO ₃ -N (ppm)	Fecal Coliform (MPN)
1.	Perumnas Tanah Abang Block 44	TA 44	tt	5.559	-
2.	Perumnas Tanah Abang Block 45	TA 45	tt	9.225	- 6
3.	Perumnas Tanah Abang Block 44	TTA 44	-	13.896	50 x 10 ⁶
4.	Perumnas Tanah Abang Block 45	TTA 45	-	13.724	48 x 10 ⁶
5.	Perumnas Pluit Block NR	RT NR	tt	3.980	-
6.	Perumnas Pluit Block MA	RT MA	tt	5.397	-
7.	Perumnas Klender Block 63	Kld 63	tt	4.758	-
8.	Perumnas Klender Block 70	Kld 70	tt	3.656	- 6
9.	Perumnas Klender Block 65	Kld 65	tt	13.674	50 x 10 ⁶
10.	MCK Kel. Kebon Kacang (Septic Tank Effl.)	T Kb Kc	tt	18.031	84 x 10 ⁶
11.	MCK Kel. Kebon Kacang (Kitchen)	LD Kb Kc	0.015	5.075	-
12.	MCK Kel. Kebon Kacang (Bathing & Washing)	MC Kb Kc	0.030	6.053	-
13.	MCK Kel. Karet (Bathing)	KM	0.060	5.725	-
14.	MCK Kel. Karet (Washing)	KC	tt	4.445	- 6
15.	MCK Kel. Karet (Septic Tank Eff.)	KT	tt	9.169	20 x 10 ⁶
16.	MCK Kel. Karet (Kitchen)	KD	tt	5.210	-
17.	MCK Kel. Guntur (Bathing)	GM	0.120	3.675	-
18.	MCK Kel. Guntur (Washing)	GC	tt	5.075	- 6
19.	MCK Kel. Guntur (Septic Tank Eff)	GT	0.009	7.767	24 x 10 ⁶
20.	MCK Kel. Guntur (Kitchen)	GD	tt	3.223	-

Note : tt - Undetected

CODE OF NAMING OF COMPOSITE SAMPLE / SAMPLE

- TA 44 : Domestic Waste water from Perumnas Tanah Abang Residential Area, Block 44.
- TA 45 : Domestic Waste water from Perumnas Tanah Abang Residential Area, Block 45.
- TTA 44 : Human Waste from Perumnas Tanah Abang, Residential Area, Block 44.
- TTA 45 : Human Waste from Perumnas Tanah Abang, Residential Area, Block 45.
- RT NR : Domestic Waste water from Pluit Residential Area, Block NR
- RT MA : Domestic Waste water from Pluit Residential Area, Block MA
- Kld 63 : Domestic Waste water from Perumnas Klender Residential Area Block 63
- Kld 70 : Domestic Waste water from Perumnas Klender Residential Area Block 70
- Kld 65 : Human Waste from Perumnas Klender Residential Area, Block 65.
- T Kb Kc : Septic Tank Effluent from toilet facilities at MCK Kel. Kebon Kacang
- LD Kb Kc : Waste water from Kitchen near MCK Kel. Kebon Kacang
- MC Kb Kc : Waste water from Washing & Bathing facilities at MCK Kel. Kebon Kacang.
- KM : Waste water from bathing facilities at MCK Kel. Karet
- KC : Waste water from washing facilities at MCK Kel. Karet.
- KD : Waste water from Kitchen near MCK Kel. Karet.
- KT : Septic tank effluent from toilet facilities at MCK Kel. Karet.
- GM : Waste water from bathing facilities at MCK Kel. Guntur.
- GC : Waste water from washing facilities at MCK Kel. Guntur.
- GT : Septic tank effluent from toilet facilities at MCK Kel. Guntur.
- GD : Waste water from Kitchen near MCK Kel. Guntur.
- CBM I : Waste water from Block M commercial area at 12.00 sampling.
- CBM II : Waste water from Block M commercial area at 18.00 sampling.
- CBM III : Waste water from Block M commercial area at 24.00 sampling.
- CBM IV : Waste water from Block M commercial area at 06.00 sampling.
- CK I : Waste water from Kota commercial area at 12.00 sampling.
- CK II : Waste water from Kota commercial area at 18.00 sampling.
- CK III : Waste water from Kota commercial area at 24.00 sampling.
- CK IV : Waste water from Kota commercial area at 06.00 sampling.
- PB 1 : Waste water from Pasar Baru commercial area at 12.00 sampling.
- PB 2 : Waste water from Pasar Baru commercial area at 18.00 sampling.
- PB 3 : Waste water from Pasar Baru commercial area at 24.00 sampling.
- PB 4 : Waste water from Pasar Baru commercial area at 06.00 sampling.

*IX. SURVEY RESULT OF EFFLUENT WATER
QUALITY FROM WASTEWATER
TREATMENT PLANT*

1. SCOPE OF WORK

The sample taking was executed at 18 locations such as :

- | | |
|---------------------------|------------------------------------|
| 1. Hotel Hilton | 11. Gajah Mada building |
| 2. Hotel Borobudur | 12. Ratu Plaza building |
| 3. Hotel Menteng | 13. Pertambangan (mining) building |
| 4. Hotel President | 14. Setiabudi building |
| 5. Hotel Sahid Jaya | 15. Menara Patra building |
| 6. Hotel Sofyan | 16. Pramuka Market building |
| 7. Wisma BCA | 17. Pasar Pagi building |
| 8. Chase Plaza building | 18. Pasar Blok M building |
| 9. Indocement building | |
| 10. Glodok Plaza building | |

2. ANALYZED PARAMETER

The parameters of water quality which were analyzed in this case are :

- pH
- BOD
- COD
- SS
- Fecal Coliform
- and air temperature is also observed at each sampling time.

A. FIELD PARAMETER

The parameter which were measured in the field such as :

- a. Air Temperature
- b. Sample of wastewater temperature
- c. pH.

B. LABORATORY ANALYZED PARAMETER

- a. COD (dichromat)
- b. BOD (20 C. 5 days)
- c. Fecal Coliform
- d. Suspended Solid

C. METHOD OF ANALYSIS MEASUREMENT

- a. Temperature : thermometer / direct
- b. pH : pH meter
- c. COD : dichromat Reflux Method
- d. Fecal Coliform : multiple Tube Fermentation Technic.

3. THE RESULT OF

a.

LOCATION	OBSERVATION TIME	AIR TEMP. (°C)	WATER TEMP. SAMPLING (°C)	pH
1.Hotel Hilton	12.00	30.0	29.0	6.8
2.Hotel Borobudur	13.45	30.5	28.5	7.0
3.Hotel Menteng	10.30	31.2	28.0	6.2
4.Hotel President	11.45	31.7	29.5	5.9
5.Hotel Sahid Jaya	12.30	29.5	28.0	7.0
6.Hotel Sofyan	10.30	32.0	30.5	5.95
7.Wisma BCA	10.30	30.6	29.5	6.5
8.Chase Plaza	09.30	32.0	27.5	6.0
9.Gedung Indocement	12.45	31.5	27.5	6.0
10.Ged. Pertambangan	12.40	32.4	28.5	6.0
11.Ged. Setiabudi II	13.25	32.0	31.0	5.85
12.Gedung BPPT	10.20	28.0	27.5	6.0
13.Glodok Plaza	12.05	31.0	28.5	7.0
14.Gajah Mada Plaza	11.15	32.0	30.0	6.0
15.Ratu Plaza	10.30	30.0	27.8	6.5
16.Pasar Pramuka	14.10	28.8	28.0	5.89
17.Pasar Pagi	12.30	32.5	31.5	6.5
18.Pasar Blok M	12.40	31.1	30.5	5.85

b.

LOCATION	COD (DICHROMAT) (mg/l)	BOD 20°C, 5DAYS (mg/l)	FECAL COLIFORM /100 cc	SS (mg/l)
1.Hotel Hilton	1508.62	1164.0	1100.10 4	60.0
2.Hotel Borobudur	174.91	140.0	23.10 5	40.0
3.Hotel Menteng	911.0	616.75	93.10 5	60.0
4.Hotel President	2142.67	1250.50	23.10 7	460.0
5.Hotel Sahid Jaya	444.57	248.65	23.10 4	20.0
6.Hotel Sofyan	644.99	486.0	23.10 6	220.0
7.Wisma BCA	114.42	90.20	43.10 6	10.0
8.Chase Plaza	184.39	126.0	93.10 4	40.0
9.Gedung Indocement	121.71	78.18	93.10 5	40.0
10.Ged. Pertambangan	940.20	720.0	93.10 5	15.0
11.Ged. Setiabudi II	419.05	242.50	460.10 4	20.0
12.Gedung BPPT	107.13	77.80	23.10 5	10.0
13.Glodok Plaza	1515.90	880.0	150.10 5	180.0
14.Gajah Mada Plaza	513.80	370.25	240.10 3	150.0
15.Ratu Plaza	96.20	52.50	23.10 6	60.0
16.Pasar Pramuka	1239.0	980.0	150.10 6	17.0
17.Pasar Pagi	1042.18	940.0	23.10 3	35.0
18.Pasar Blok M	2135.38	1800.60	23.10	420.0

*X. SURVEY OF EFFICIENCY OF WATER
QUALITY OF EXISTING SEPTIC TANK*

1. Sampling

-7 Samples of human waste were taken at 5 locations.

Location 1. 2 (two) samples been taken directly from Toilet Jl.Tanah Tinggi Timur Kelurahan Harapan Mulya before discharge to saptic Tank .
With code No. H.1.1 & H.1.2

Location 2. 2(two) samples been taken directly from toilet Jl. Tanah Tinggi Barat kelurahan Hutan Panjang before discharge to saptic tank with code No. H.2.1 & H.2.2.

Location 3. 1(one) sample been taken from septic tank effluent at toilet Jl. Tanah Tinggi Timur (Nort site) kelurahan Haapan Mulya with code No.S.1

Location 4. 1(one) sample been taken from septic tank effluent at toilet Jl. Tanah Tinggi Timur (souht site) kelurahan Harapan mulya wiht code No.S.2

Location 5. 1(one) sample been taken from septic tank effluent at toilet Jl. Pramuka (Market) with code No. S.3

2. Parameter

- Analysis laboratory will be executed by P4L

Analysis parameters : BOD, COD cr, SS

- Method of analysis

a. COD : dichromat reflux method

b. BOD : dilution method

c. S.S : photometric method

A. RESULT OF SURVEY TOILET USER.

1. LOCATION : Jl.Tanah Tinggi Timur Kel.Harapan Mulya
 Code No. : H.1.1
 VOLUME OF SAMPLE : 76 lt.

	Adult	Child	T O T A L
Man	8	1	9
Woman	12	3	15
T O T A L	20	4	24

2. LOCATION : Jl.Tanah Tinggi Timur Kel.Harapan Mulya
 Code No. : H.1.2
 VOLUME OF SAMPLE : 82 lt.

	Adult	Child	T O T A L
Man	9	4	13
Woman	8	2	10
T O T A L	17	6	23

A. RESULT OF SURVEY TOILET USER.

1. LOCATION : Jl.Tanah Tinggi Barat Kel. Utan Panjang
 Code No. : H.2.1
 VOLUME OF SAMPLE : 77 lt.

	Adult	Child	T O T A L
Man	12	-	12
Woman	9	1	10
T O T A L	21	1	22

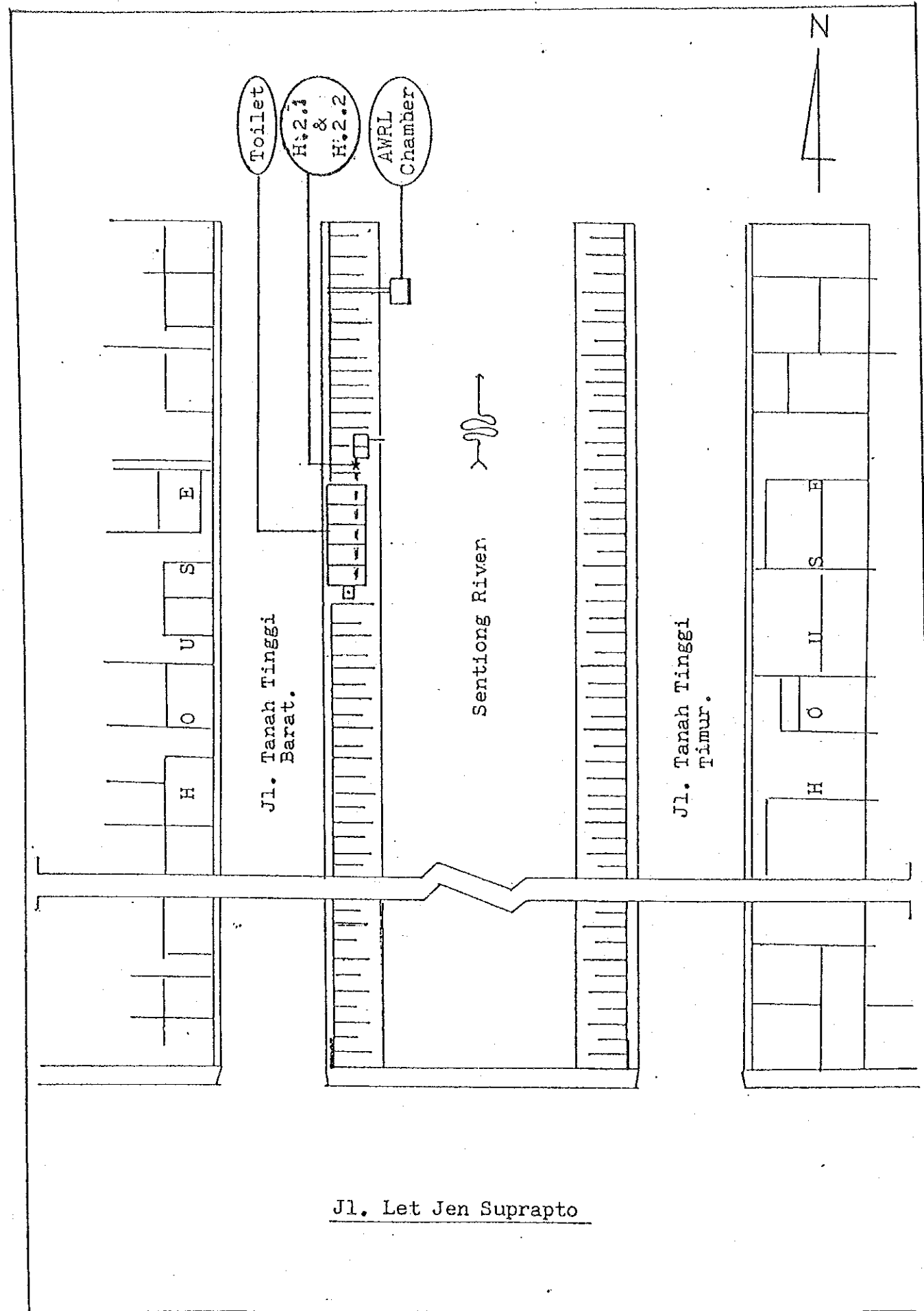
2. LOCATION : Jl.Tanah Tinggi Barat Kel.Utan Panjang
 Code No. : H.2.2
 Volume Of Sample : 85 lt.

	Adult	Child	T O T A L
Man	5	2	7
Woman	11	3	14
T O T A L	16	5	21

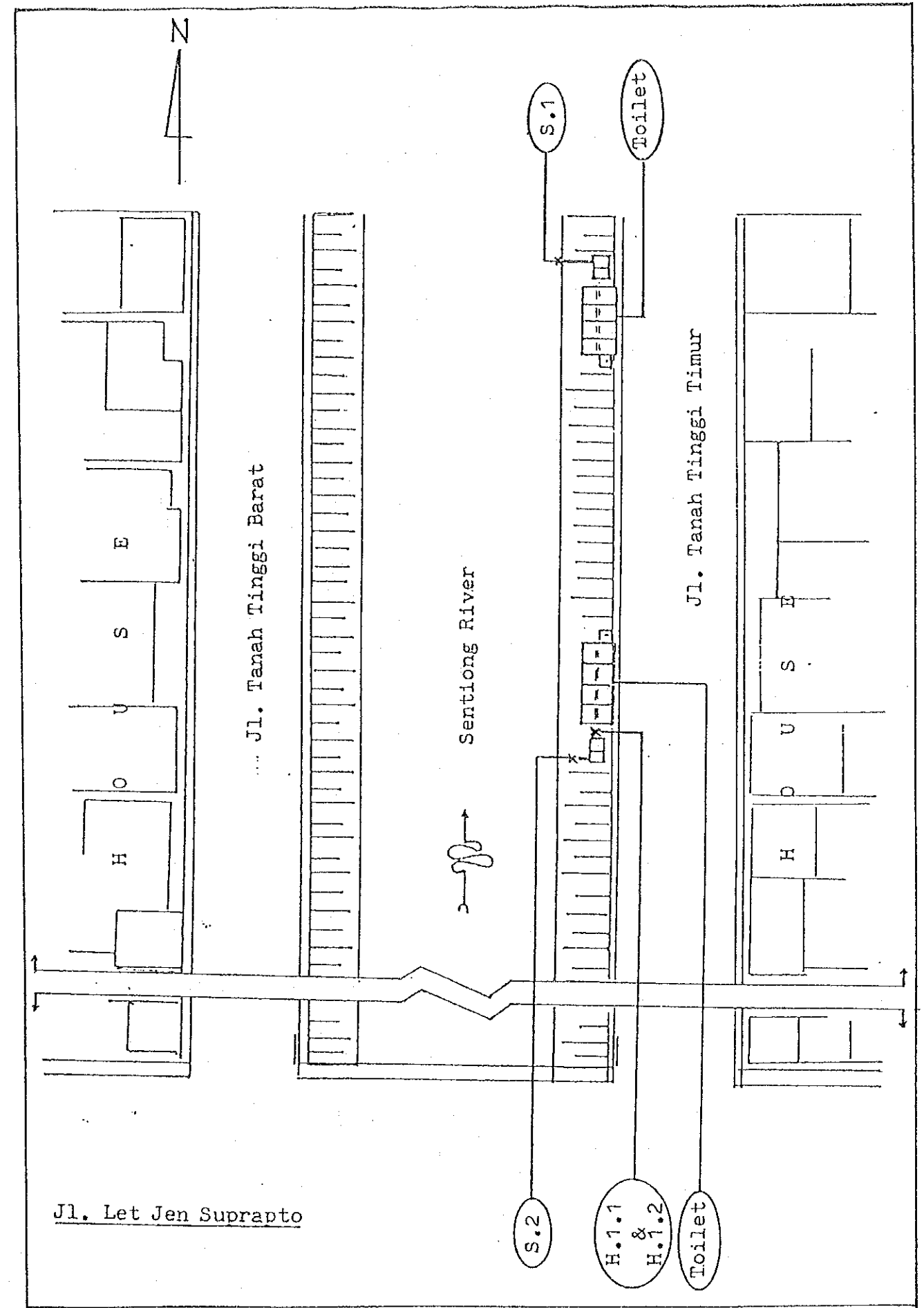
B. RESULT OF LABORATORY ANALYSIS.

NO	NO CODE	LOCATION	COD cr mg/l	BOD5 mg/l	S.SOLID mg/l
1	H.1.1.	Toilet Jl. Tanah Tinggi Timur Kel.Harapan Mulya	2994,99	1630,0	320,0
2	H.1.2.	Toilet Jl. Tanah Tinggi Timur Kel.Harapan Mulya	3505,50	2200,0	880,0
3	H.2.1.	Toilet Jl. Tanah Tinggi Barat Kel.Utan Panjang	6966,96	3600,0	1250,0
4	H.2.2.	Toilet Jl. Tanah Tinggi Barat Kel.Utan Panjang	8248,24	4300,0	720,0
5	S.1.	Toilet Jl. Tanah Tinggi Timur - Utara Kel. Harapan Mulya	2962,96	2600,0	730,0
6	S.2.	Toilet Jl. Tanah Tinggi Timur Kel.Harapan Mulya	10110,10	5800,0	2500,0
7	S.3.	MCK di Pasar Jl. Pramuka Kel. Rawa Sari.	168,17	150,0	150,0

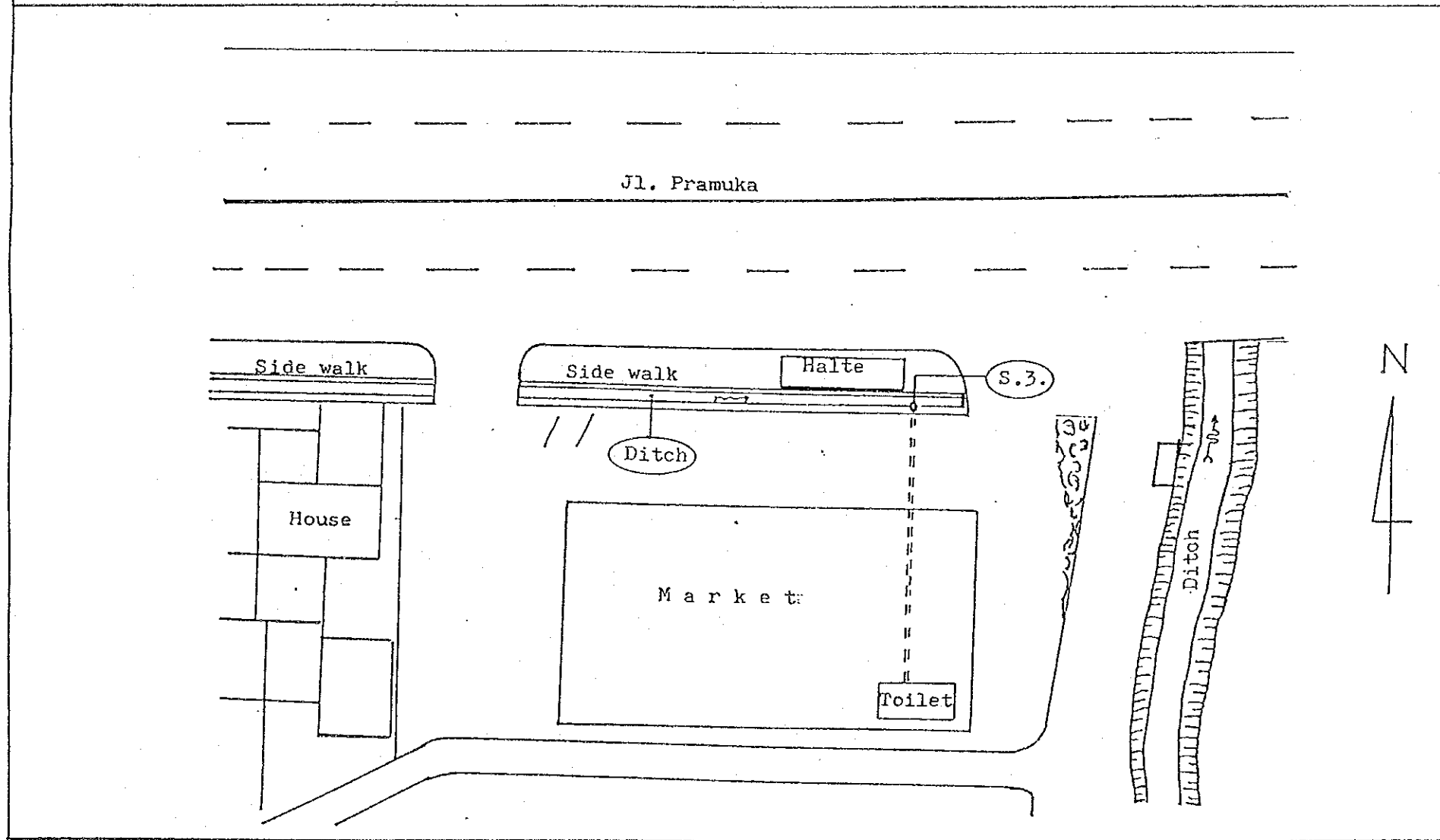
Toilet at Jl. TANAH TINGGI BARAT in Kel. UTAN PANJANG



MCK and Toilet at Jl. TANAH TINGGI TIMUR in Kel. HARAPAN MULYA



MCK at Market Jl. PRAMUKA in Kel. RAWASARI



JICA