CHAPTER IV

RESULTS

The study results can be divided into two parts, each for each waste disposal site. Each part consists of 2 sets of data for each month of observation. The details are as follows.

The first and the third month of a field observation were obtained from On-nuch disposal site in May and July 1992. The differences of these two observations were due to the rainfall occurrence. In the third month of observation, 4 in 11 days had moderate to heavy rain but in the first month only one day of observation had slightly rainfall prior to the observations. Except from rainfall, there was no other significant difference in condition occurred. The summarized data obtained from On-nuch disposal site in May and July 1992 are shown in appendix A.

The second and the forth month of observation were obtained from Nong Kham disposal site in June and August. There was no significant difference about rainfall occurrence here. Because 5 in 11 days of the second month had slightly rainfall and 4 days in the forth month had slightly to moderate rainfall. The summarized data obtained from Nong Kham disposal site in both months are shown in appendix B.

Tables 4-1 and 4-2 and figures 4-1 and 4-2 are the mean value comparison of each parameter in the two periods of observation in each solid waste disposal site.

The missing of data from both sites caused by

1) Improper function of field observation instrument

and 2) The unavoidable obstructions to reach the station caused by low water level in Klong Ta Khe Kob and the muddy road at Nong Kham disposal site due to the rain.

Table 4-1 Summarized mean value obtained from On-nuch disposal site.

PARAMETER		STATION 1	2	3	4	5	6	7	8	9	10
TEMP.	May	29.7	30.9	31.2	31.1	31.2	31	31.4	31.6	31.8	31.7
(CELCIUS)	July	30.7	30	29.6	29.6	29.4	29.8	30.4	30.8	30.7	30.8
pH	May	8	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
(pH UNIT)	July	8.1	7.4	7.3	7.4	7.3	7.3	7.2	7.2	7.2	7.2
DO.	May	0.27	0.88	1.11	1.63	1.13	1.42	1.13	1.07	1.58	1.26
(mg/L)	July	0.09	1.9	0.91	1.06	1.22	1.75	1.64	2.2	2.19	1.98
CONDUCT.	May	25509	2844	3067	3024	2976	2821	2711	2745	2755	2721
(umhos/cm)	July	19086	1735	2979	2652	2242	1677	1507	1480	1536	1607
SALINITY	May	13.7	0.8	0.9	1	0.9	0.9	0.9	0.8	0.8	0.7
(ppt.)	July	10	0.7	1	1	0.7	0.5	0.2	0.2	0.2	0.1
ALKALINITY	May	587	19	20	21	19	18	17	17	17	17
(mg/L)	July	523	32	35	38	35	30	24	23	22	25
BOD.	May	268	25	41	33	13	16	29	21	12	28
(mg/L)	July	493	35	22	46	43	34	28	17	18	21
COD.	May	6380	142	183	173	157	112	107	138	121	123
(mg/L)	July	4147	178	311	419	283	235	199	77	72	99
SS.	May	174	63	40	63	52	72	48	27	22	22
(mg/L)	July	187	50	82	55	65	39	26	31	27	21
DS.	May	12425	1113	1728	1508	1342	1473	1551	1525	1505	1594
(mg/L)	July	12110	1010	1730	1550	1388	760	860	830	780	880
TS.	May	12583	1252	1769	1571	1394	1544	1655	1552	1527	1616
(mg/L)	July	12297	1060	1812	1635	1245	779	886	861	807	901
MERCURY	May	20.71	1.28	1.16	1.47	1.48	1.34	1.09	1.63	1.34	1.37
(ppb.)	July	3.73	1.31	0.9	1.21	1.48	0.97	0.81	0.82	0.89	1.12
CADMIUM	May	==========	==========	==========	==========	NON DETECTABLE	==========	==========	==========	==========	==========
(ppm.)	July	==========	==========	==========	==========	NON DETECTABLE	==========	==========	==========	==========	==========
MANGANESE	May	0.68	0.73	0.54	0.56	0.68	0.62	0.57	0.48	0.53	0.55
(ppm.)	July	0.83	0.81	0.71	0.66	0.64	0.68	0.59	0.58	0.62	0.62

Table 4-2 Summarized mean value obtained from Nong Kham disposal site.

PARAMETER		STATION 1	2	3	4	5	6	7
TEMP. (CELCIUS)	June	28.7	30.1	30.3	28.9	30	29.8	29.9
	August	27.4	31.3	30.2	27.3	29.9	29.6	29.7
pH (pH UNIT)	June	6.7	8	7.6	6.9	7.1	7	7
	August	7	7.9	7.7	7	7.1	7.2	7.2
DO. (mg/L)	June	0.33	0.12	0.66	0.38	0.46	1.23	0.91
	August	0.25	0.02	1.95	0.27	0.29	1.38	1.38
CONDUCT. (umhos/cm)	June	2526	20409	3810	1529	1543	1725	1769
	August	2479	28167	2407	1864	1421	1708	1563
SALINITY (ppt.)	June	0.7	11.5	1.3	0.2	0.2	0.3	0.3
	August	0.6	16	1.1	0.4	0	0.2	0
ALKALINITY (mg/L)	June	22	167	60	21	25	24	31
	August	33	670	63	27	22	23	24
BOD. (mg/L)	June	23	216	87	87	25	25	27
	August	19	376	70	54	26	22	22
COD. (mg/L)	June	195	2693	500	233	213	183	334
	August	167	4397	318	117	118	129	143
SS. (mg/L)	June	17	106	30	24	25	41	24
	August	12	116	40	21	18	21	16
DS. (mg/L)	June	1417	8680	1940	889	1260	700	770
	August	2188	12080	1888	669	440	830	1003
TS. (mg/L)	June	1434	8780	2150	909	1321	741	794
	August	2199	12224	1928	690	545	851	1018
MERCURY (ppb.)	June	0.8	2.05	0.81	0.99	1.16	1.45	1.28
	August	0.85	2.63	0.82	0.65	0.98	1.24	0.95
CADMIUM (ppm.)	June	NON DETECTABLE						
	August	NON DETECTABLE						
MANGANESE (ppm.)	June	0.72	0.74	1.01	0.87	0.51	0.62	0.41
	August	1.28	0.77	1.08	0.84	0.76	0.74	0.73

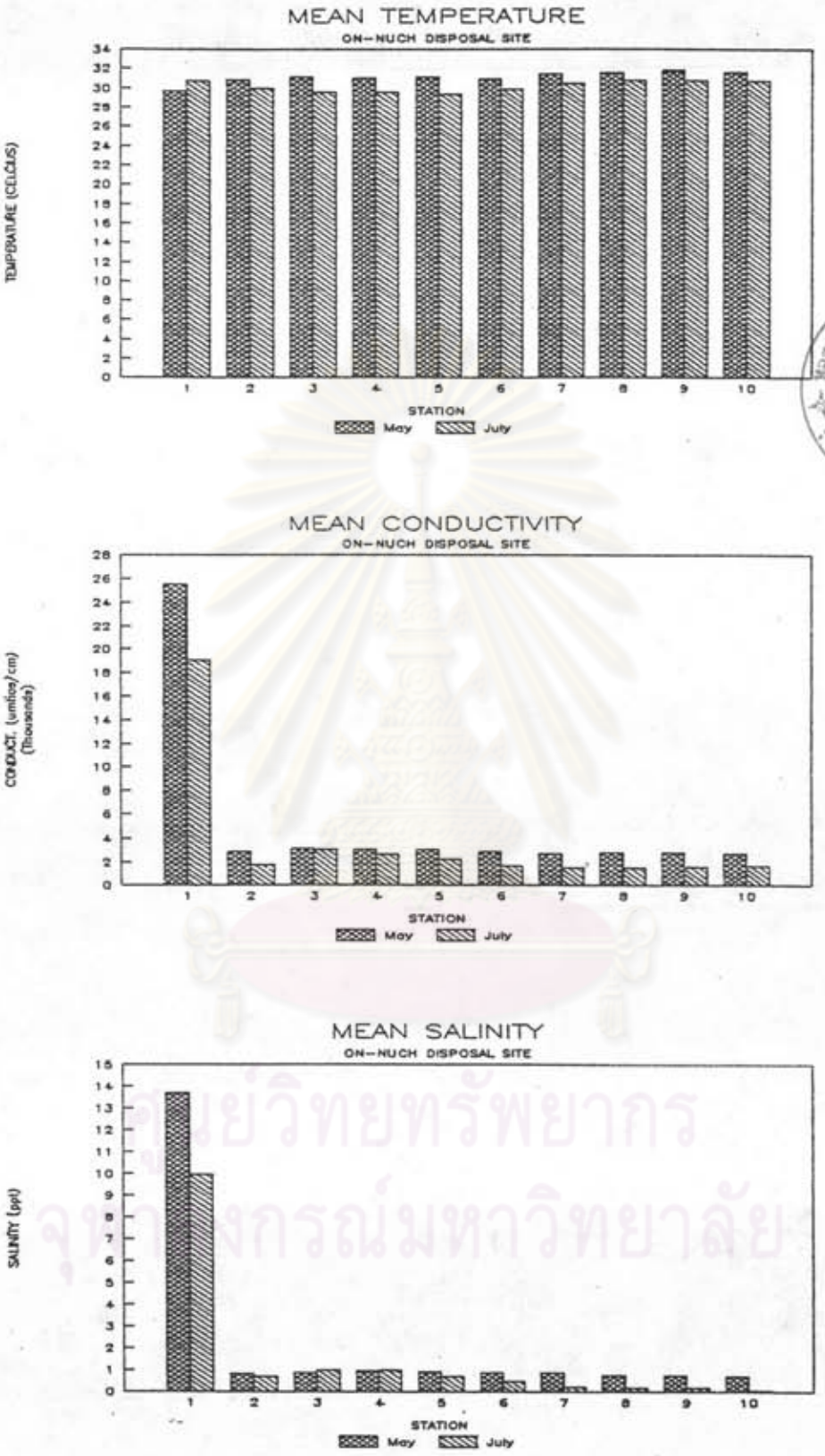
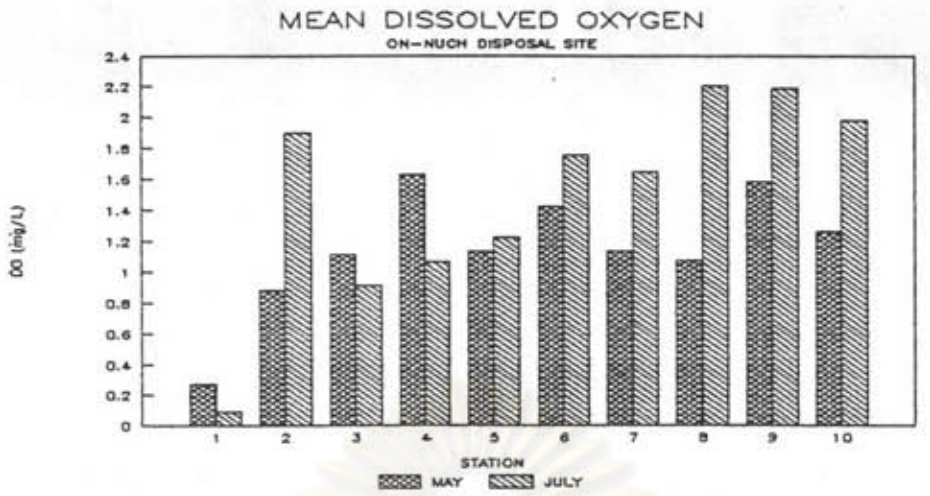
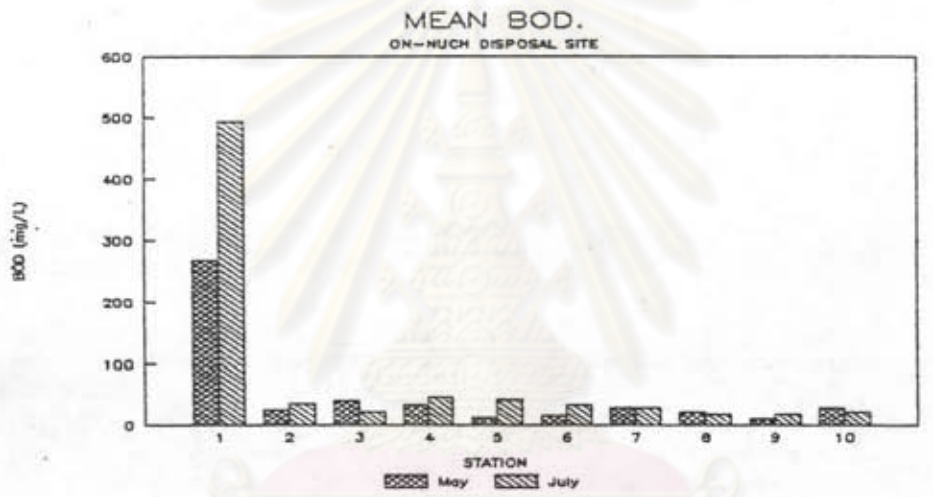


Fig. 4-1 The comparison of each parameter in the two periods of observation at the On-nuch disposal site.


MEAN DISSOLVED OXYGEN
ON-NUCH DISPOSAL SITE
DO (mg/L)
STATION
MAY
JULY


MEAN BOD.
ON-NUCH DISPOSAL SITE
BOD (mg/L)
STATION
May
July

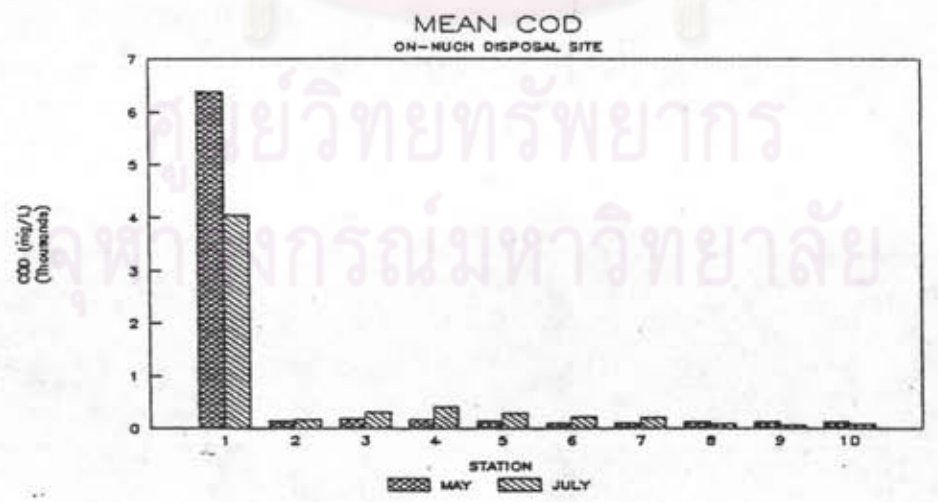
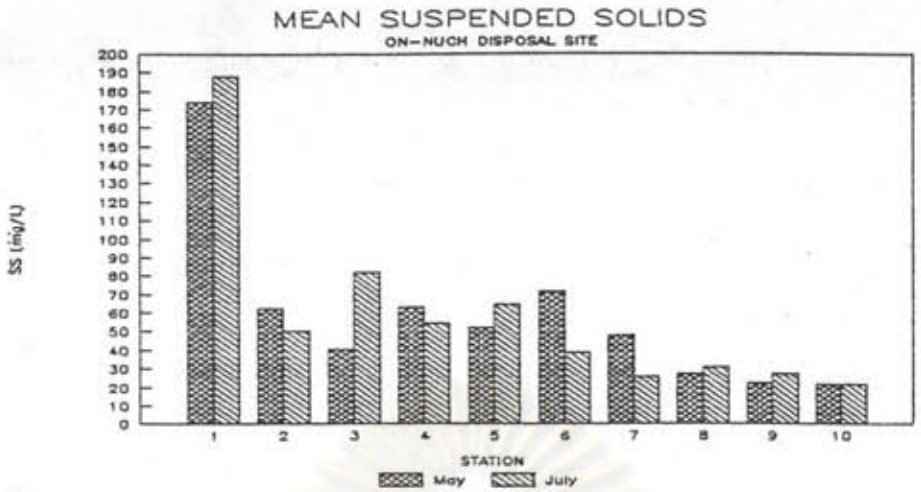
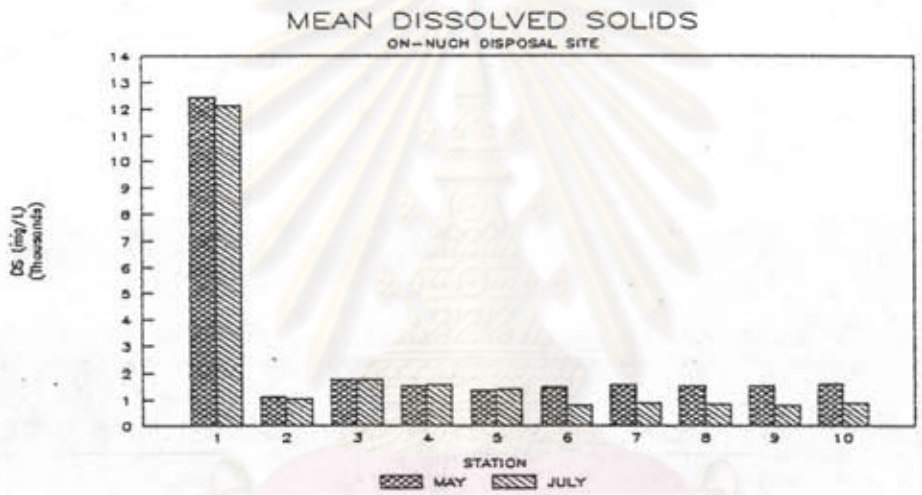

MEAN COD
ON-NUCH DISPOSAL SITE
COD (mg/L) (Thousands)
STATION
MAY
JULY

Fig. 4-1 (cont.)


MEAN SUSPENDED SOLIDS
ON-NUCH DISPOSAL SITE
SS (mg/L)
STATION
May
July


MEAN DISSOLVED SOLIDS
ON-NUCH DISPOSAL SITE
DS (mg/L) (Thousands)
STATION
MAY
JULY

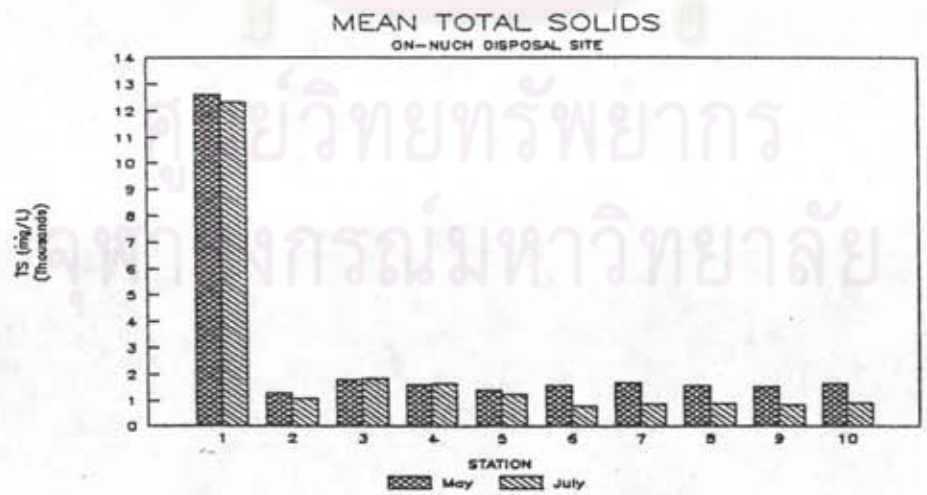
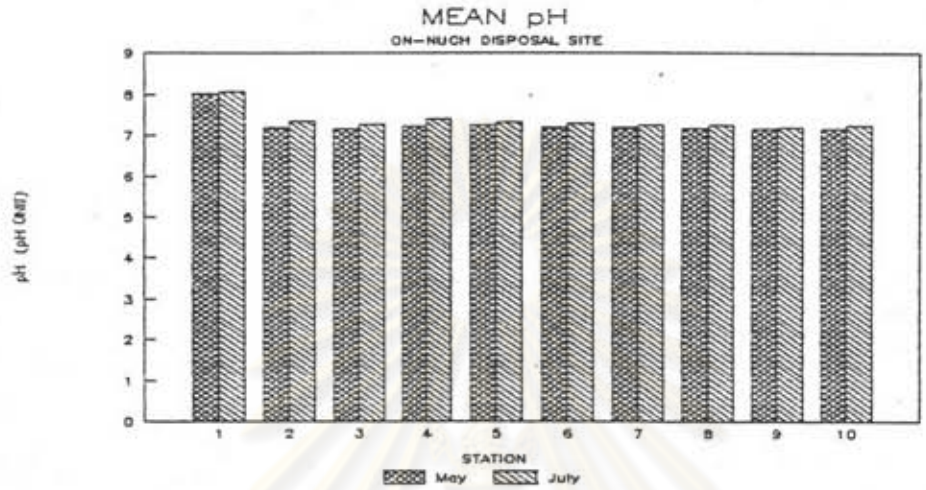

MEAN TOTAL SOLIDS
ON-NUCH DISPOSAL SITE
TS (mg/L) (Thousands)
STATION
May
July

Fig. 4-1 (cont.)


MEAN pH
ON-NUCH DISPOSAL SITE
pH (pH Unit)
0
1
2
3
4
5
6
7
8
9
1
2
3
4
5
6
7
8
9
10
STATION
May
July

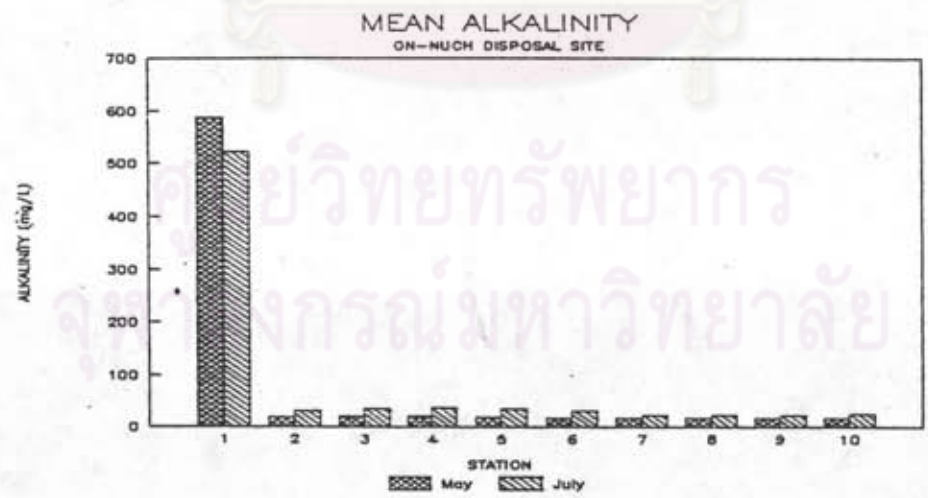

MEAN ALKALINITY
ON-NUCH DISPOSAL SITE
ALKALINITY (mg/L)
0
100
200
300
400
500
600
700
1
2
3
4
5
6
7
8
9
10
STATION
May
July

Fig. 4-1 (cont.)

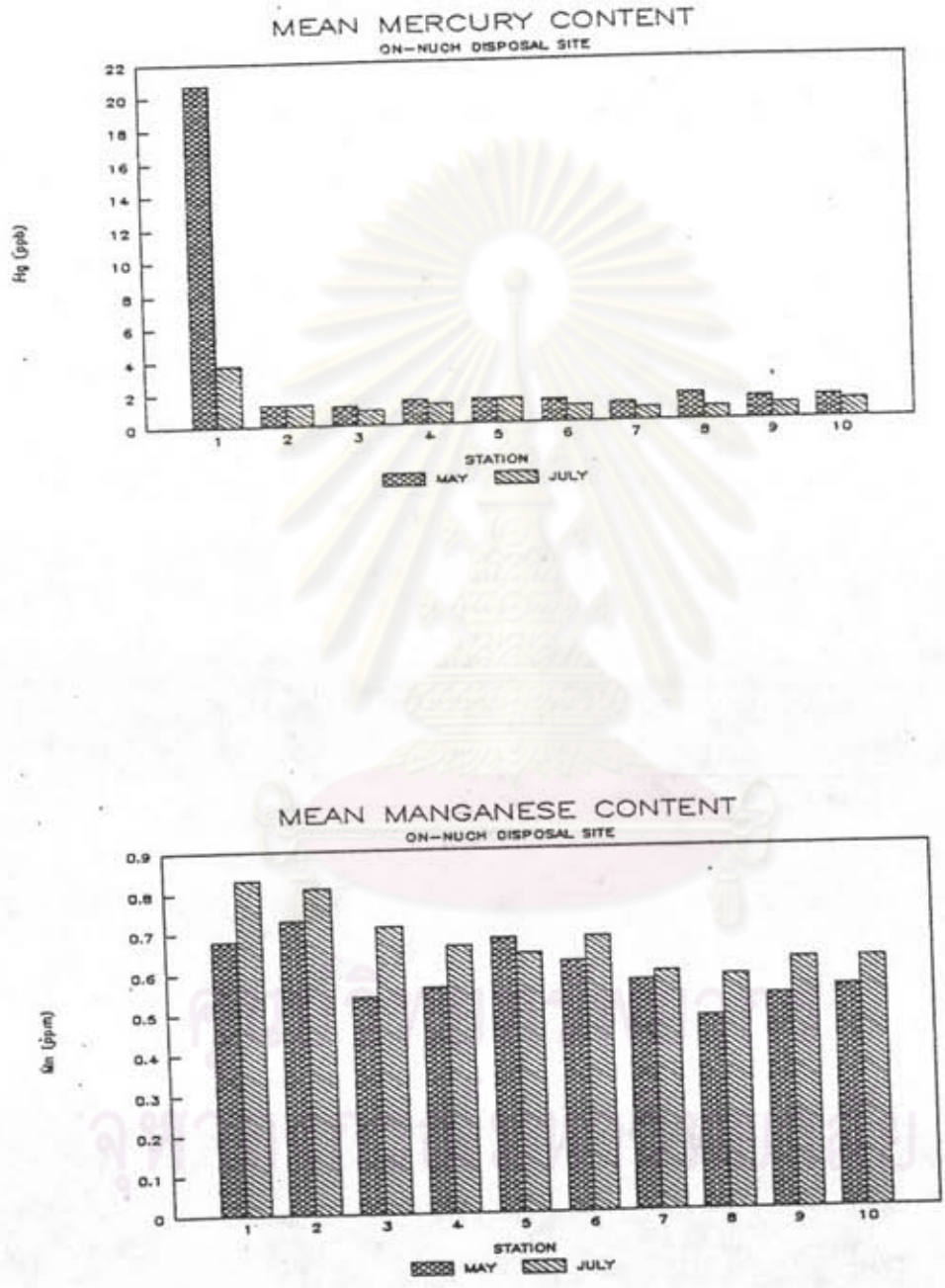

MEAN MERCURY CONTENT
ON-NUCH DISPOSAL SITE
Hg (ppb)
22
20
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
7
8
9
10
STATION
MAY
JULY
MEAN MANGANESE CONTENT
ON-NUCH DISPOSAL SITE
Mn (ppm)
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
2
3
4
5
6
7
8
9
10
STATION
MAY
JULY

Fig. 4-1 (cont.)

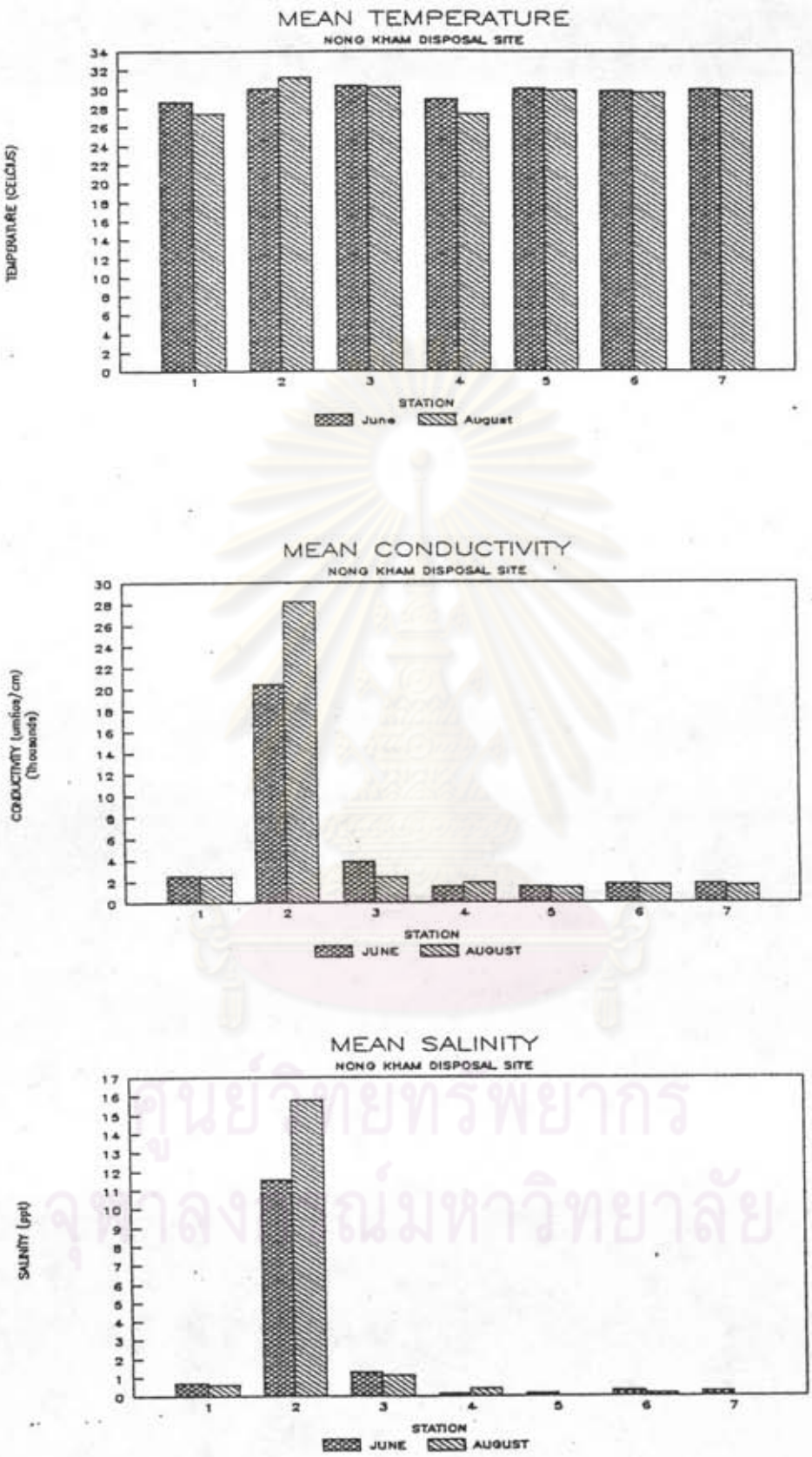


Fig. 4-2 The comparison of each parameter in the two periods of observation of the Nong Kham disposal site.

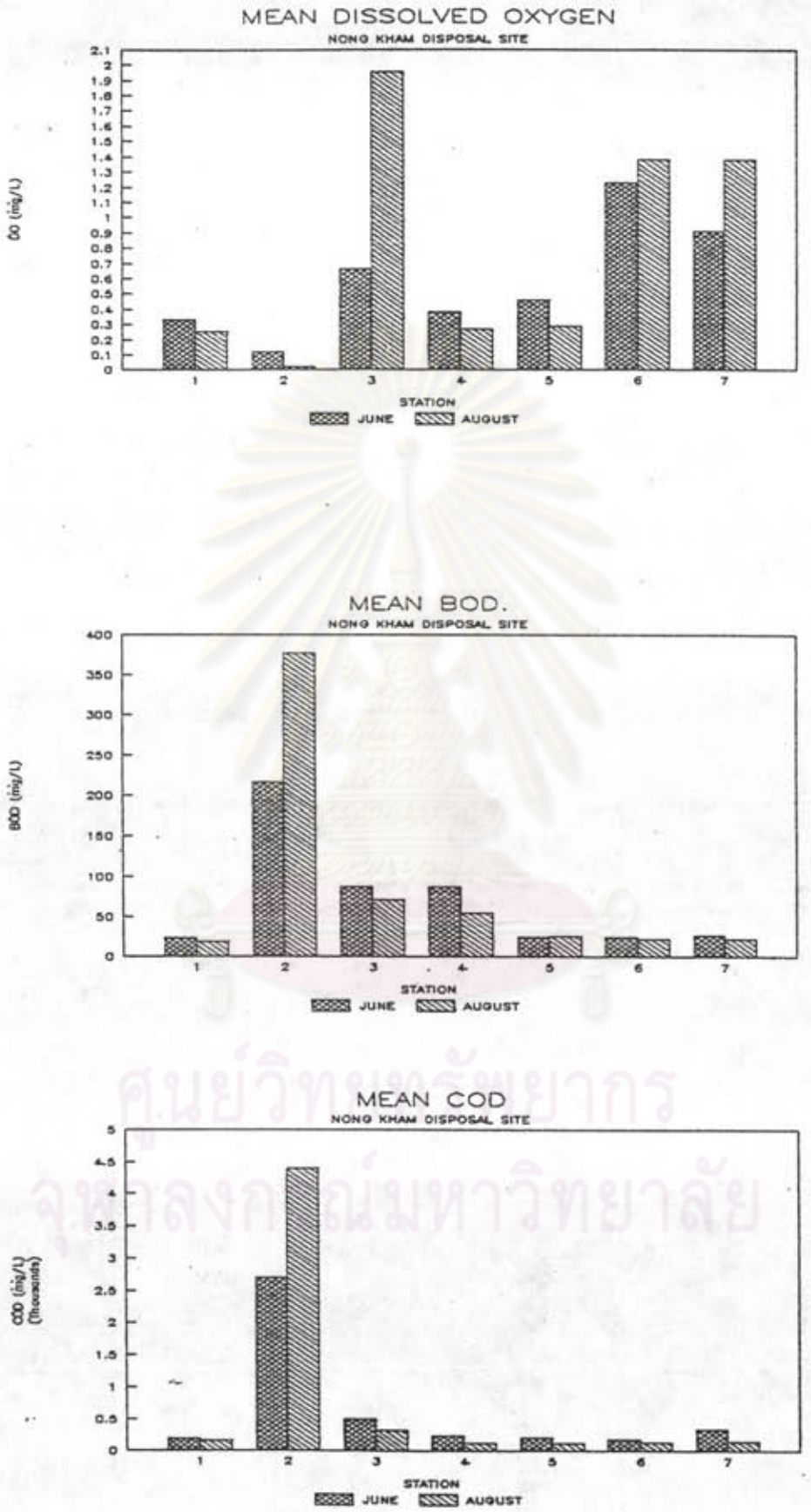

MEAN DISSOLVED OXYGEN
NONG KHAM DISPOSAL SITE
DO (mg/L)
STATION
JUNE
AUGUST
MEAN BOD.
NONG KHAM DISPOSAL SITE
BOD (mg/L)
STATION
JUNE
AUGUST
MEAN COD
NONG KHAM DISPOSAL SITE
COD (mg/L) (Thousands)
STATION
JUNE
AUGUST

Fig. 4-2 (cont.)

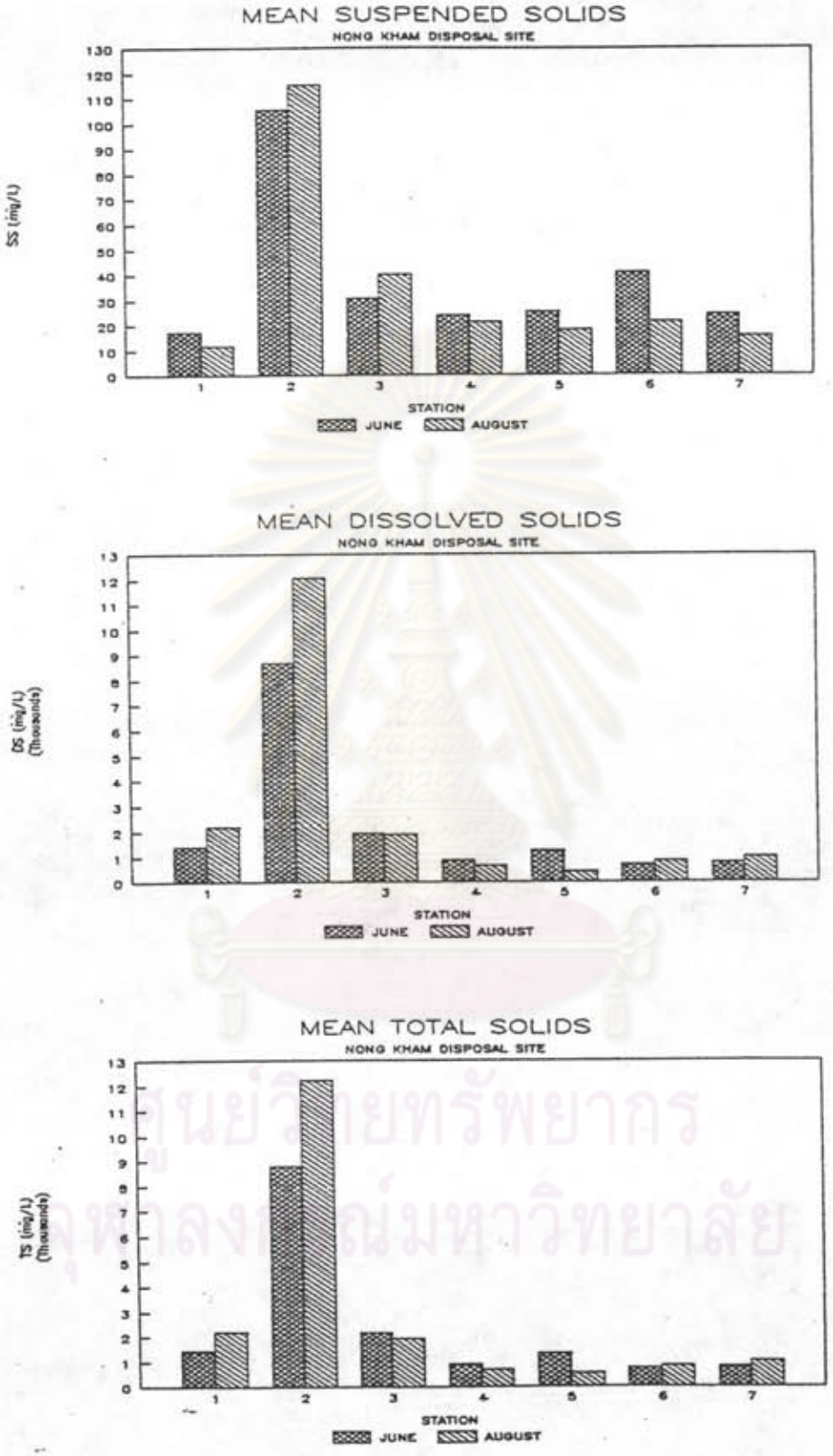
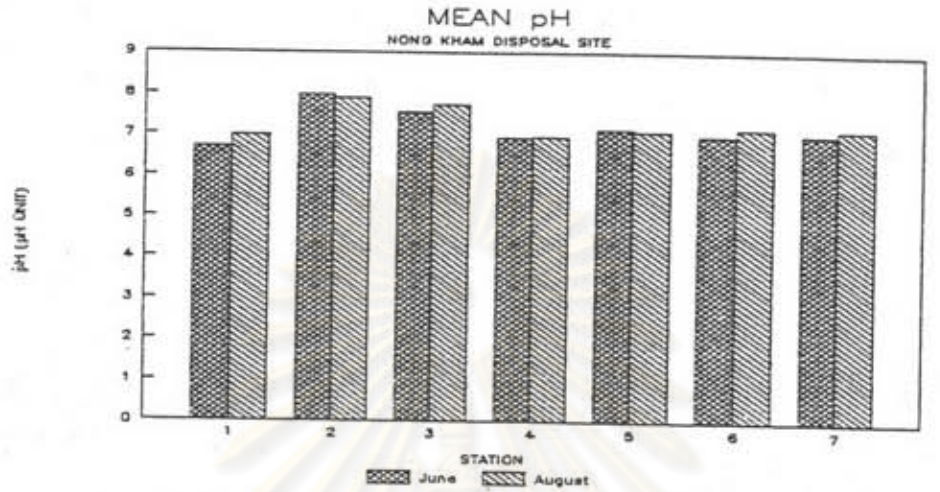

MEAN SUSPENDED SOLIDS
NONG KHAM DISPOSAL SITE
SS (mg/L)
STATION
JUNE
AUGUST
MEAN DISSOLVED SOLIDS
NONG KHAM DISPOSAL SITE
DS (mg/L) (Thousands)
STATION
JUNE
AUGUST
MEAN TOTAL SOLIDS
NONG KHAM DISPOSAL SITE
TS (mg/L) (Thousands)
STATION
JUNE
AUGUST

Fig. 4-2 (cont.)


MEAN pH
NONG KHAM DISPOSAL SITE
pH (pH UNIT)
STATION
June
August

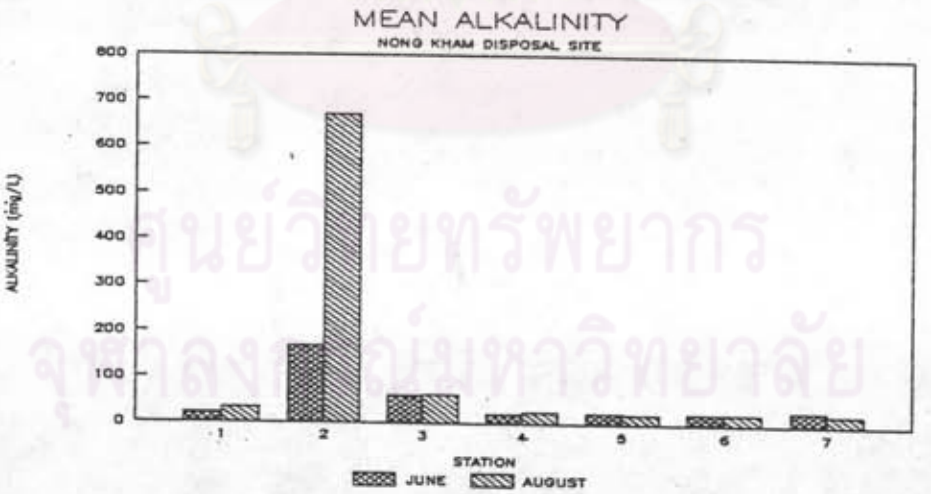
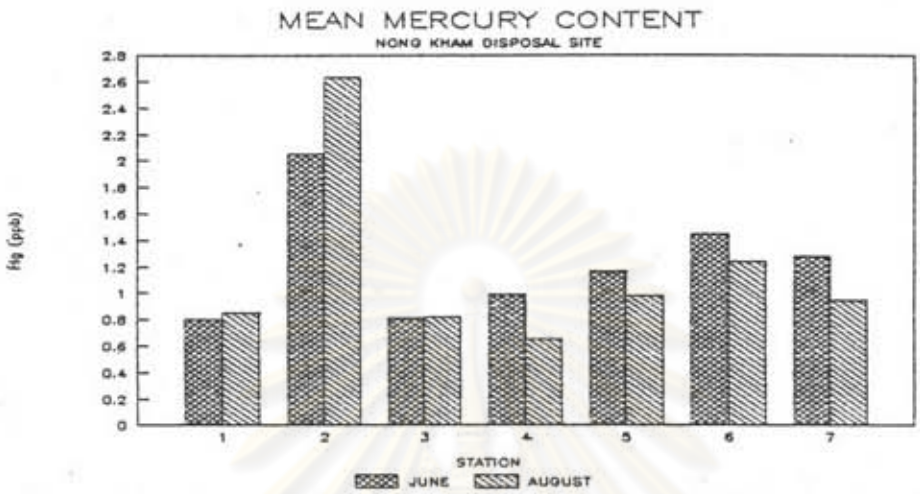

MEAN ALKALINITY
NONG KHAM DISPOSAL SITE
ALKALINITY (mg/L)
STATION
JUNE
AUGUST

Fig. 4-2 (cont.)


MEAN MERCURY CONTENT
NONG KHAM DISPOSAL SITE
Hg (ppb)
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1
2
3
4
5
6
7
STATION
JUNE
AUGUST

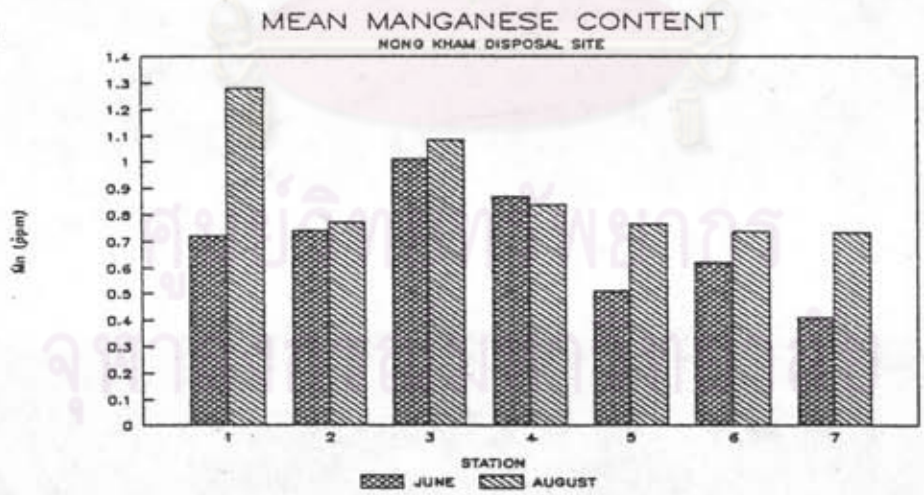

MEAN MANGANESE CONTENT
NONG KHAM DISPOSAL SITE
Mn (ppm)
1.4
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1
2
3
4
5
6
7
STATION
JUNE
AUGUST

Fig. 4-2 (cont.)