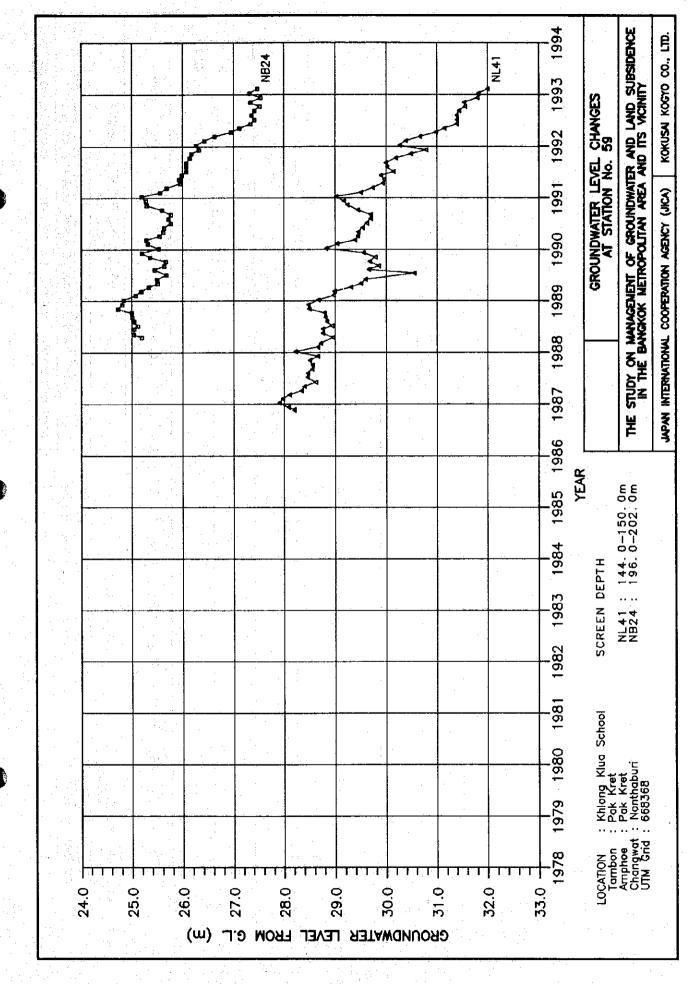
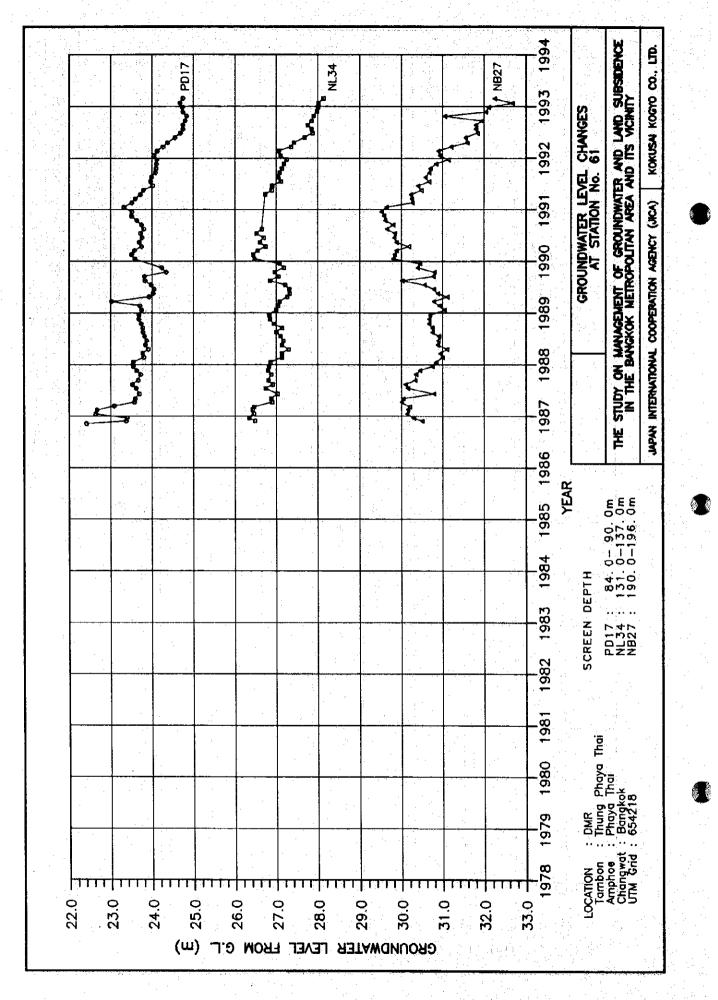
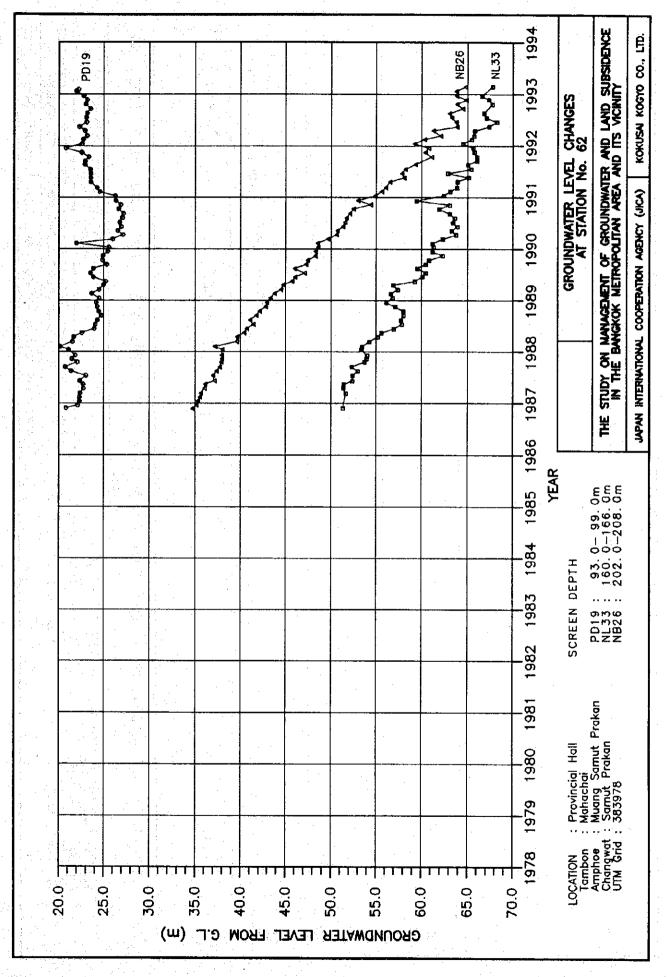


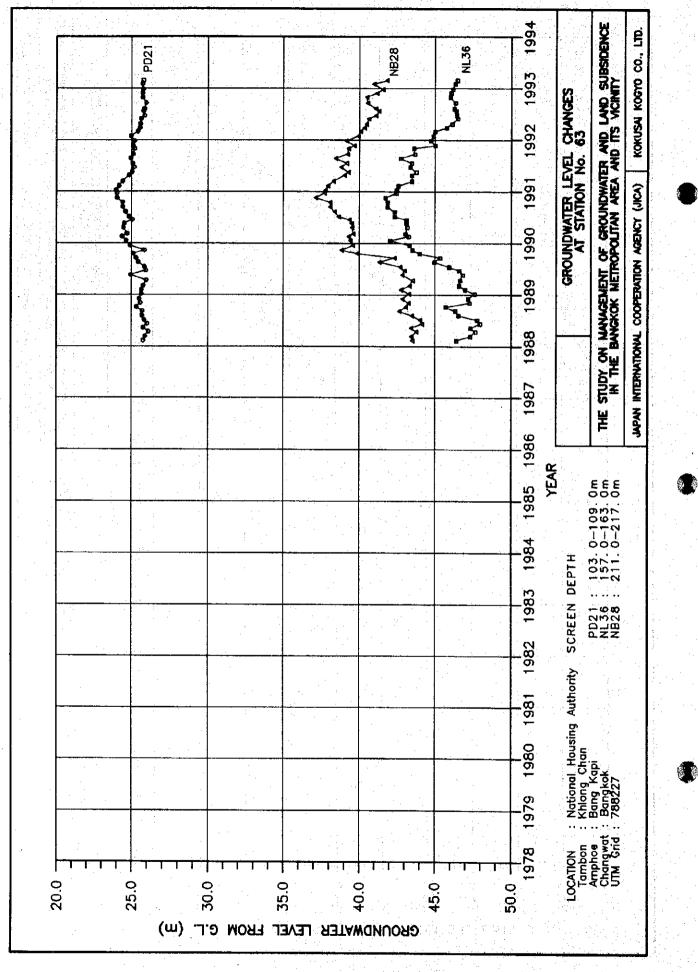
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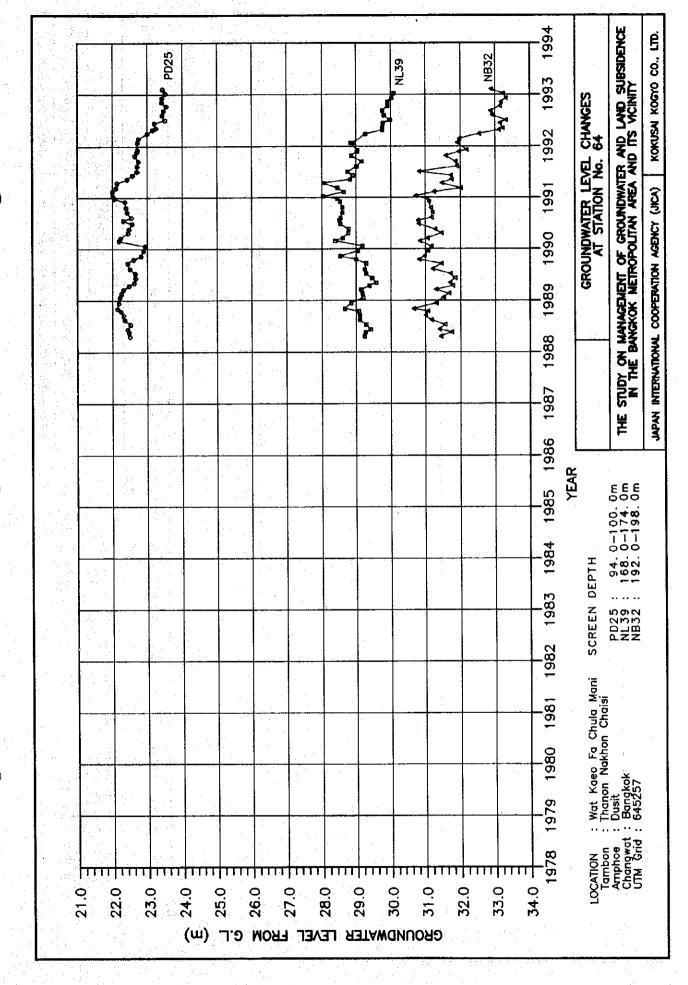


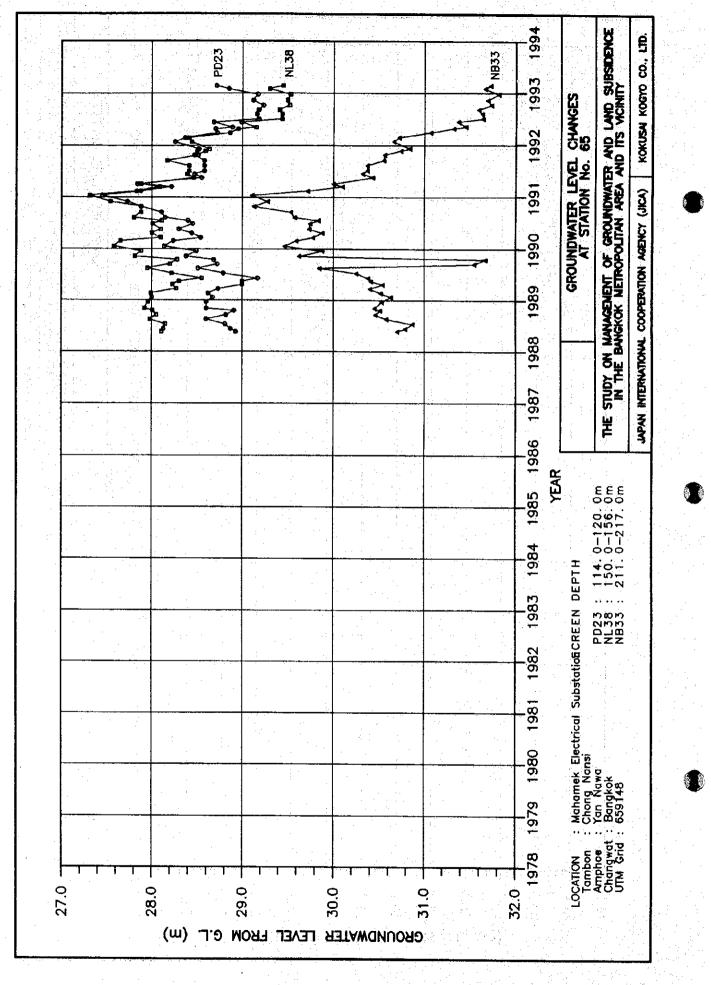


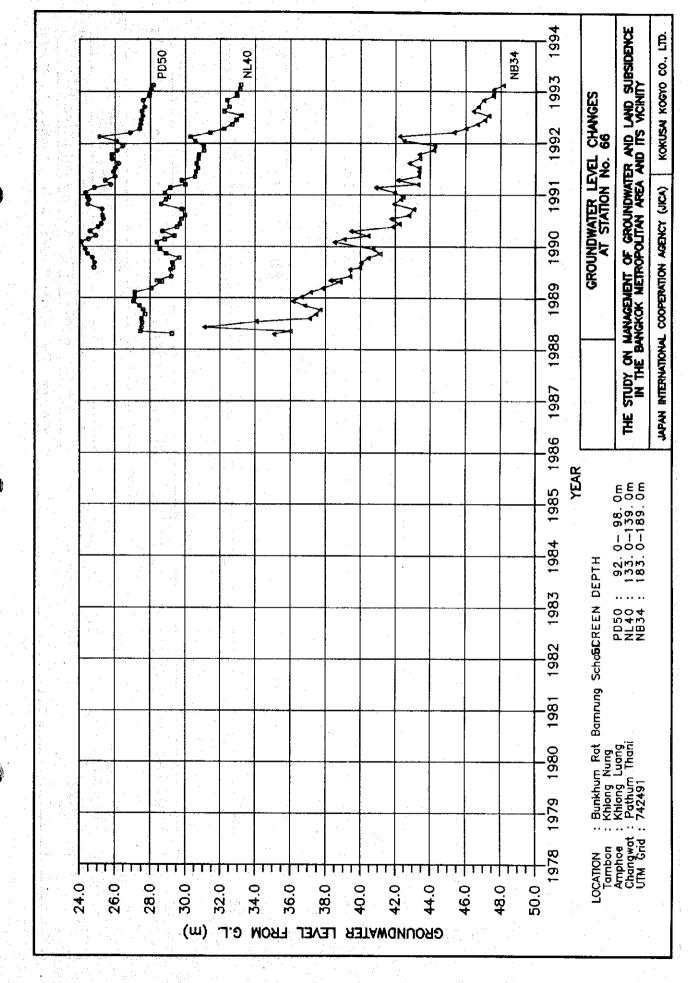


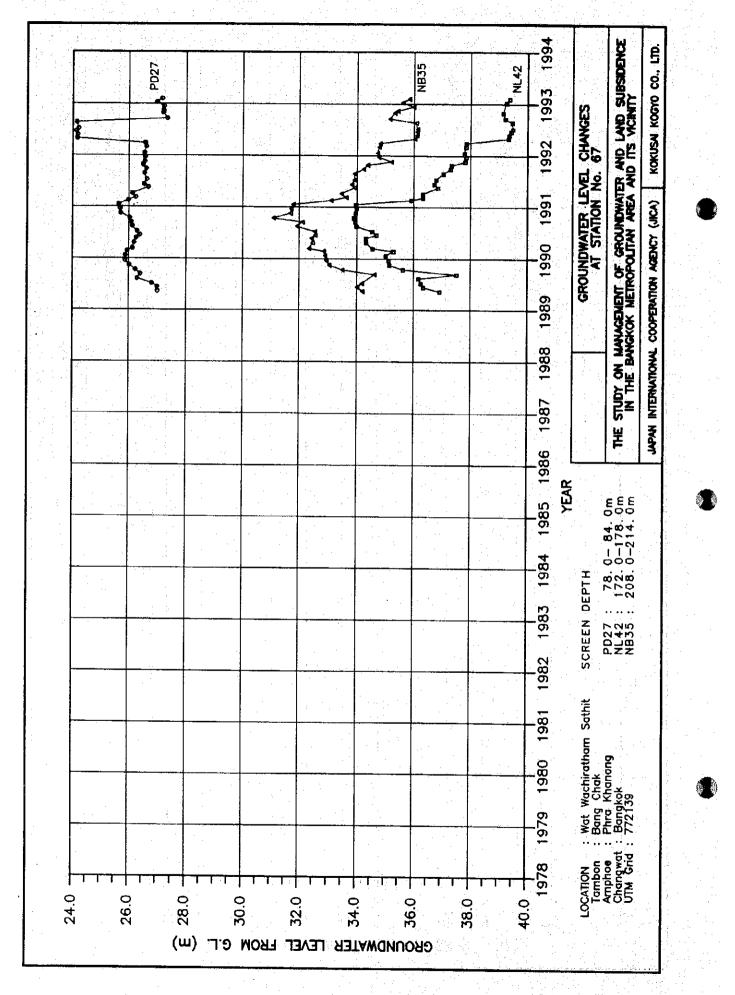
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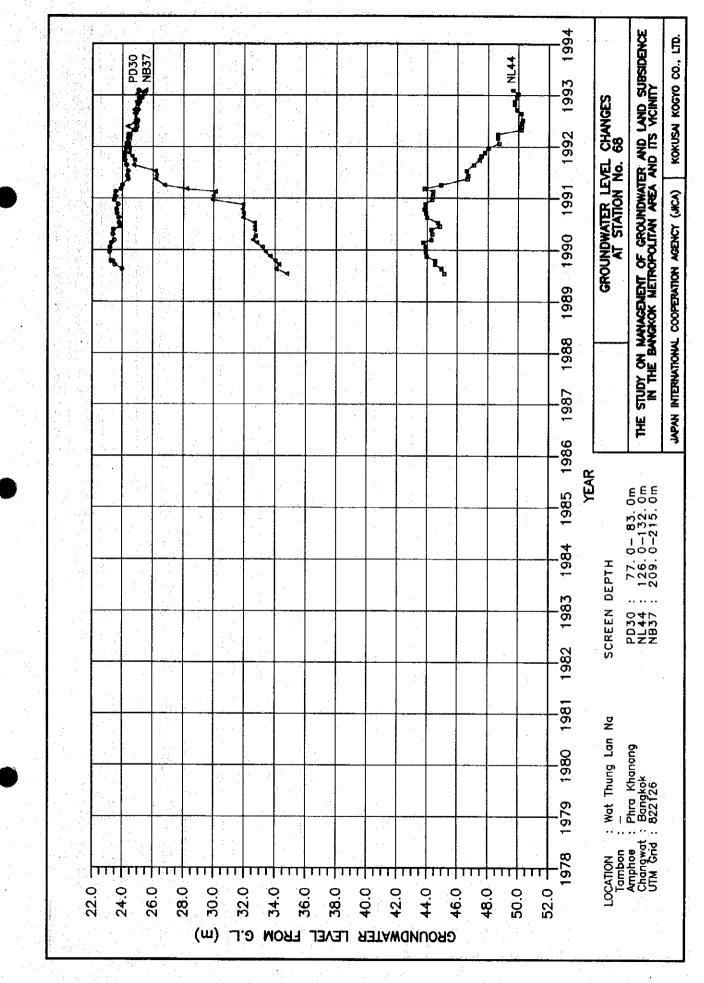


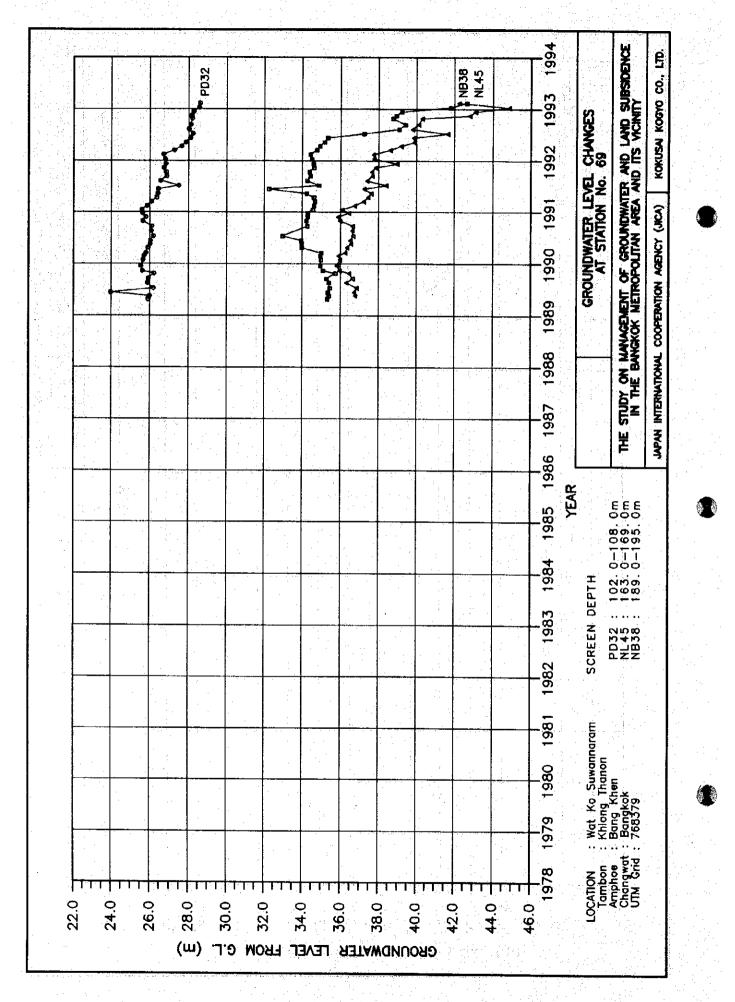


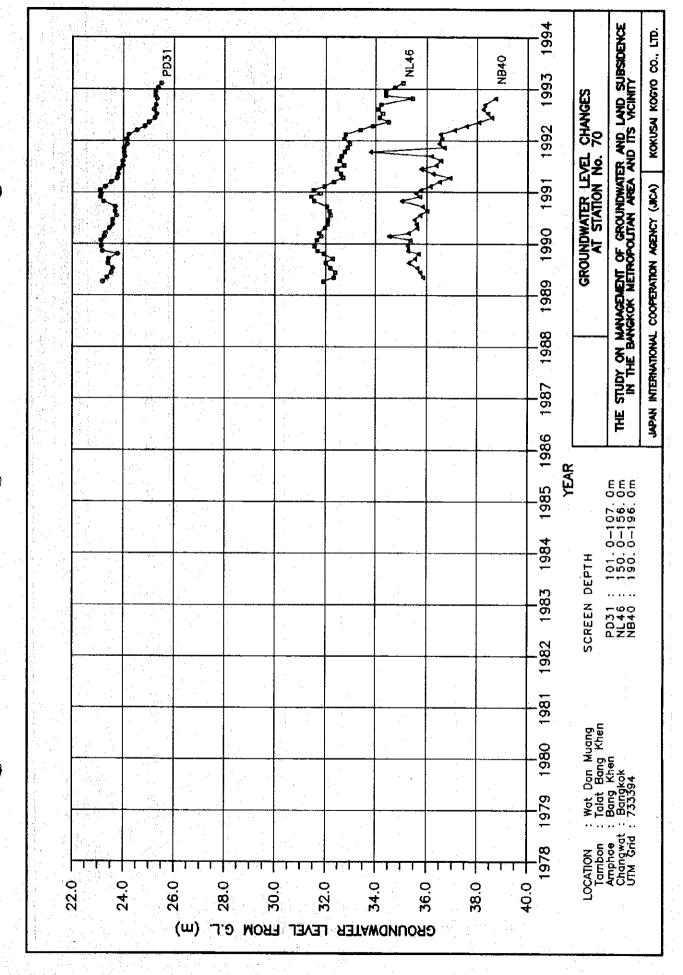


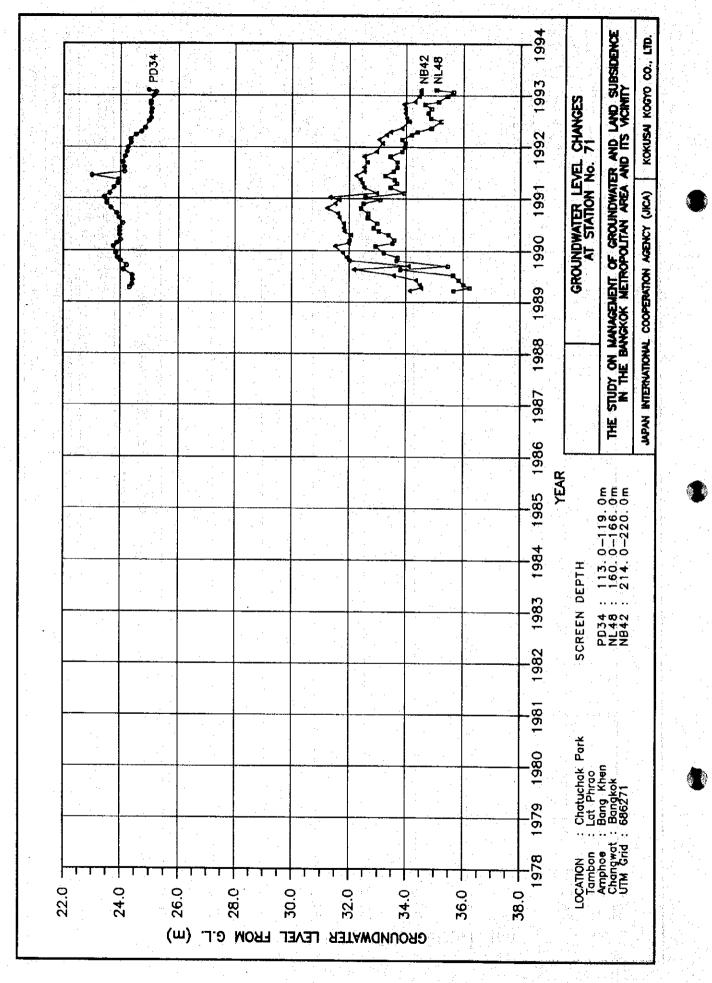


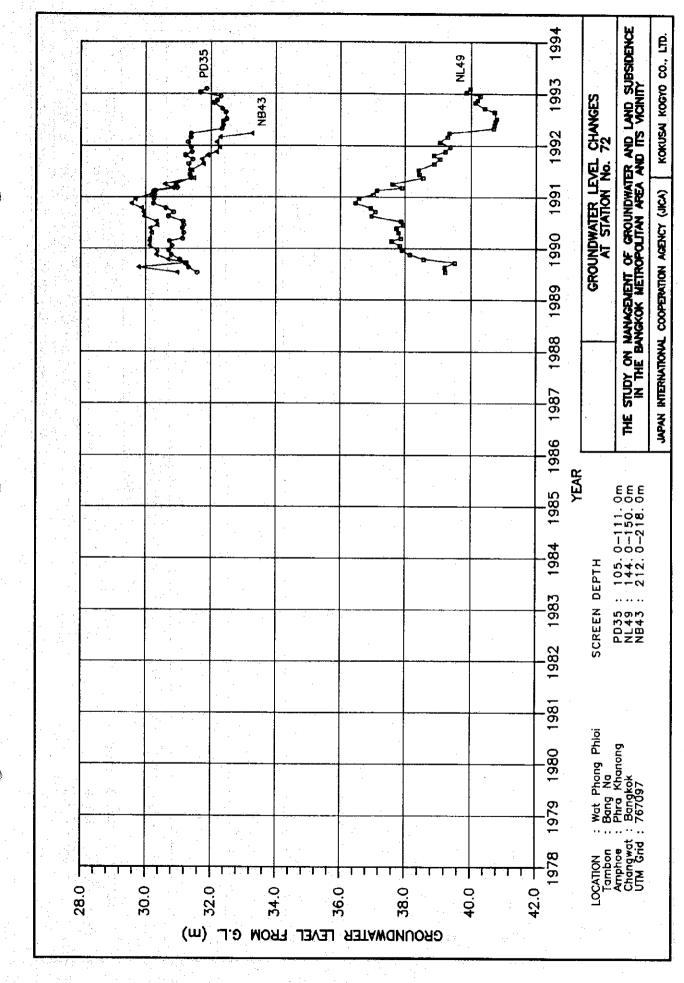
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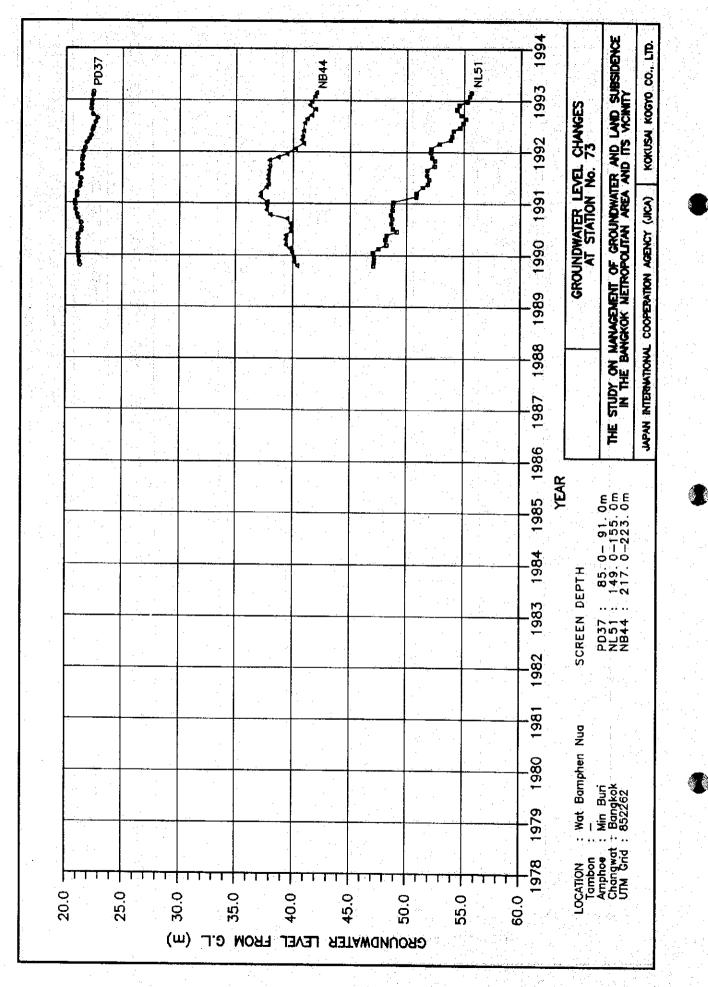


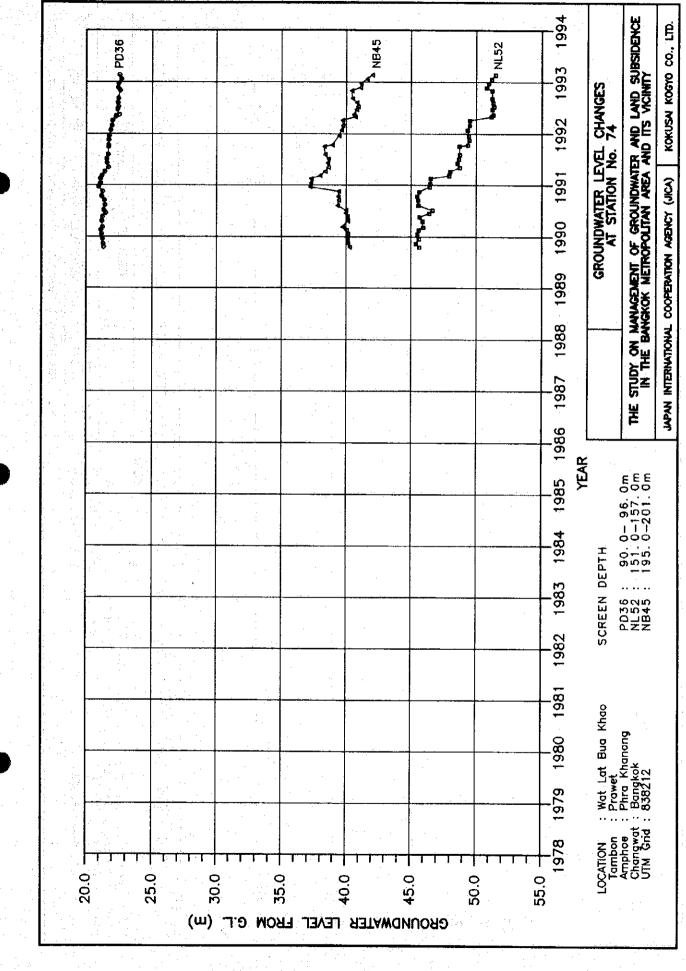




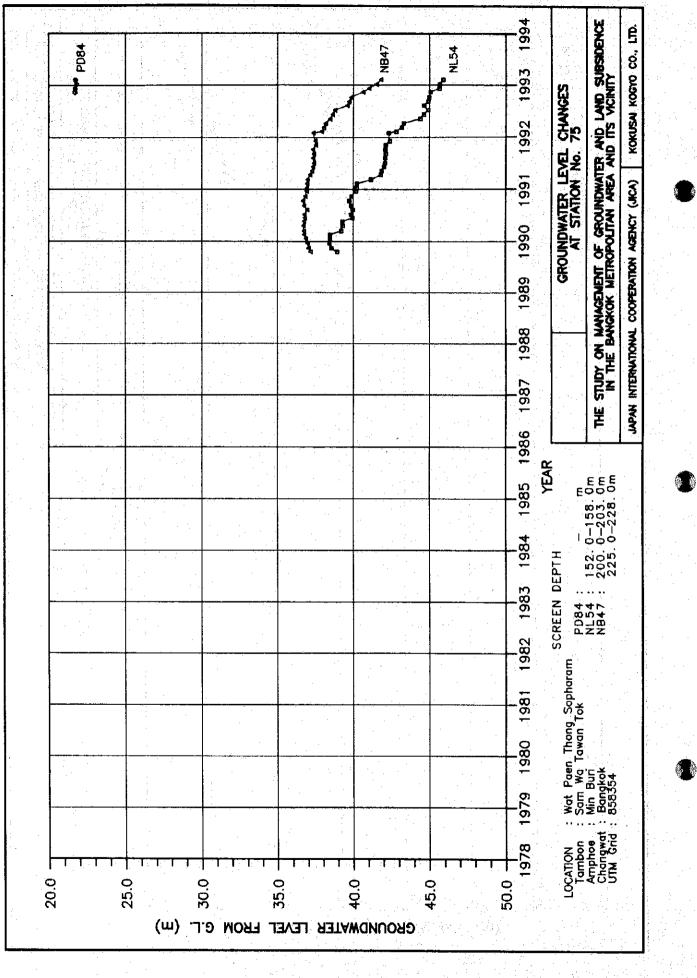


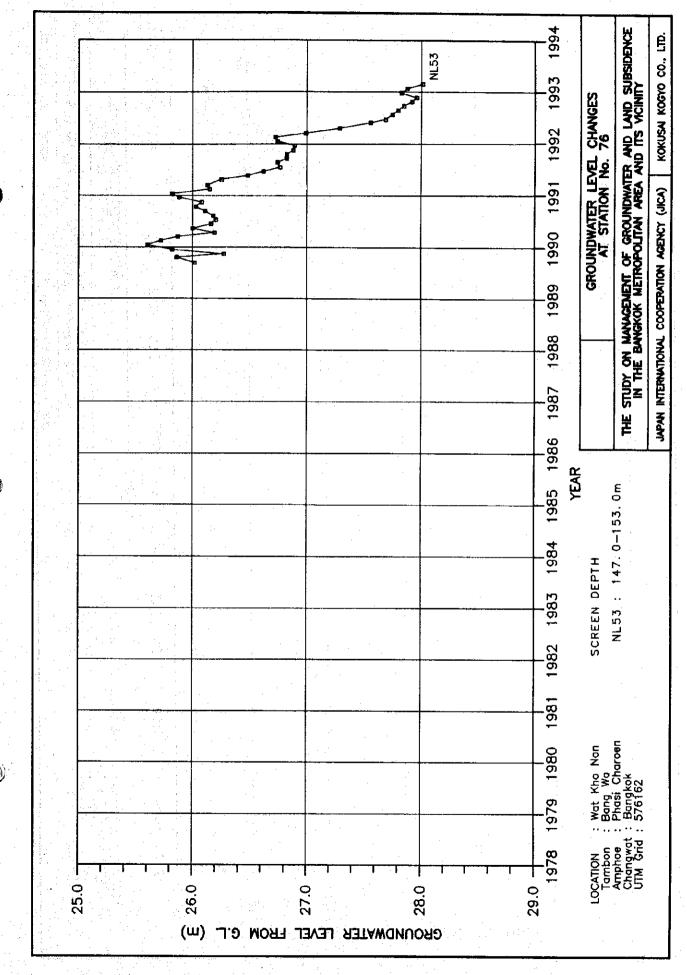


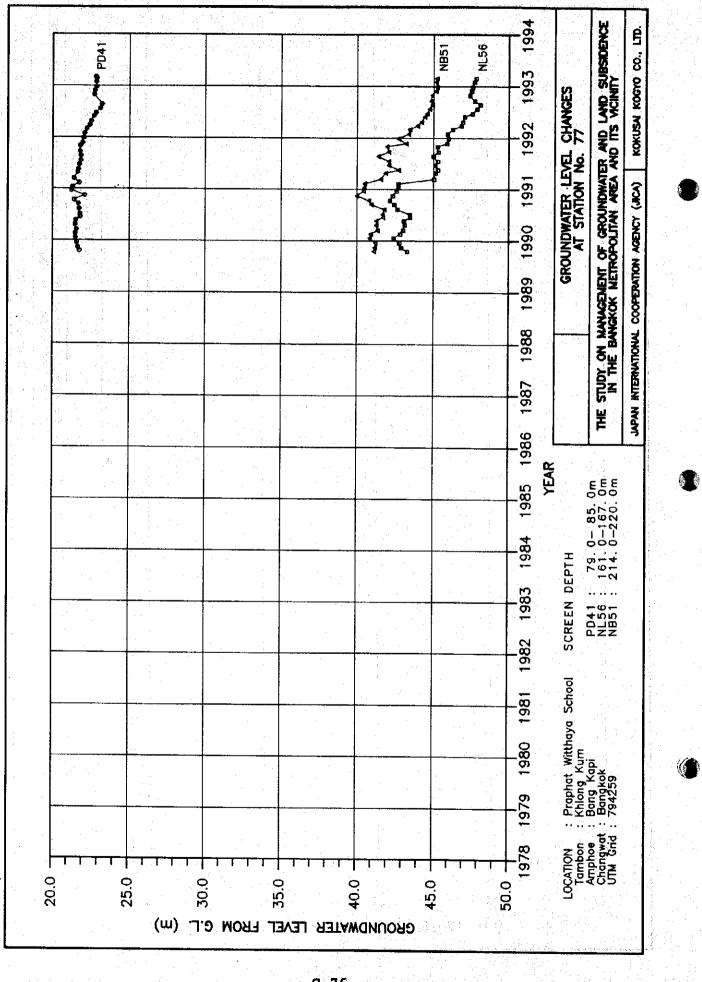


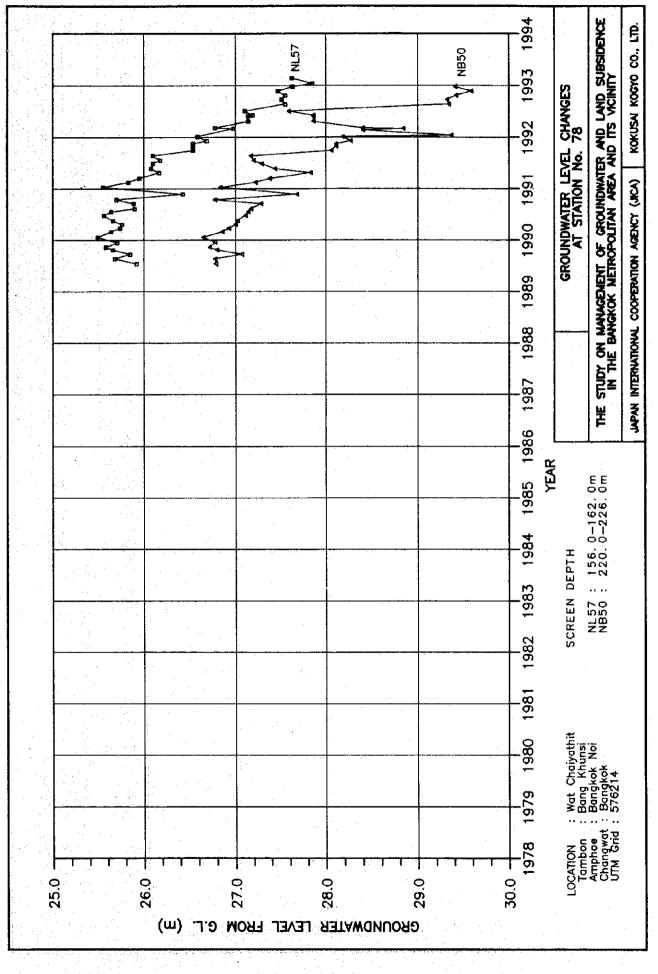


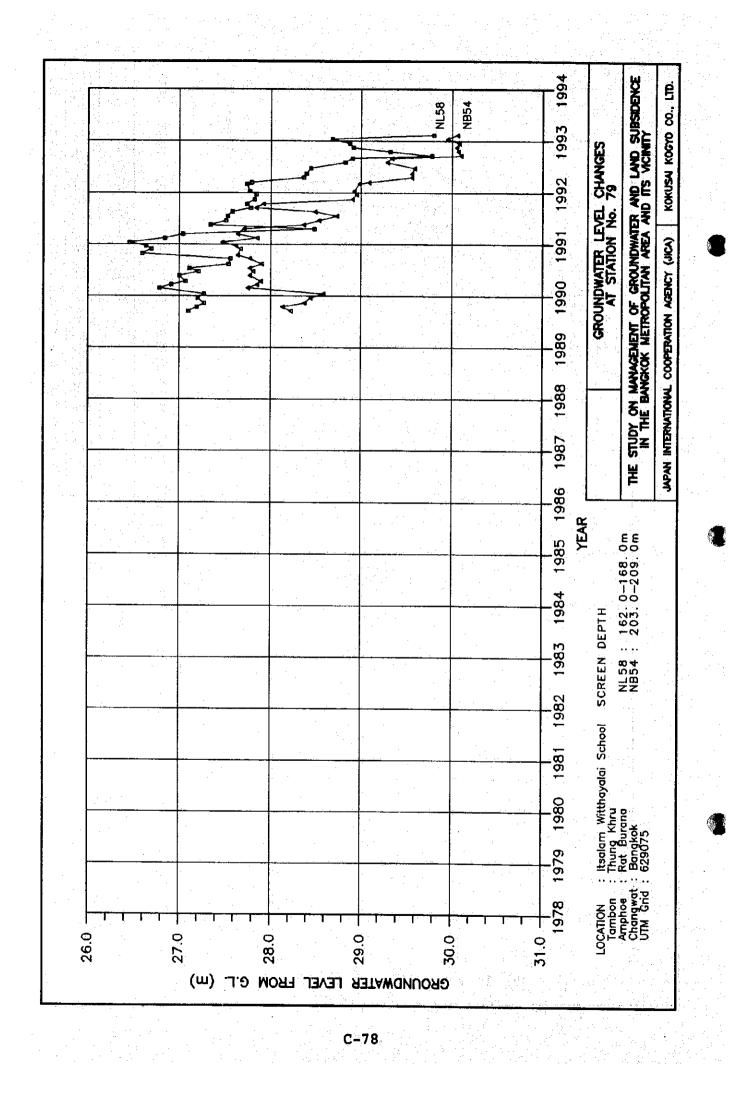
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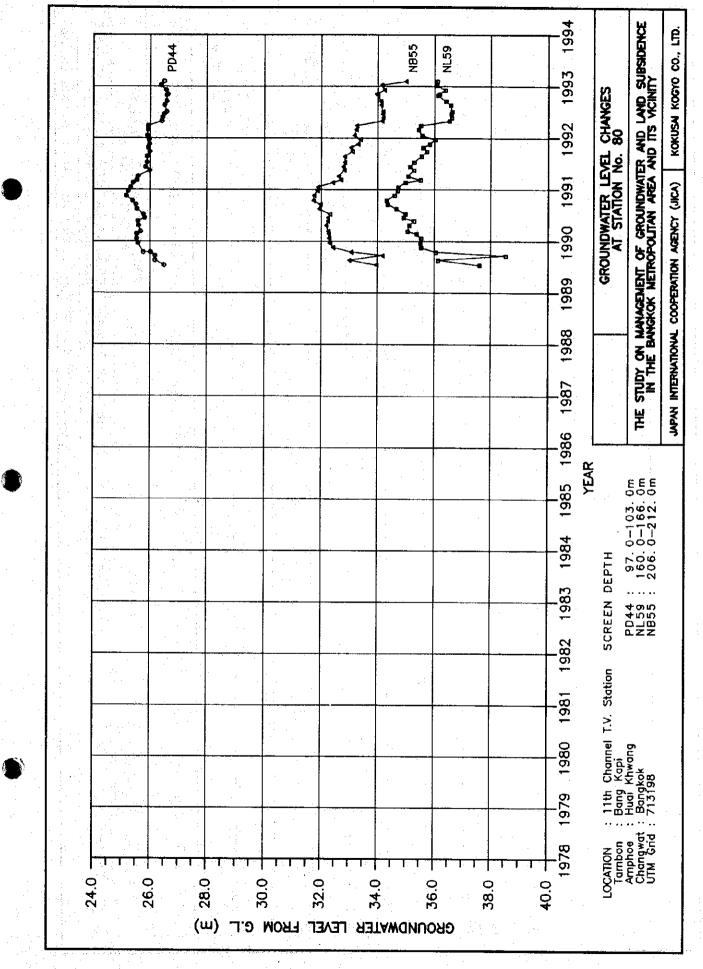


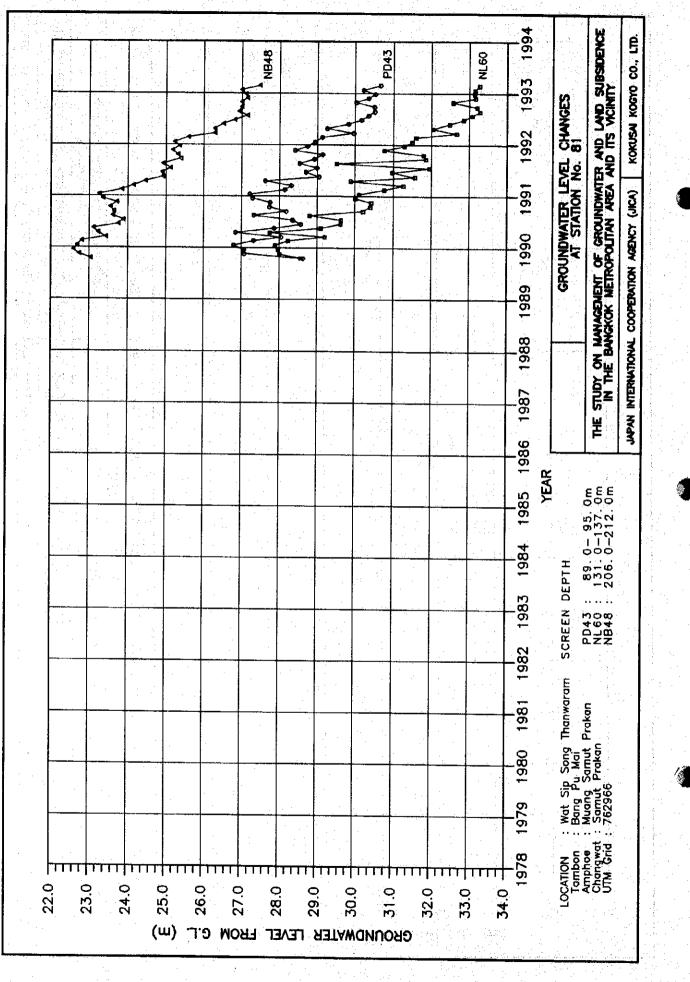


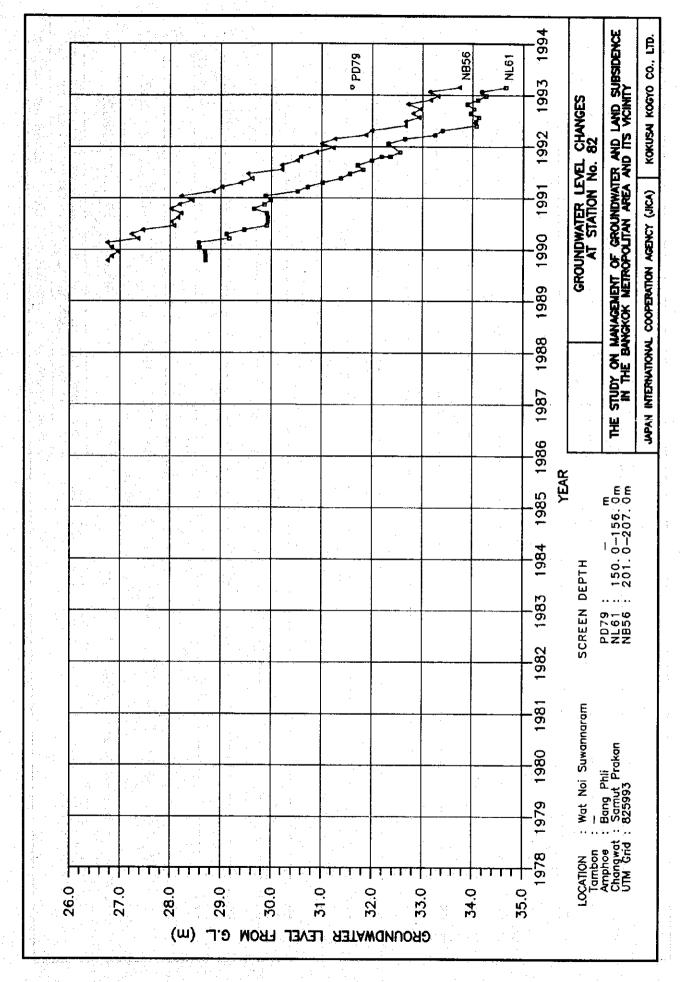


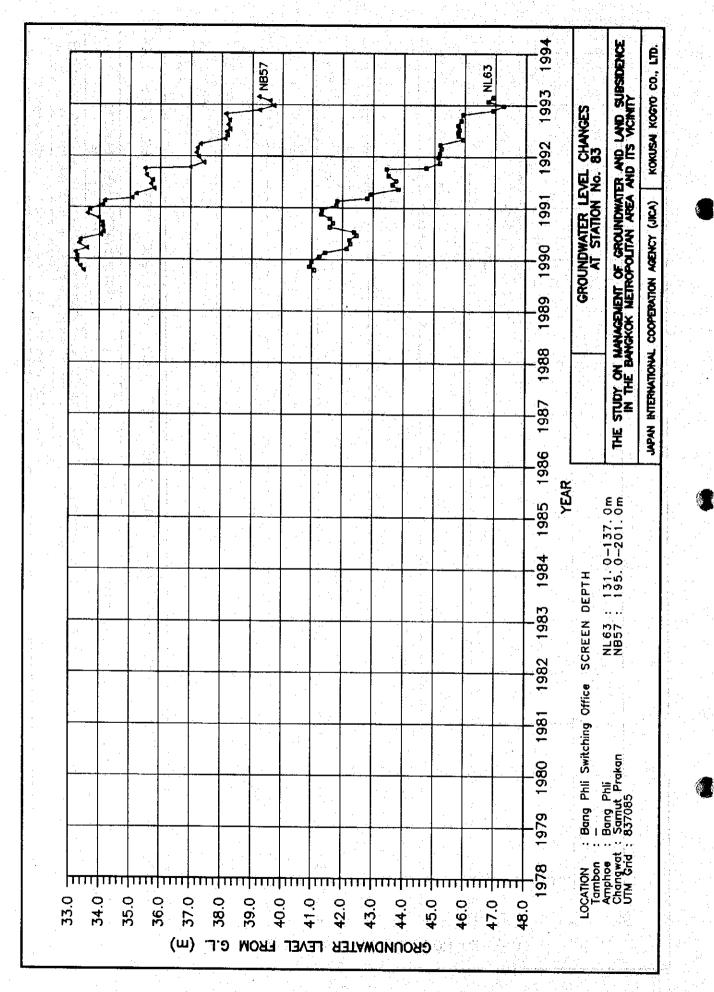


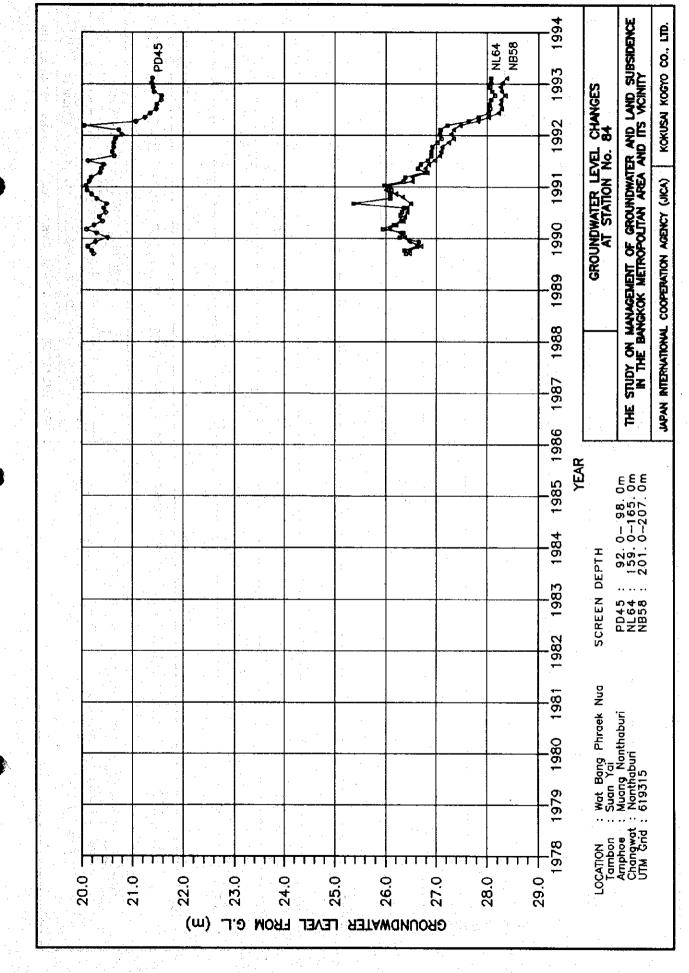


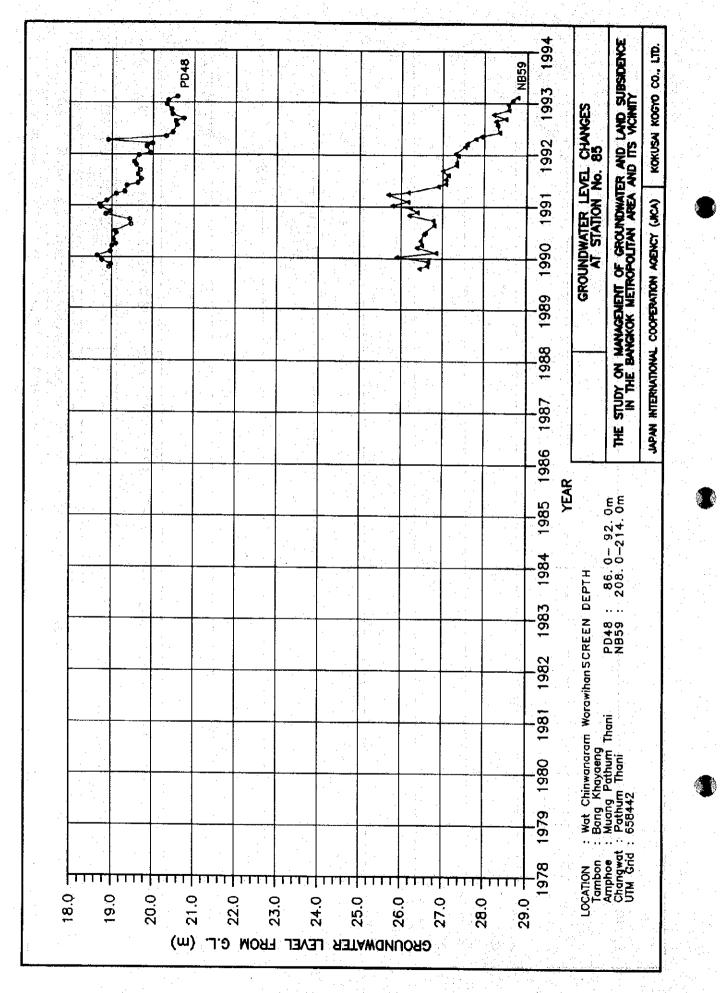




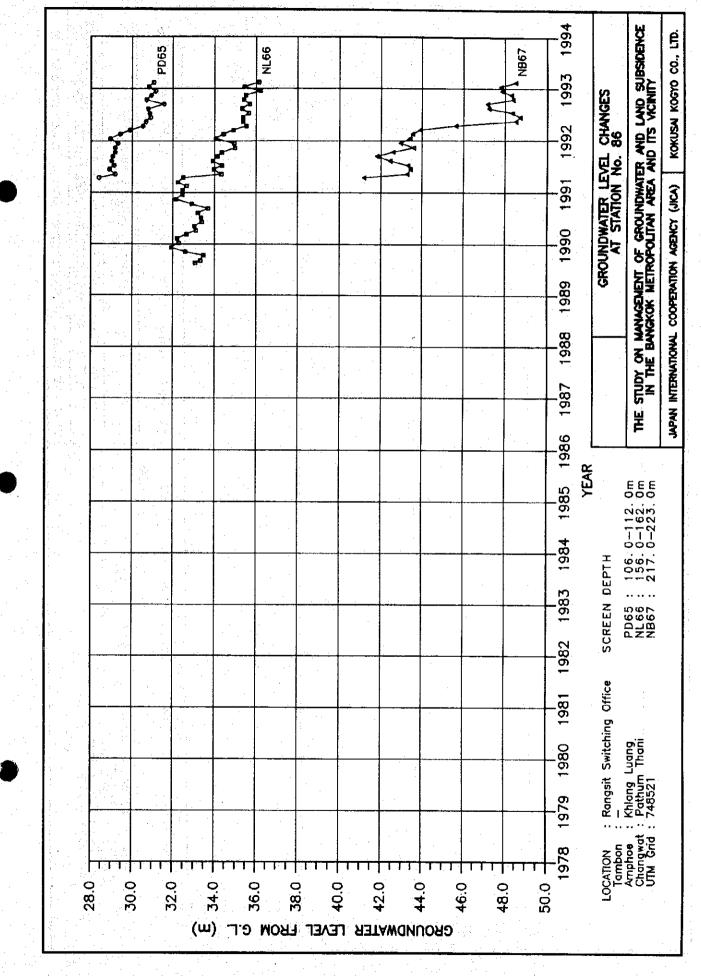


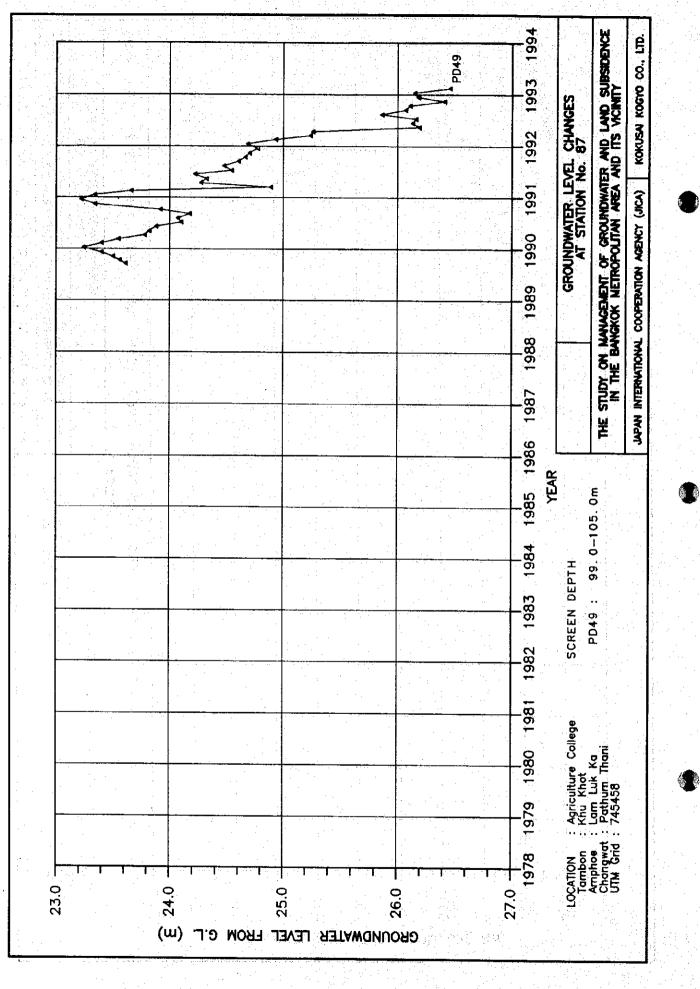




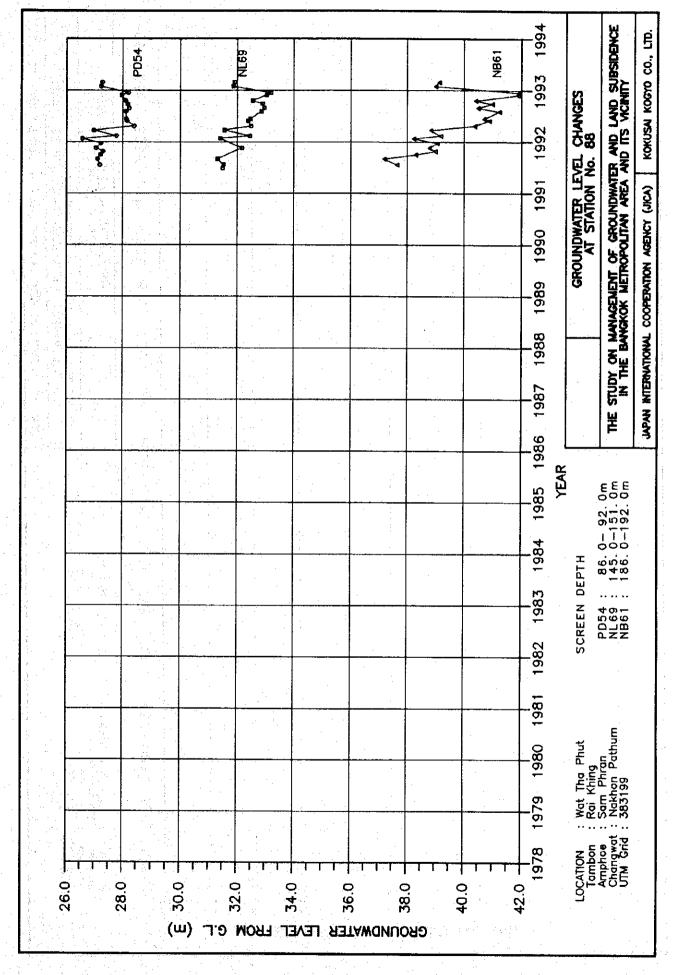


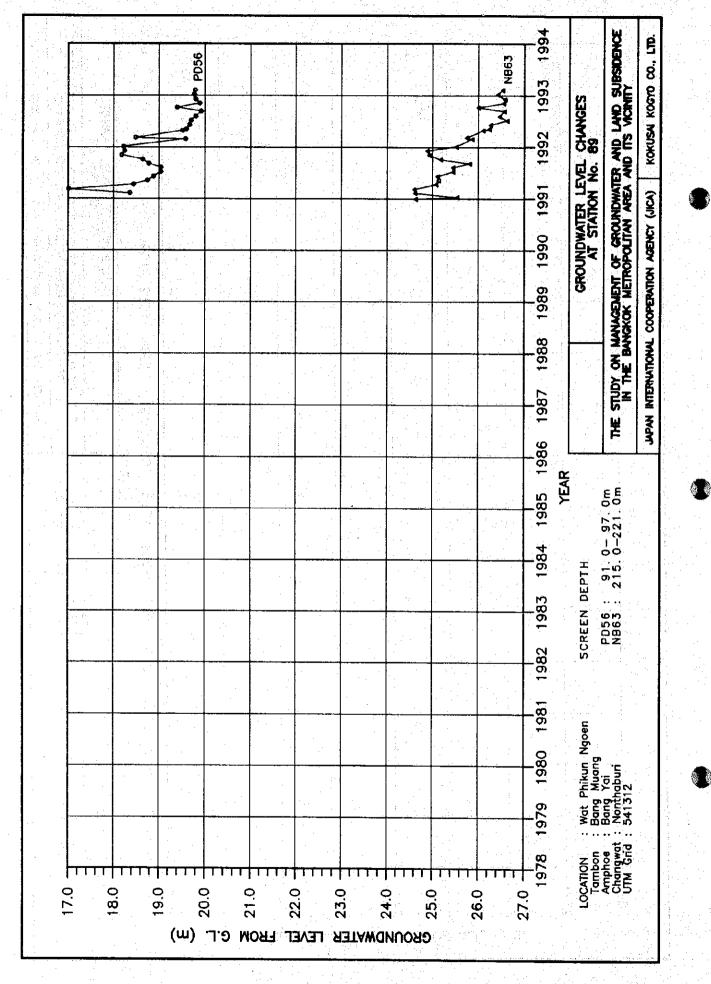
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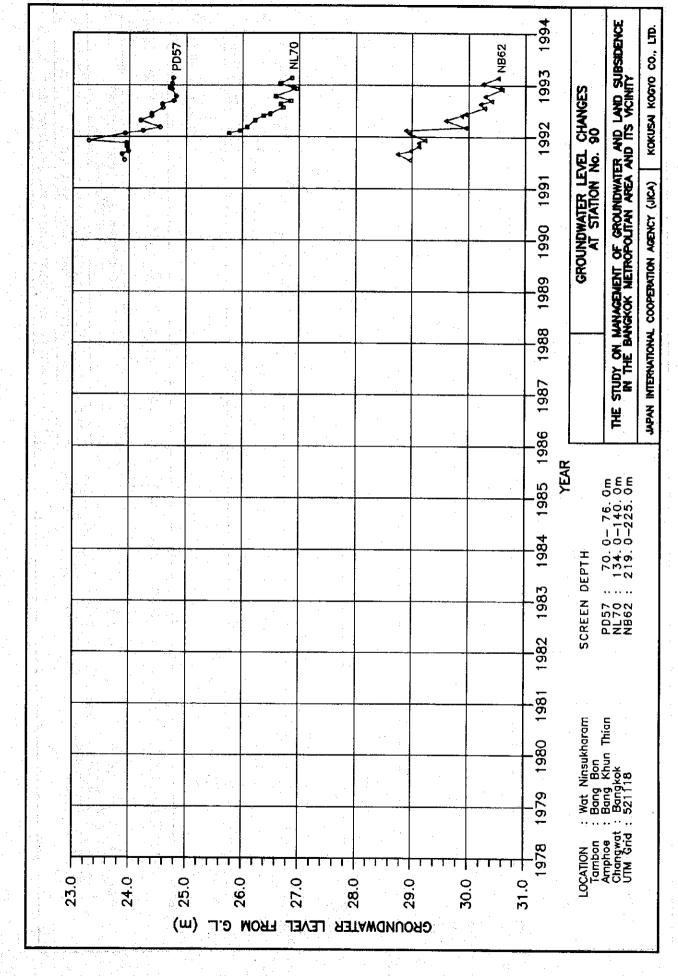


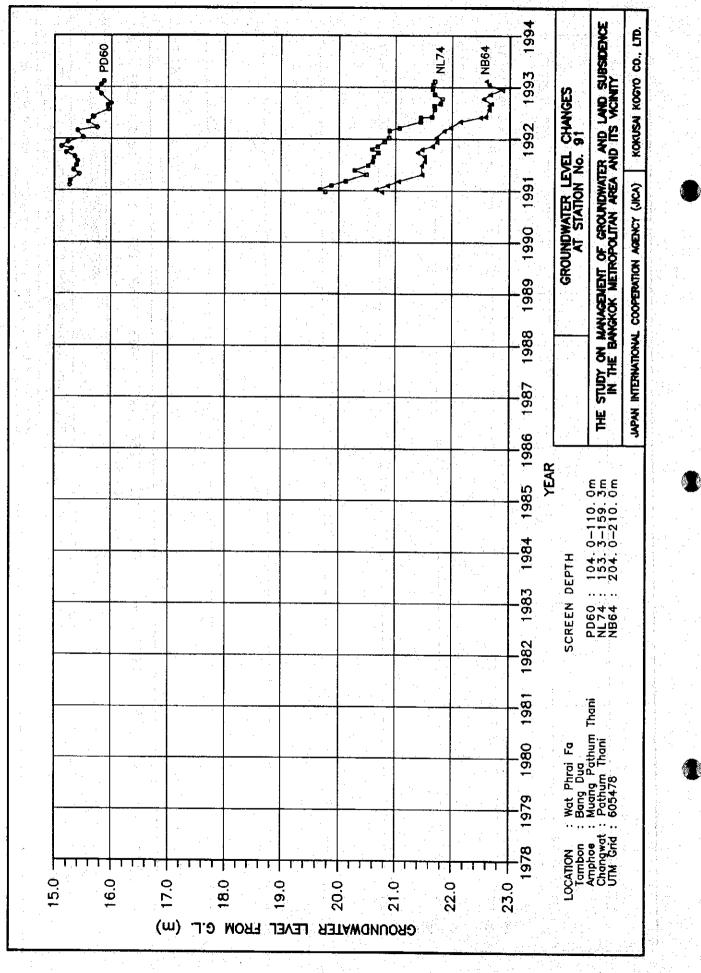


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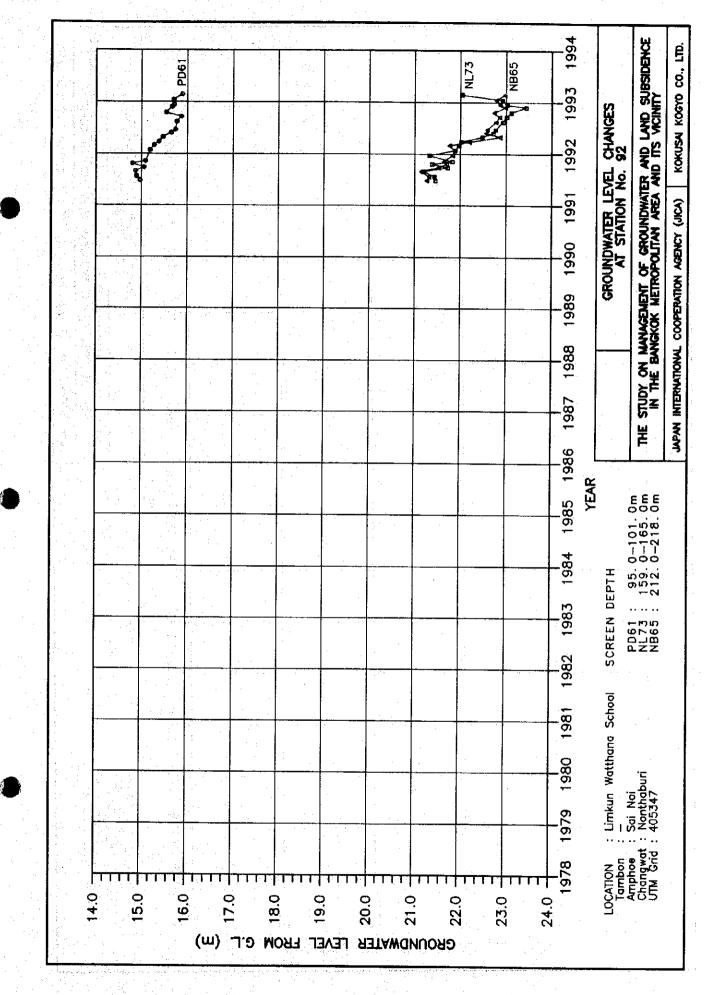


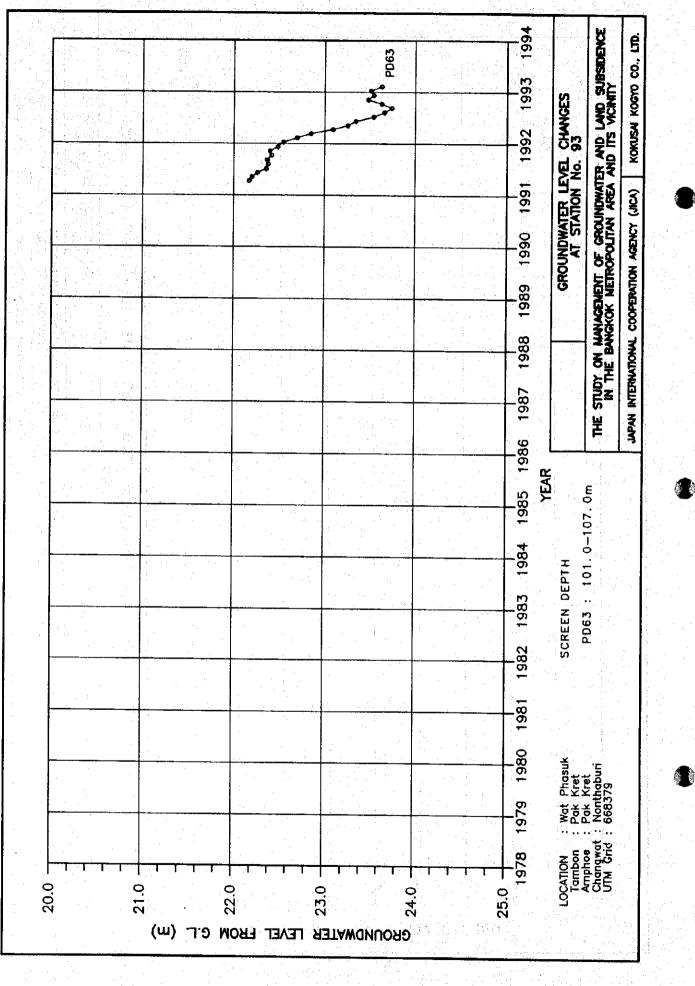


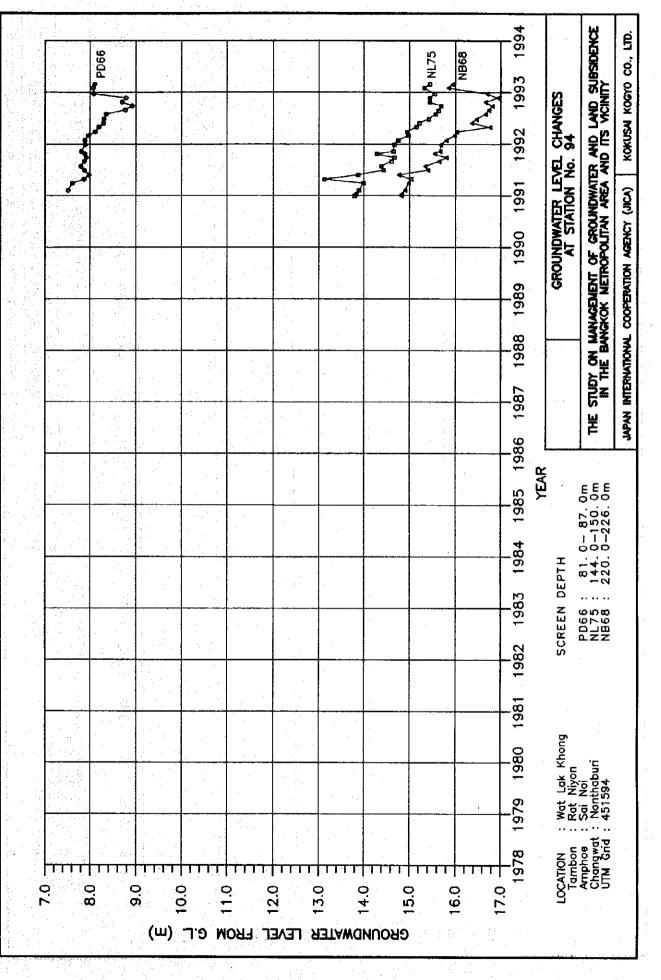




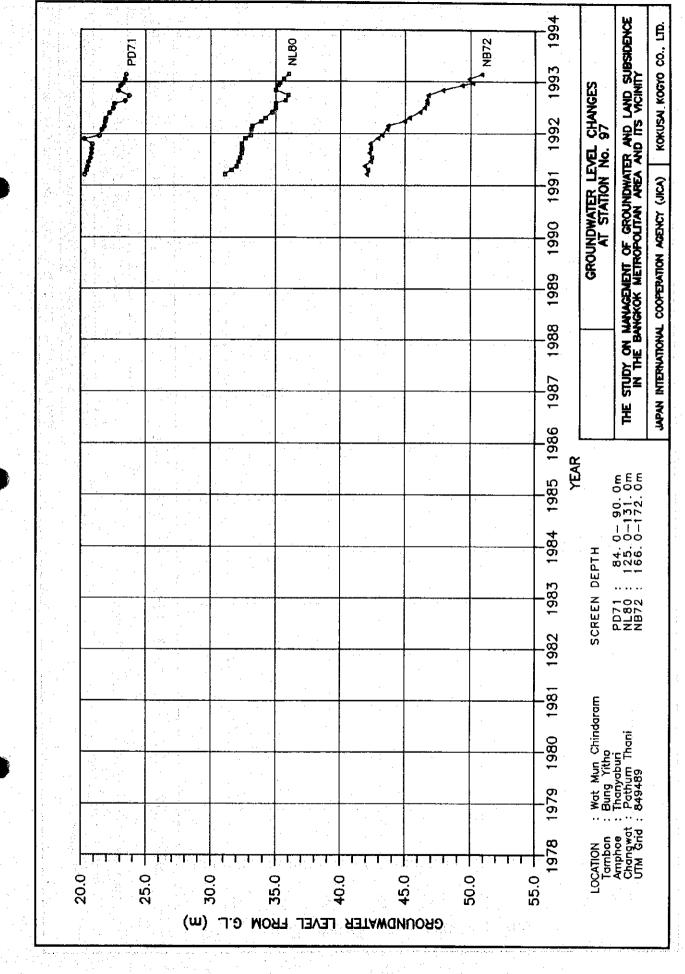
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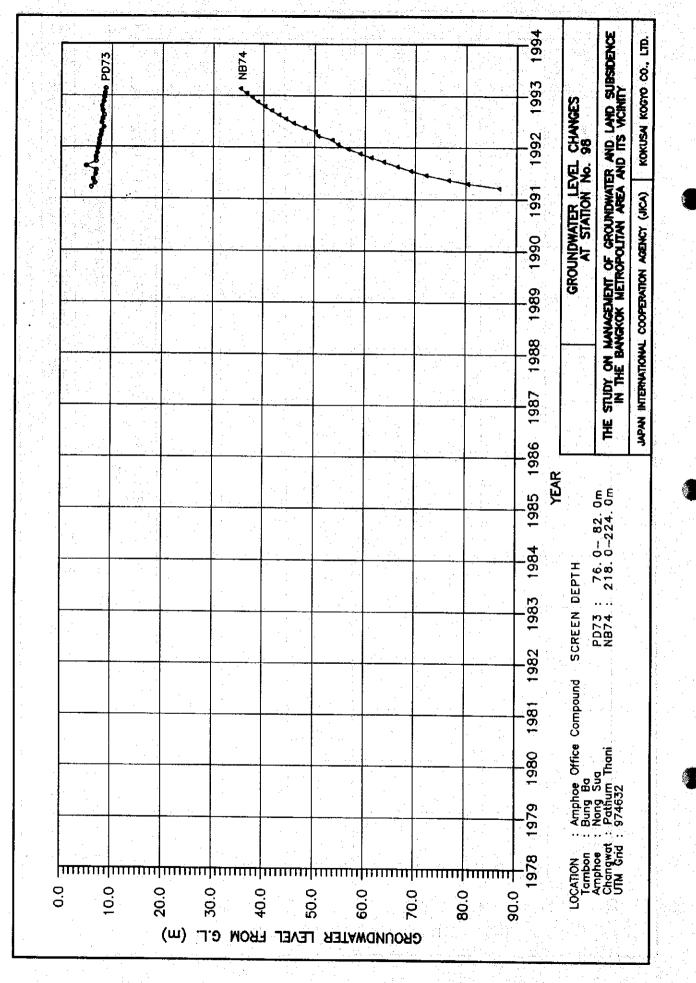






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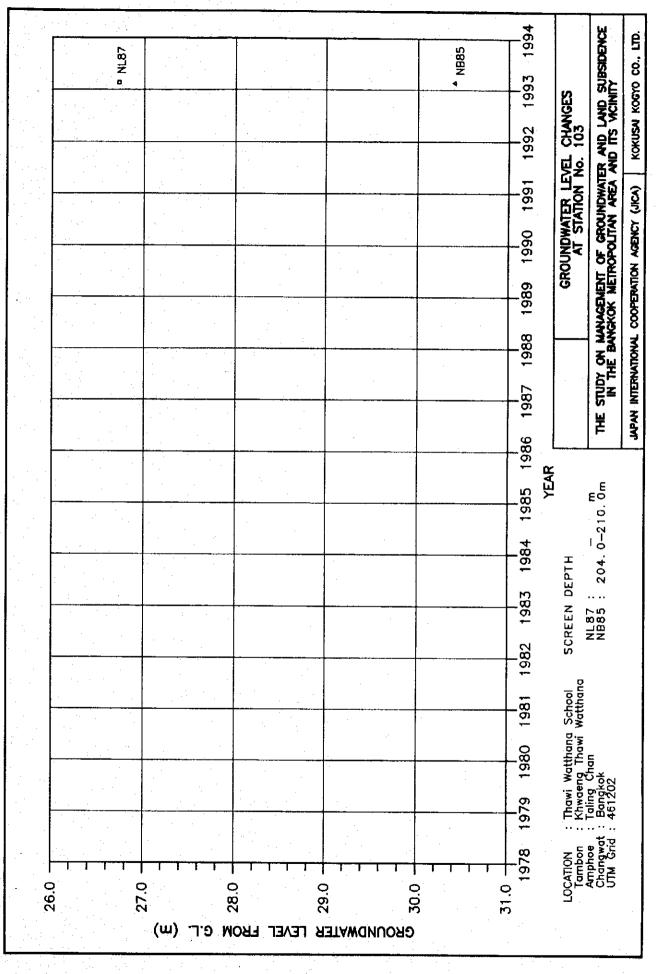


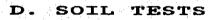
1994 THE STUDY ON MANAGEMENT OF GROUNDWATER AND LAND SUBSIDENCE IN THE BANGKOK METROPOLITAN AREA AND ITS VICINITY KOKUSA KOGYO CO., LTD. PD83 <sup>▲</sup> NB81 1989 1990 1991 1992 1993 GROUNDWATER LEVEL CHANGES AT STATION No. 101 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) 1988 1985 1986 1987 YEAR : 90.0-95.0m : 210.0-216.0m 1984 SCREEN DEPTH 1982 1983 PD83 NB81 1981 : Wat Taling Chan -: Taling Chan : Bangkok : 579234 1979 1980 LOCATION Tambon Amphos Changwat 1978 23.0 24.0 25.0 26.0 27.0 28.0 29.0 30.05 GROUNDWATER LEVEL FROM G.L. (m)

1993 1994 THE STUDY ON MANAGEMENT OF GROUNDWATER AND LAND SUBSIDENCE IN THE BANGKOK METROPOLITAN AREA AND ITS VICINITY KOKUSA KOGYO CO., LTD. ° PD86 BB4 GROUNDWATER LEVEL CHANGES AT STATION No. 102 1992 1991 JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) 1990 1989 1988 1987 1985 1986 YEAR EEE 1984 111 SCREEN DEPTH 1983 PD86 NB856 855 1982 1981 1979 1980 LOCATION Tambon Amphoe Chongwat 1978 10.0 12.0 14.0 16.0 18.0 20.0 22.0 24.0 26.0 28.0 GROUNDWATER LEVEL FROM G.L. (m)

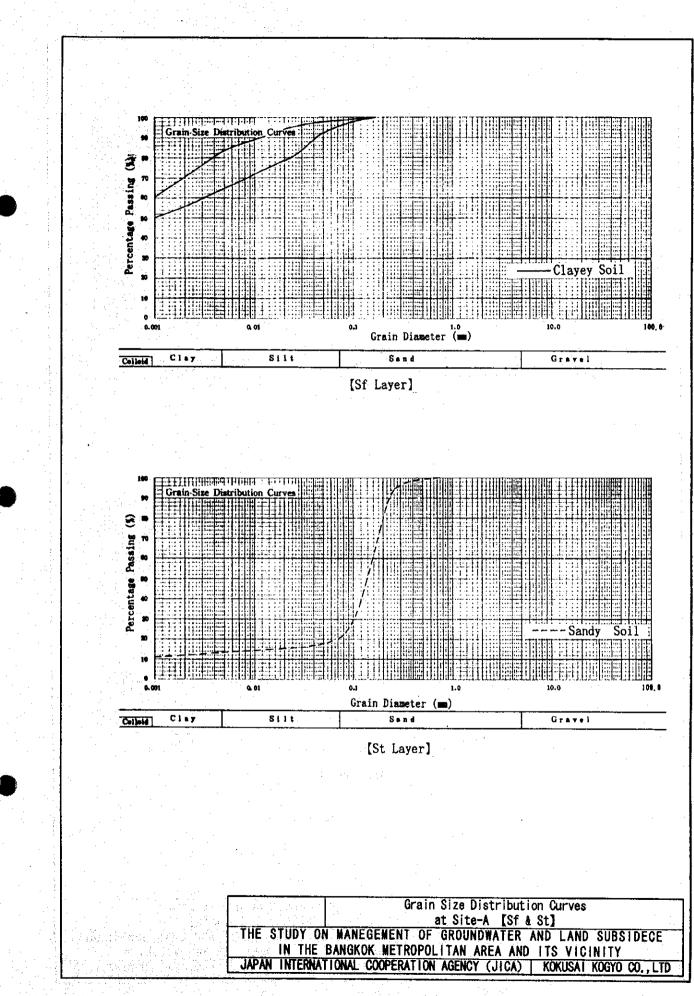
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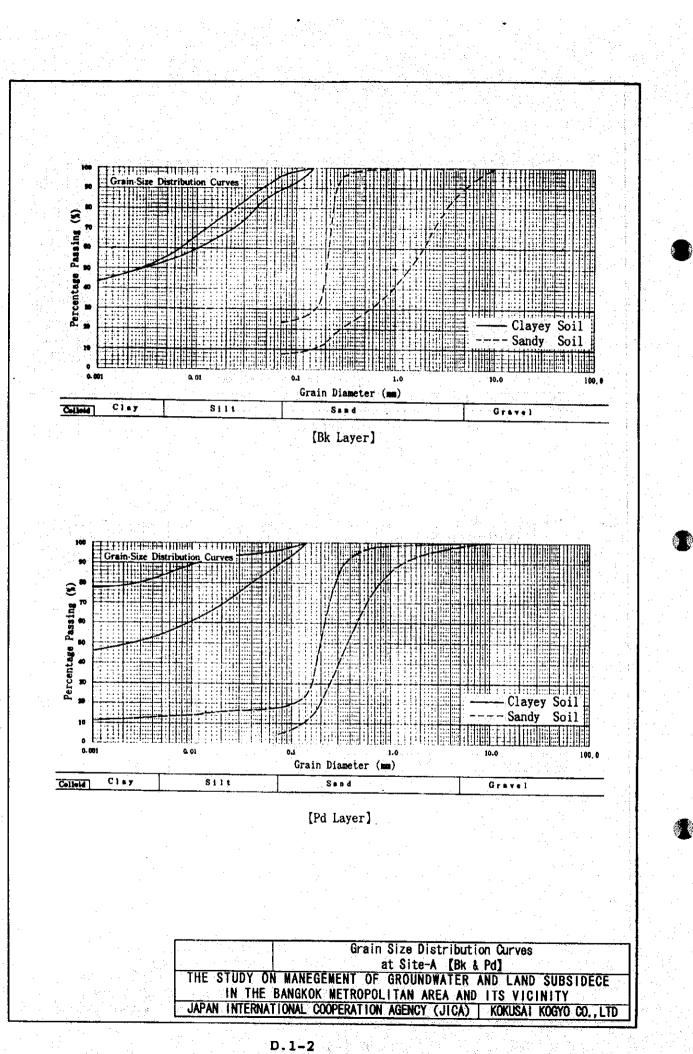
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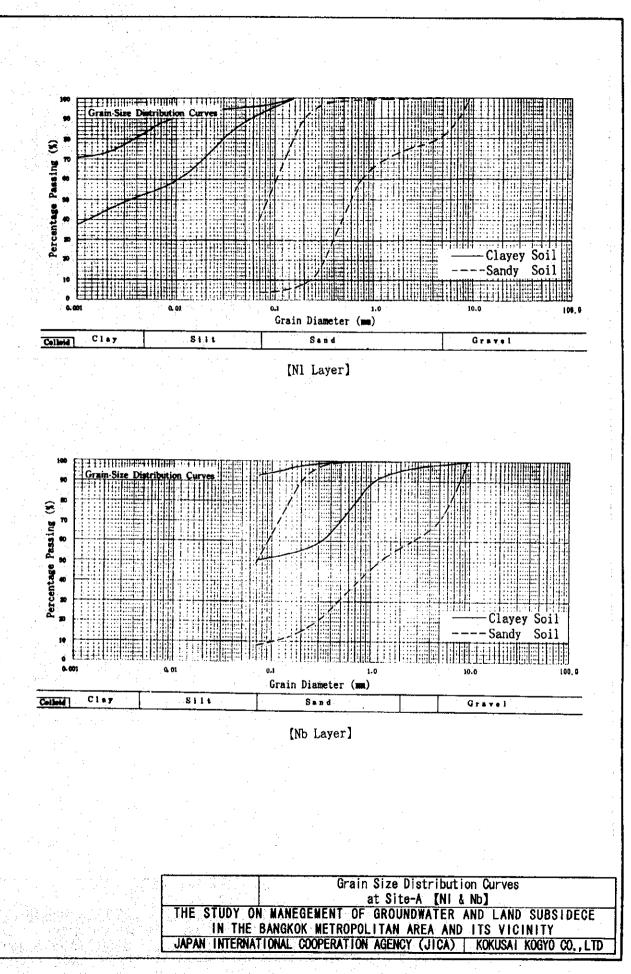


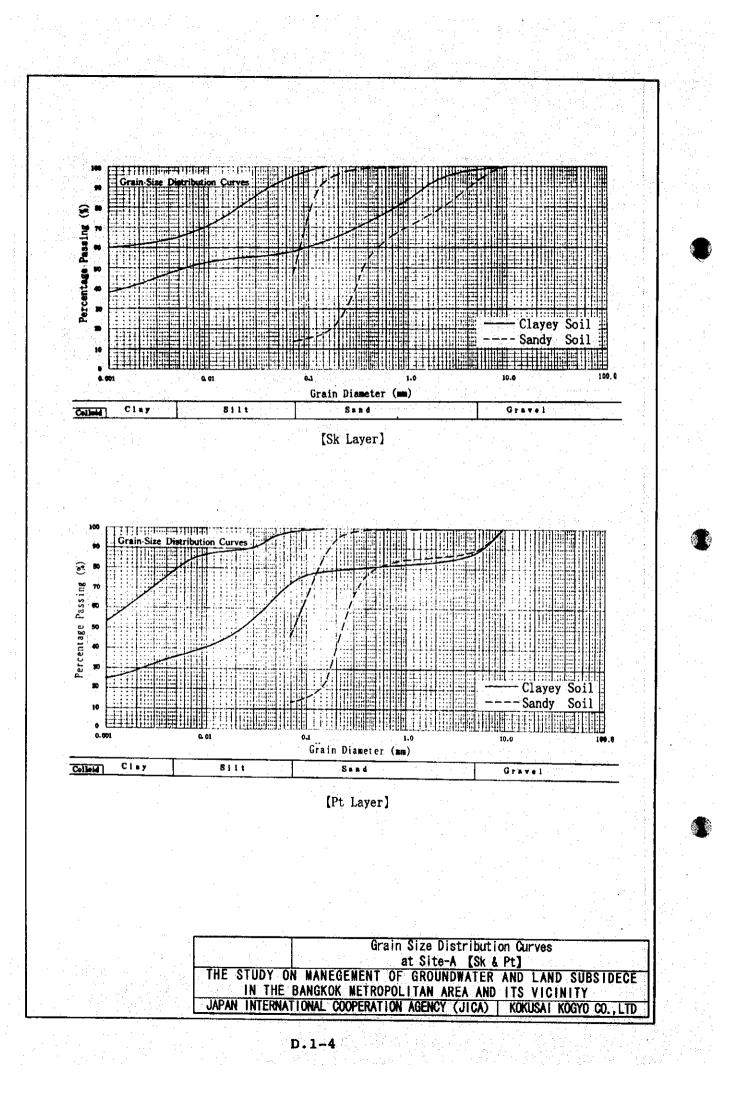


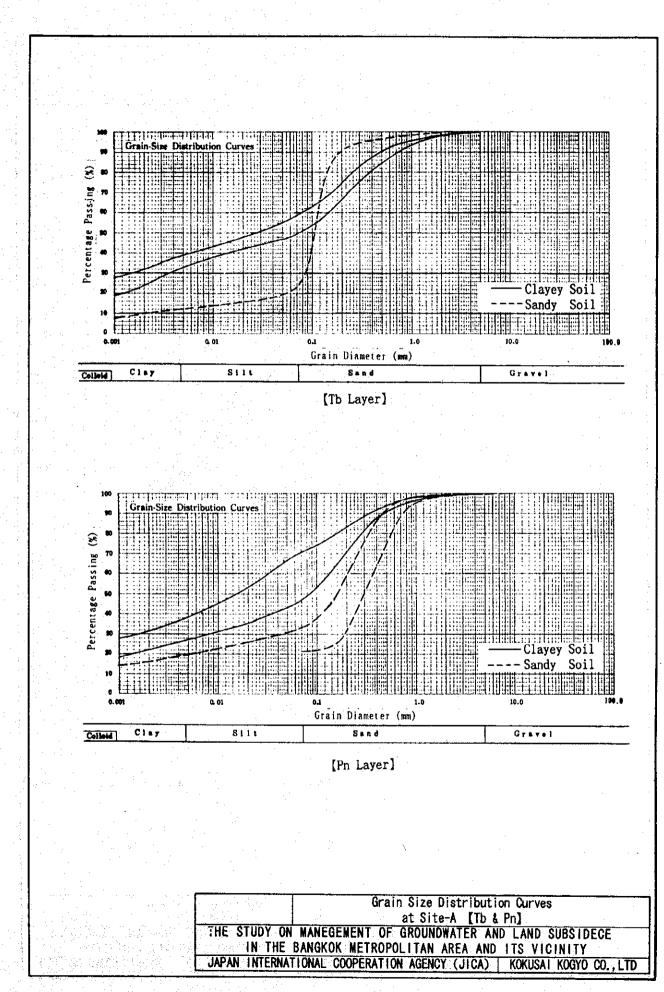
## D.1 Soil tests result of Site-A

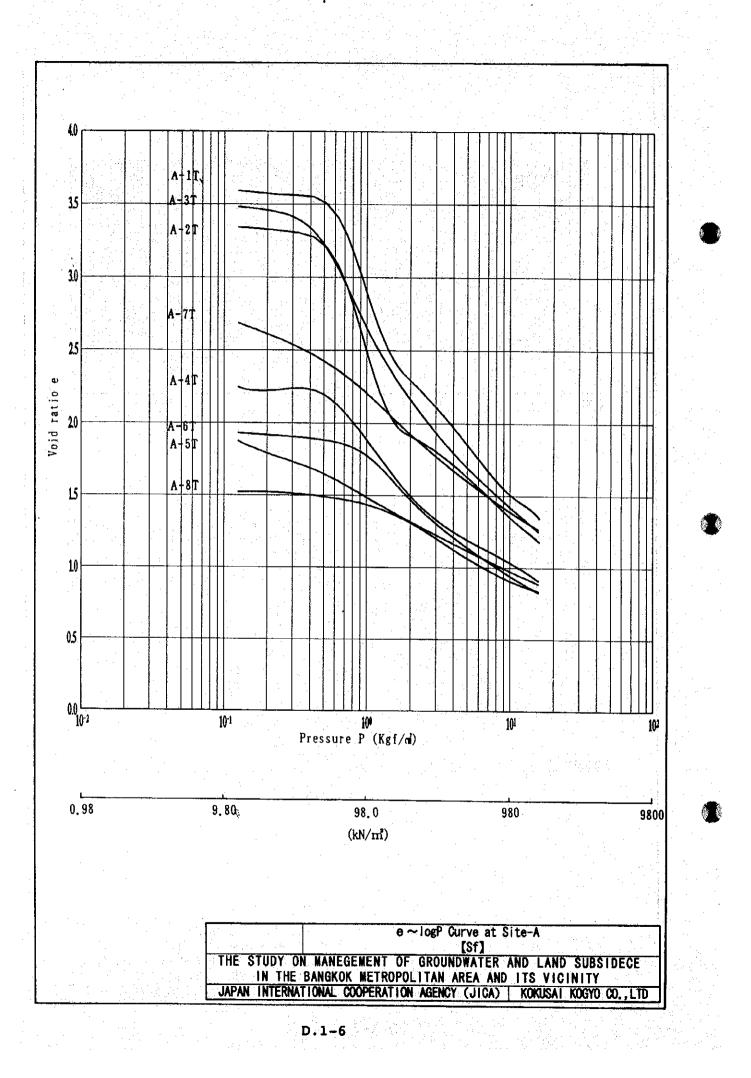


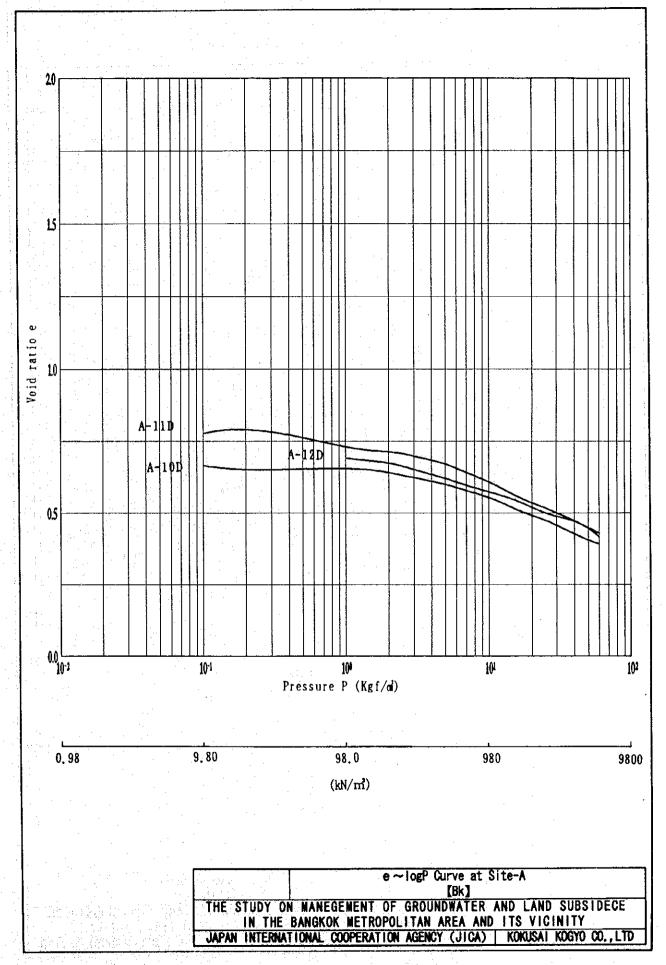


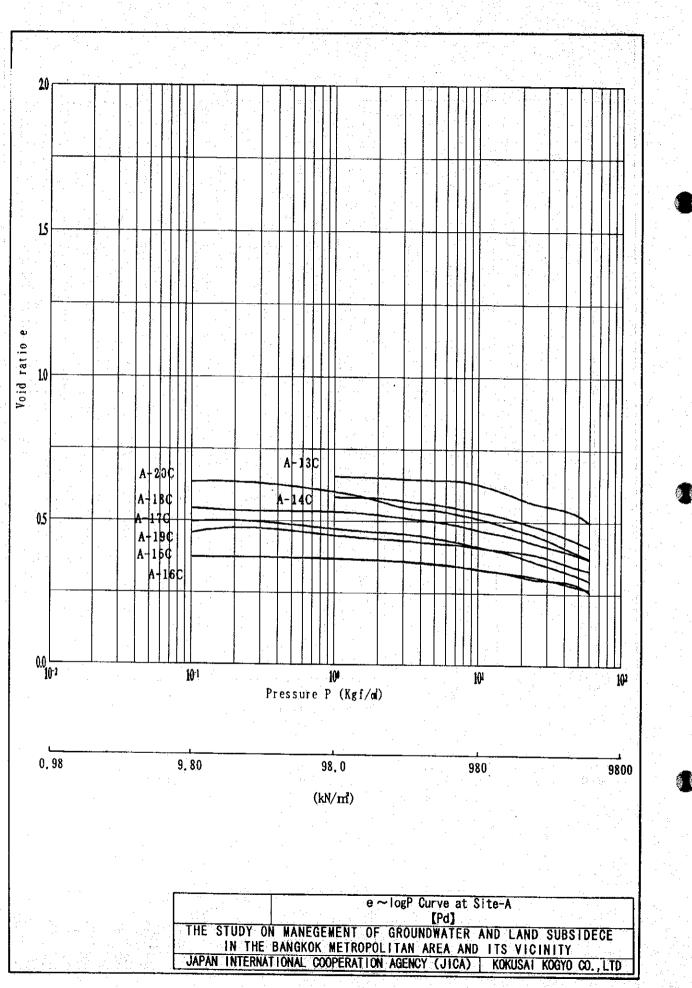


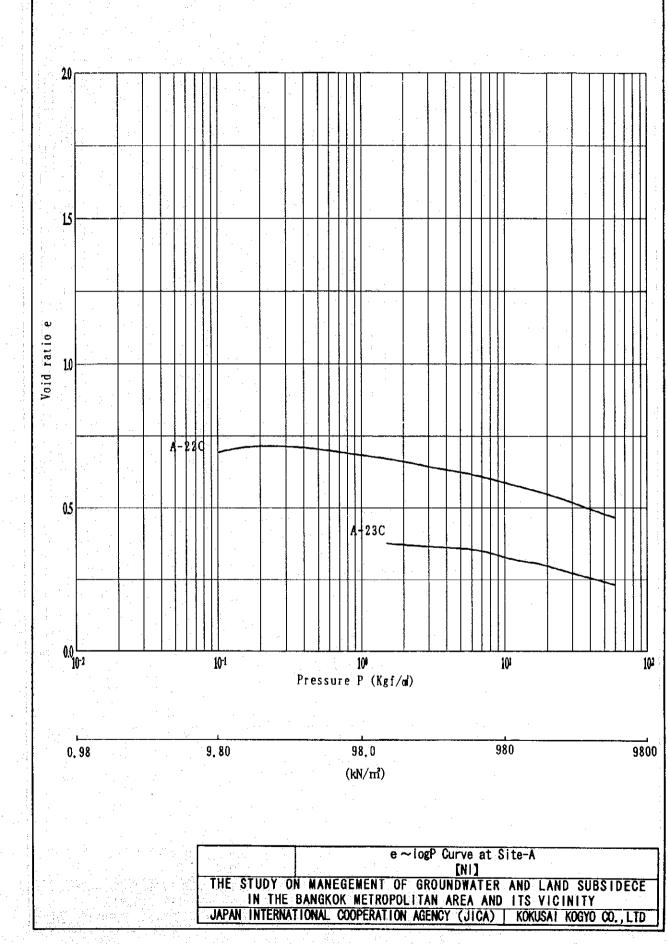


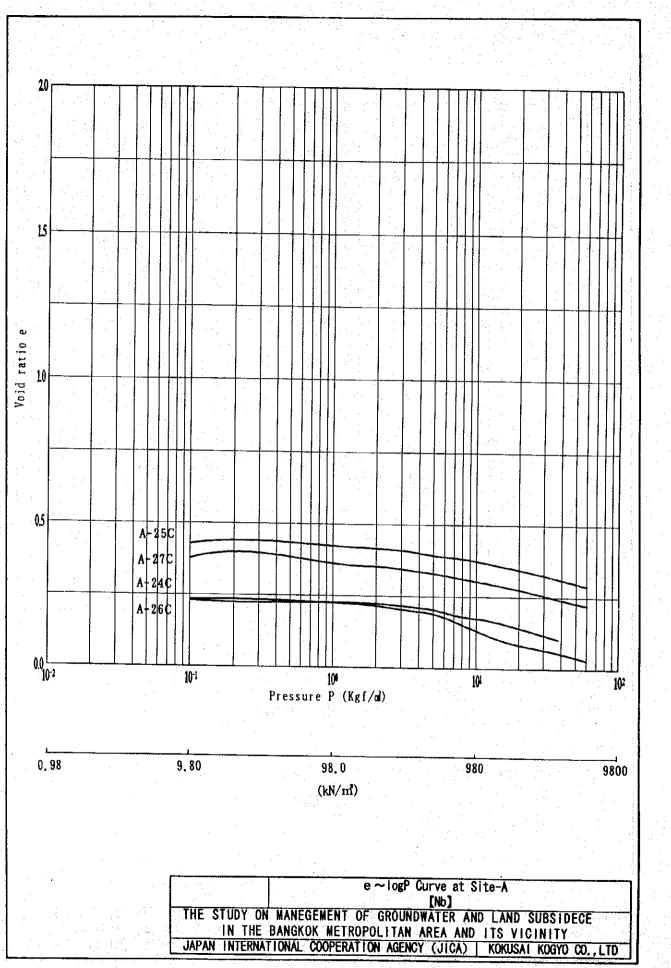


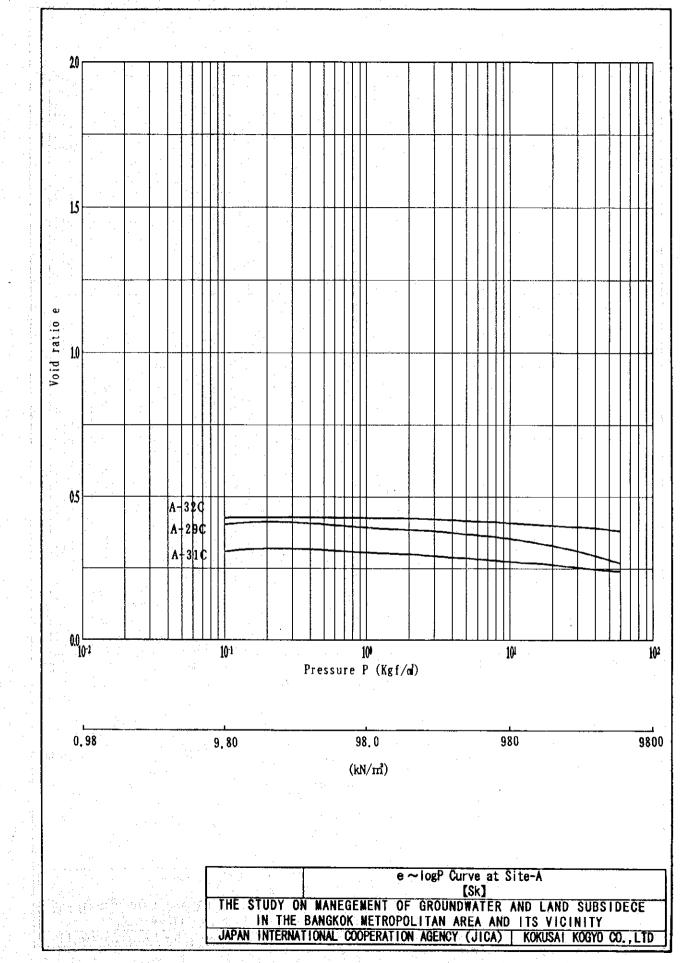


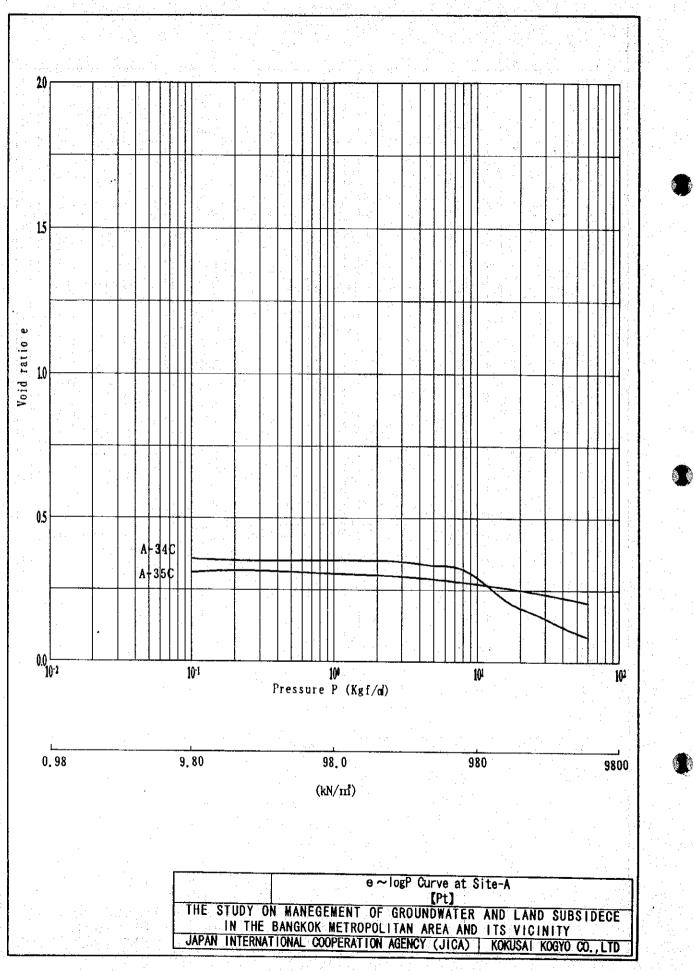


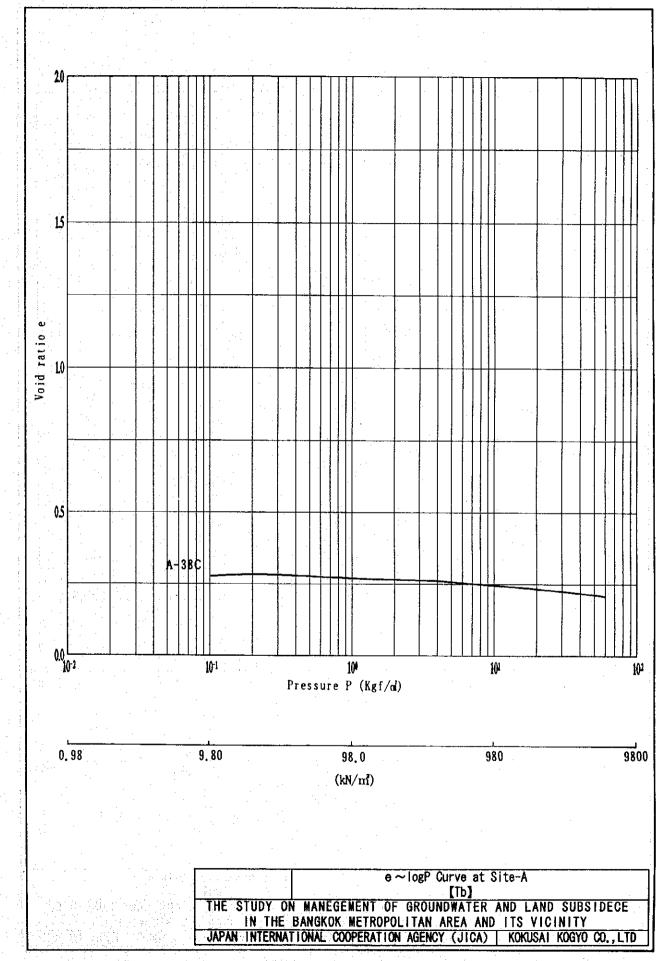


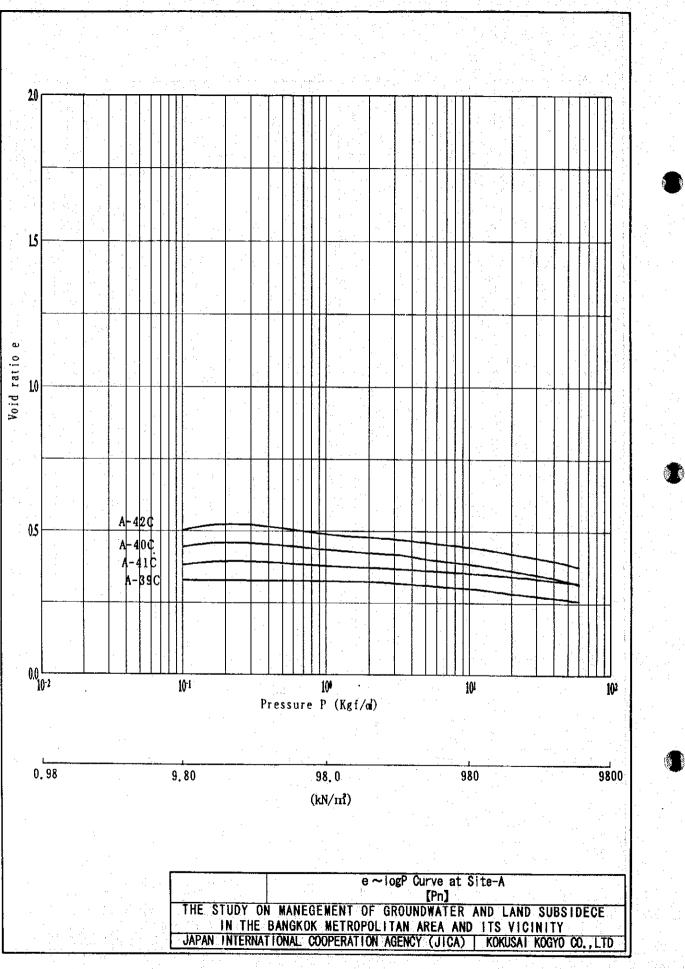


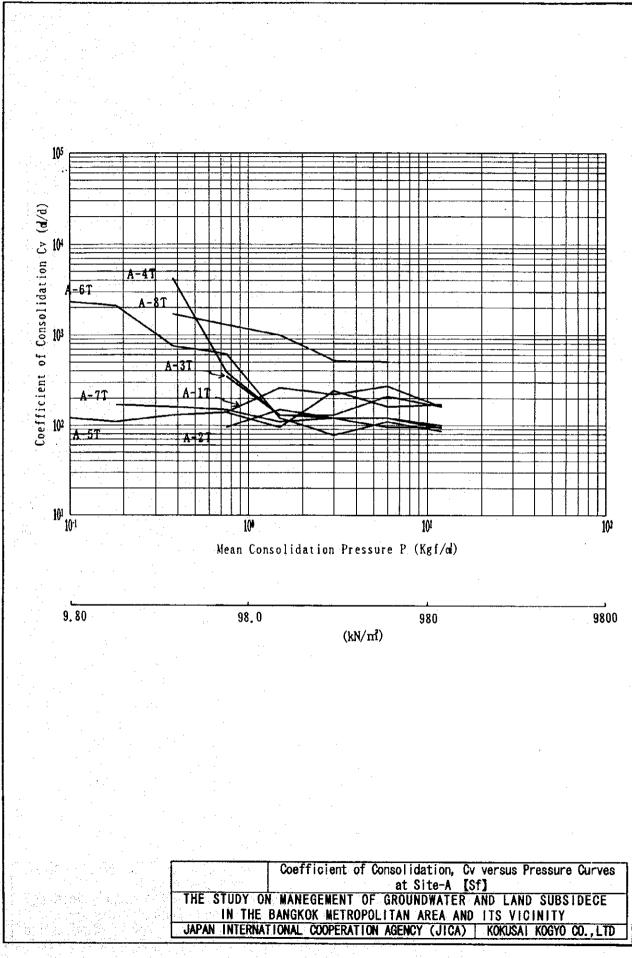


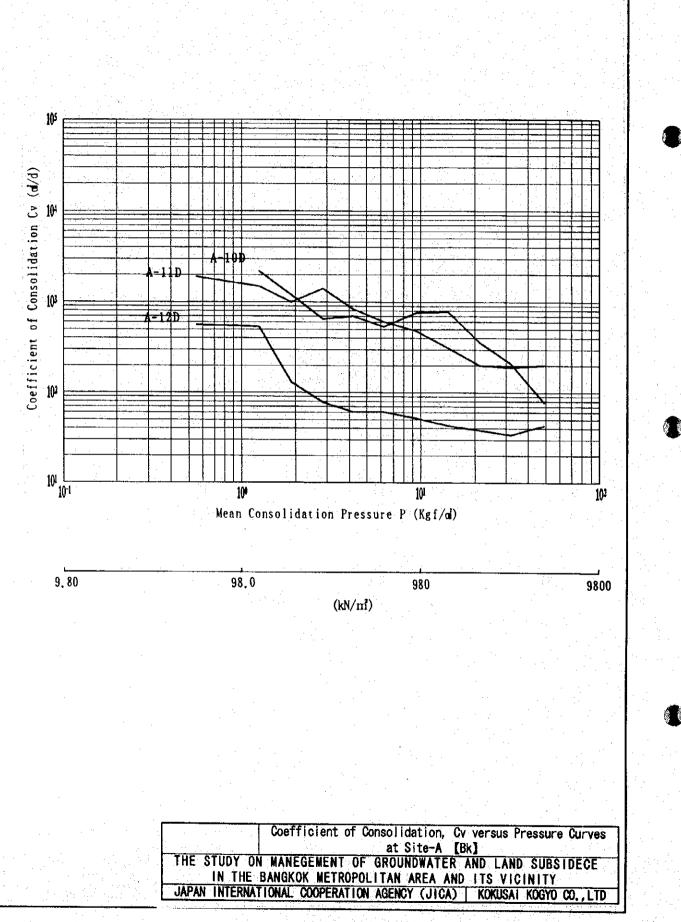


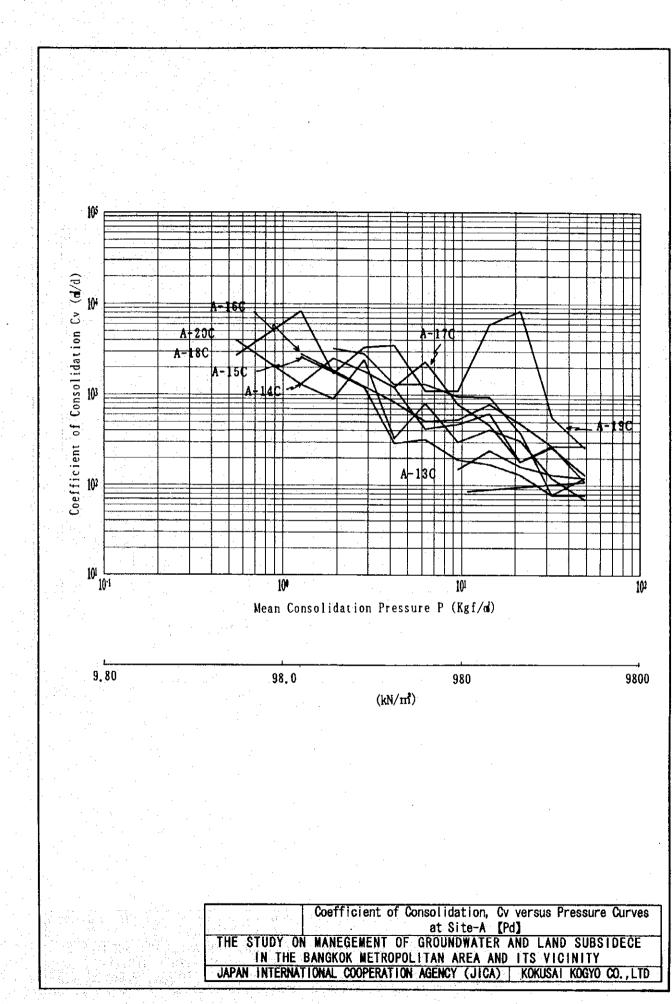


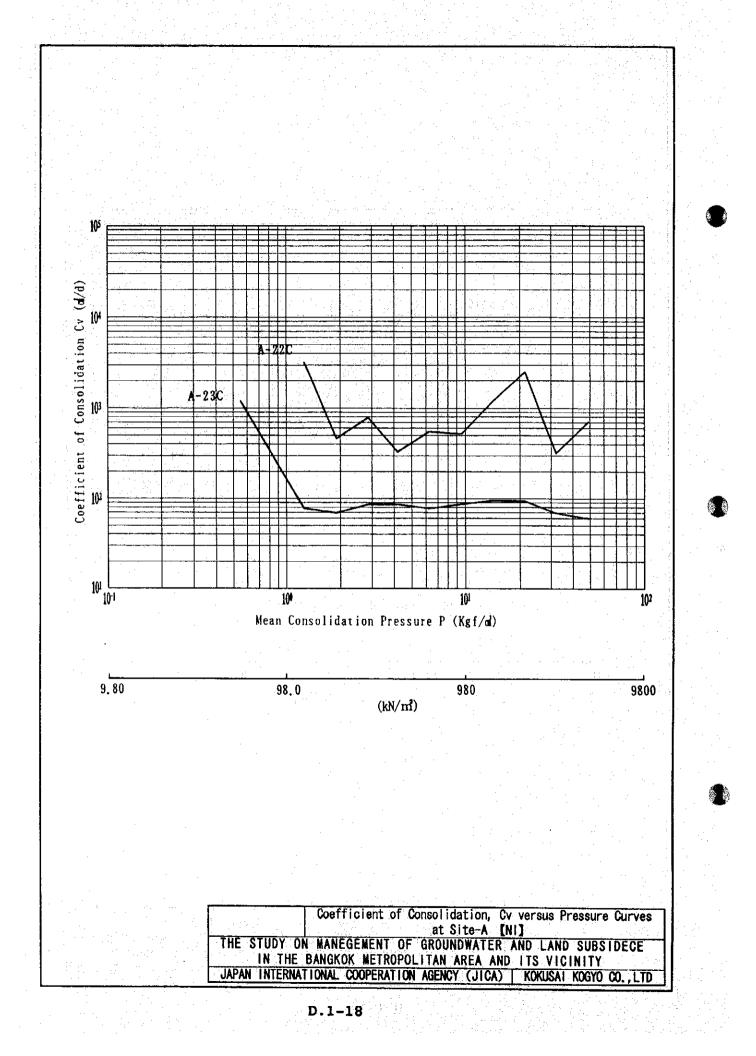


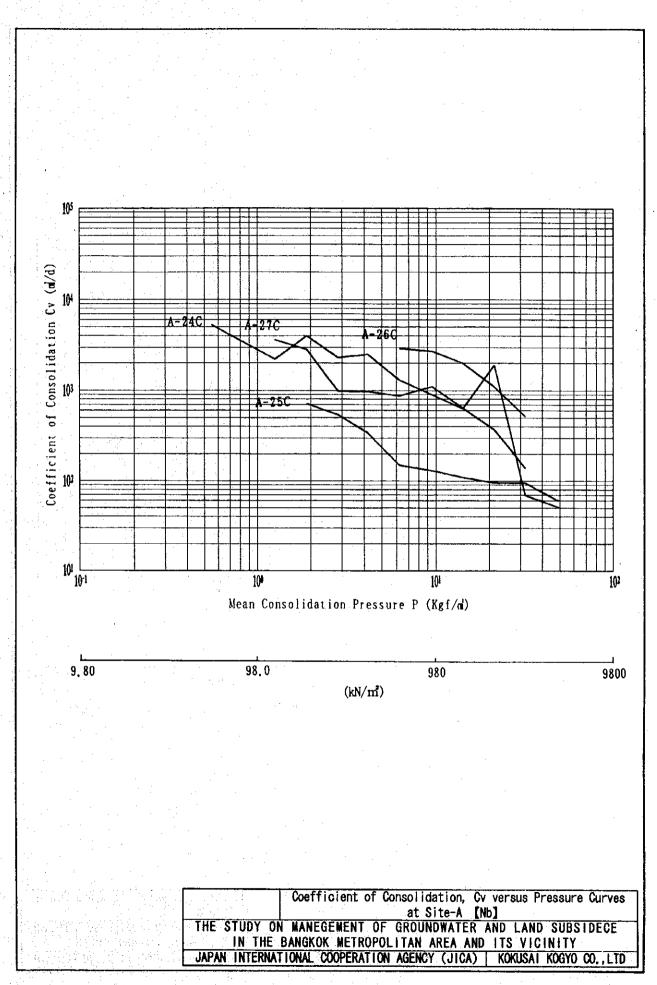


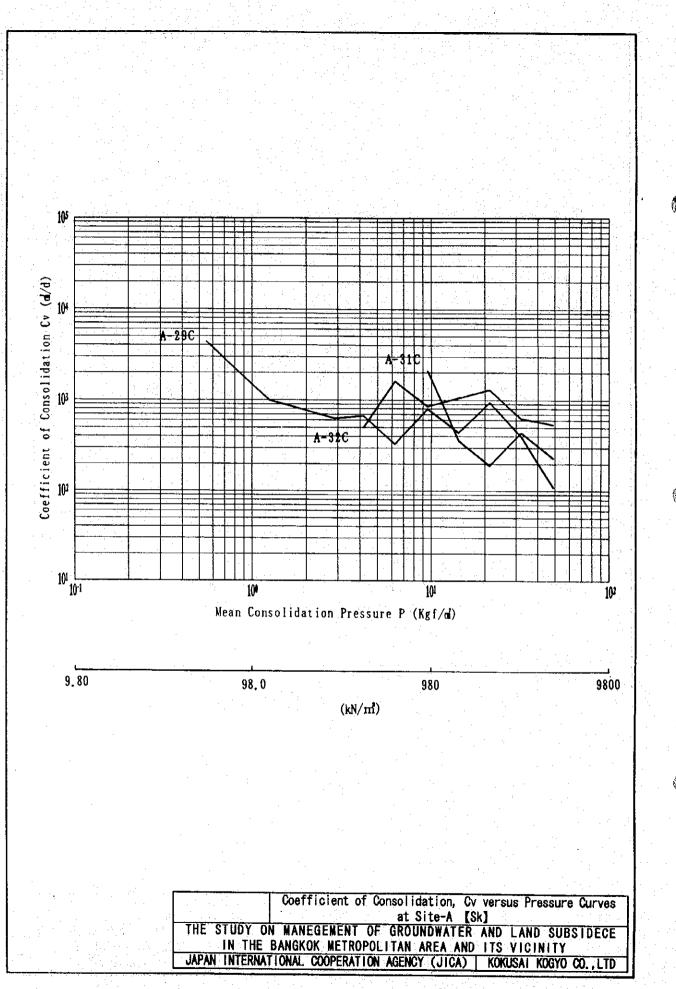




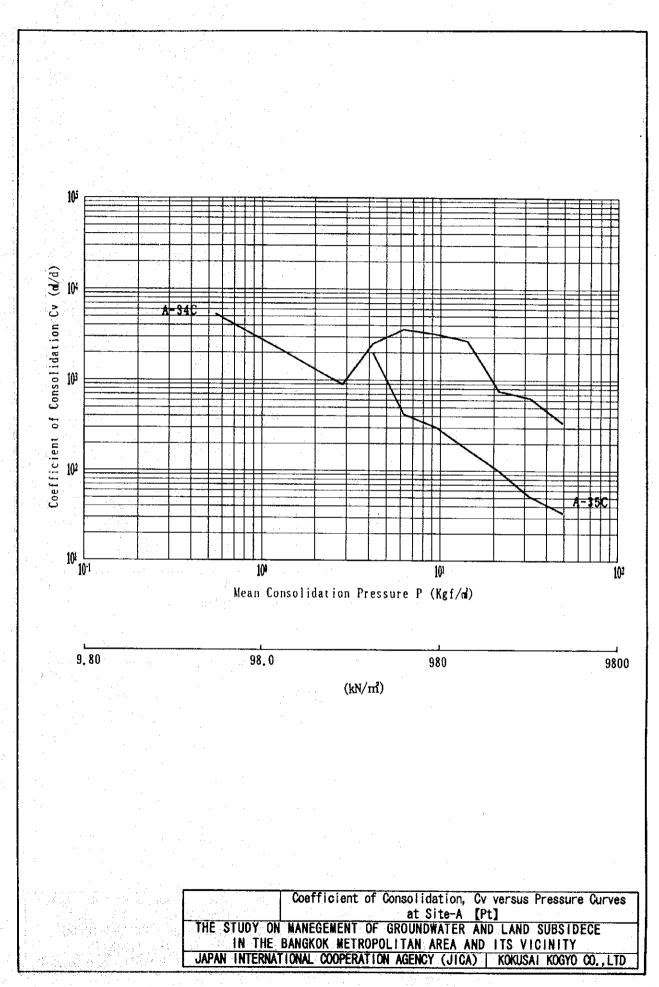


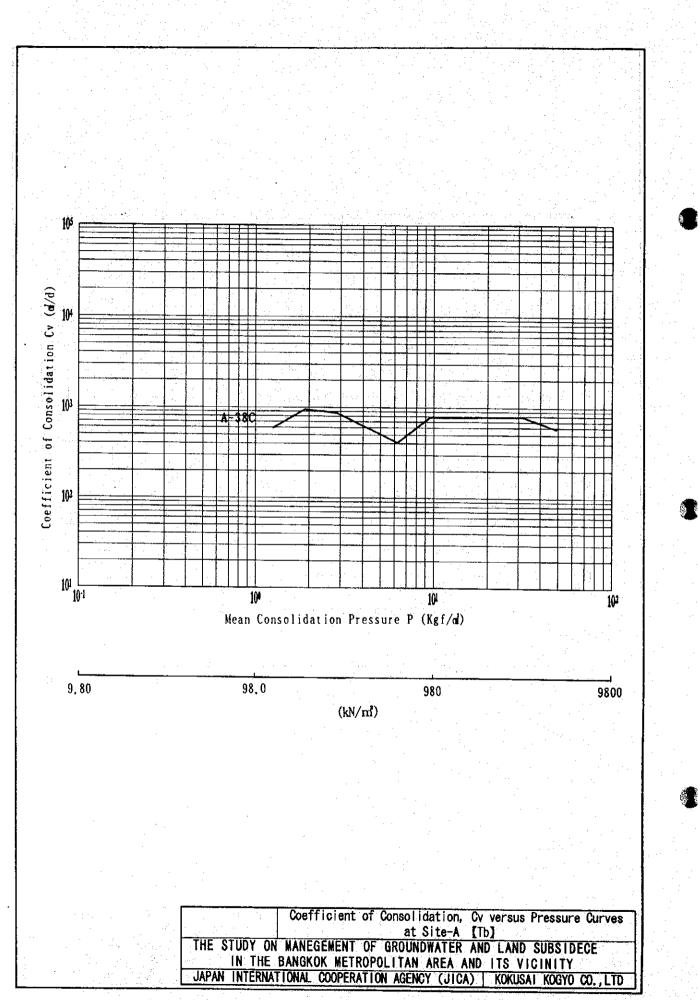


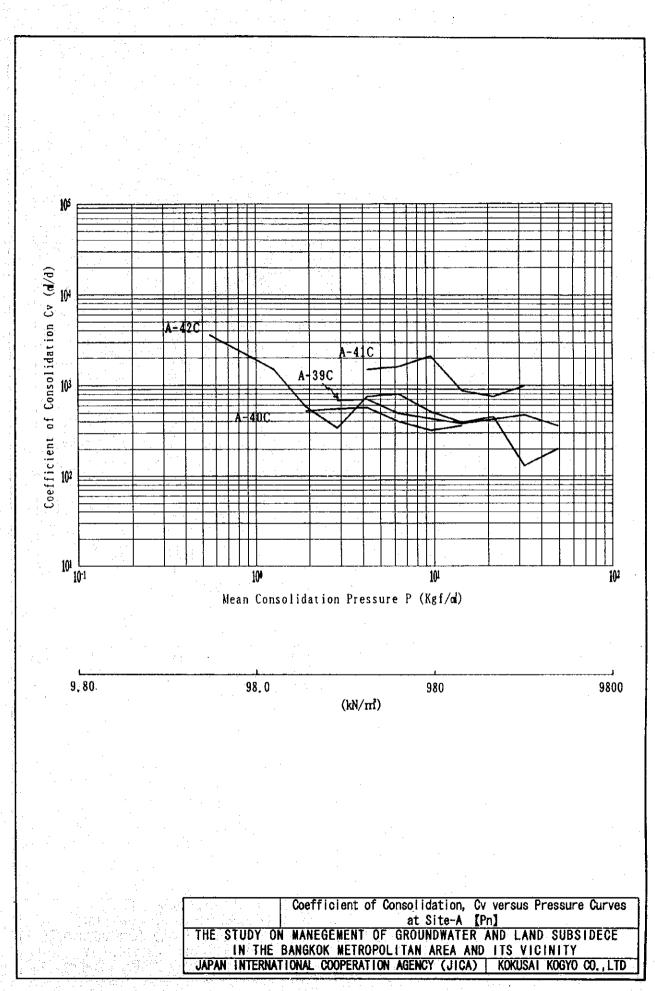


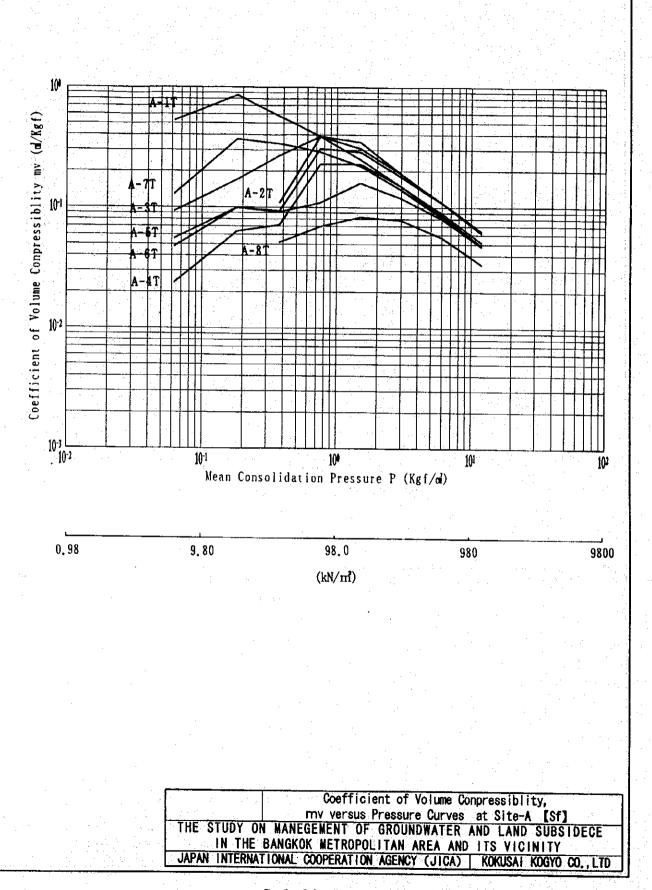


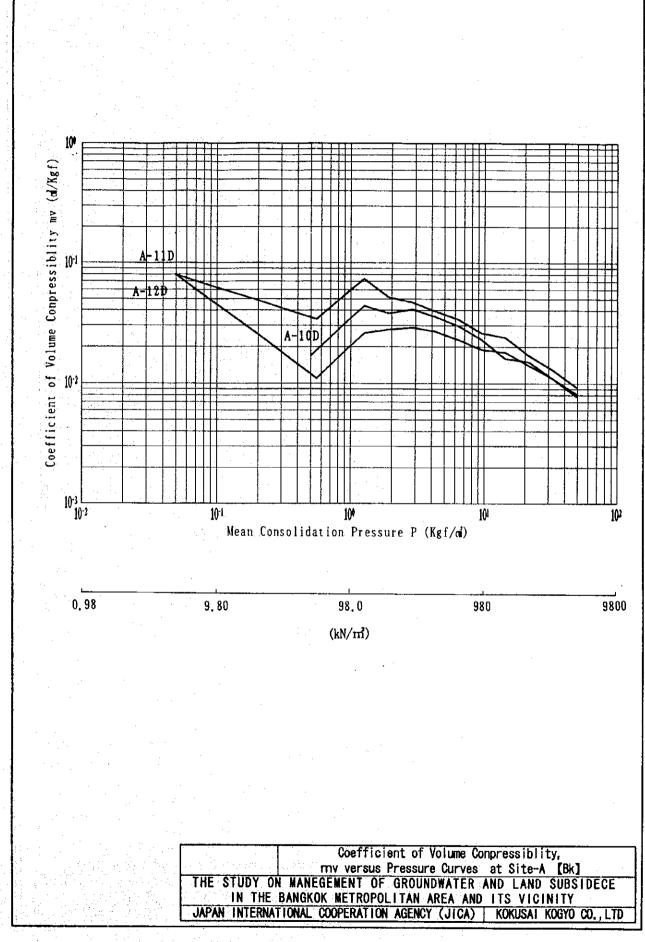
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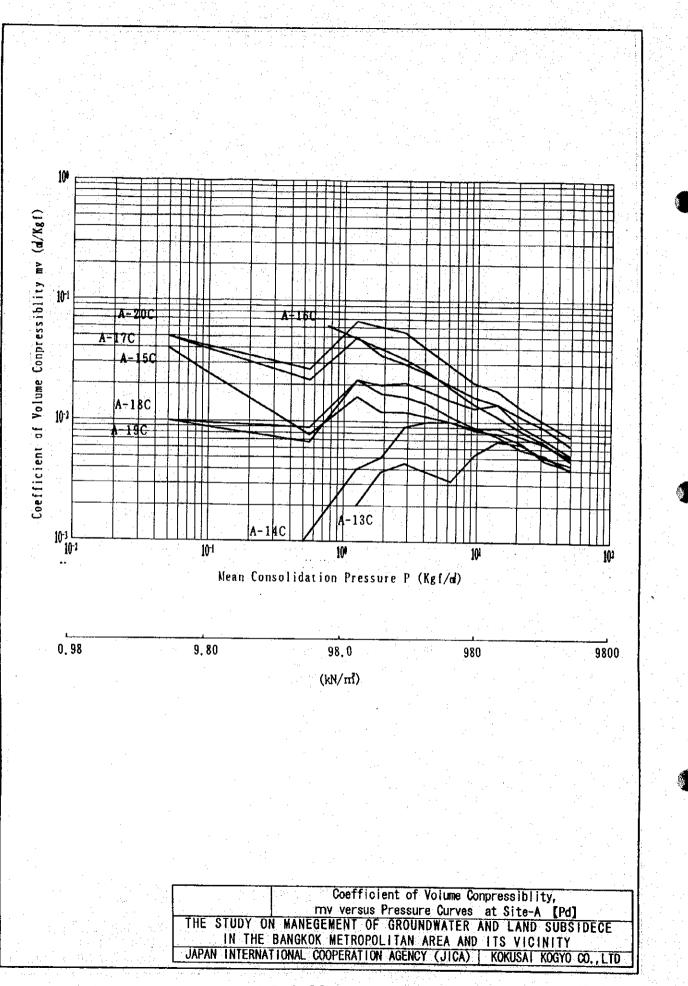


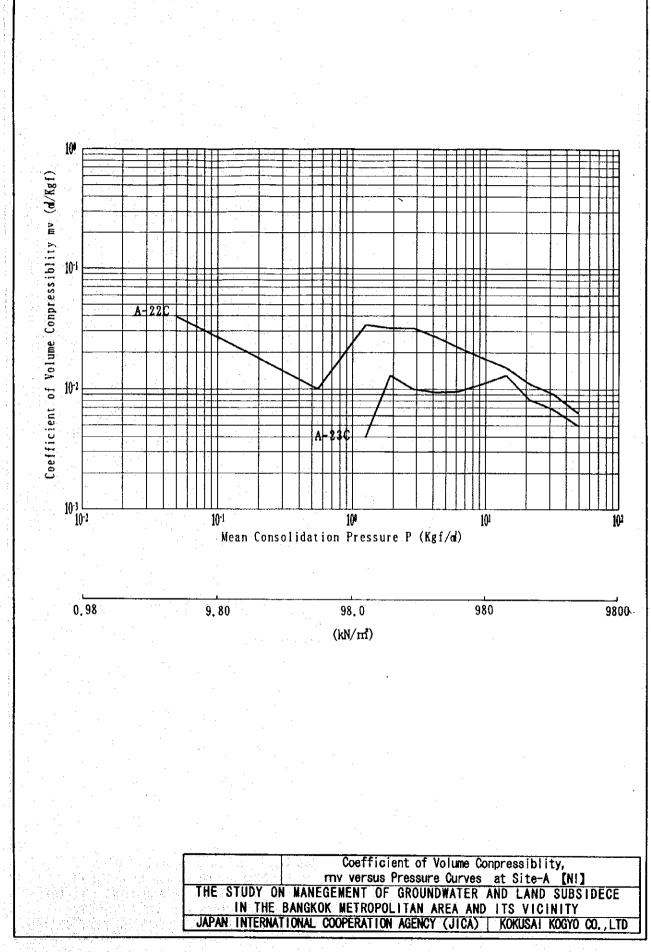


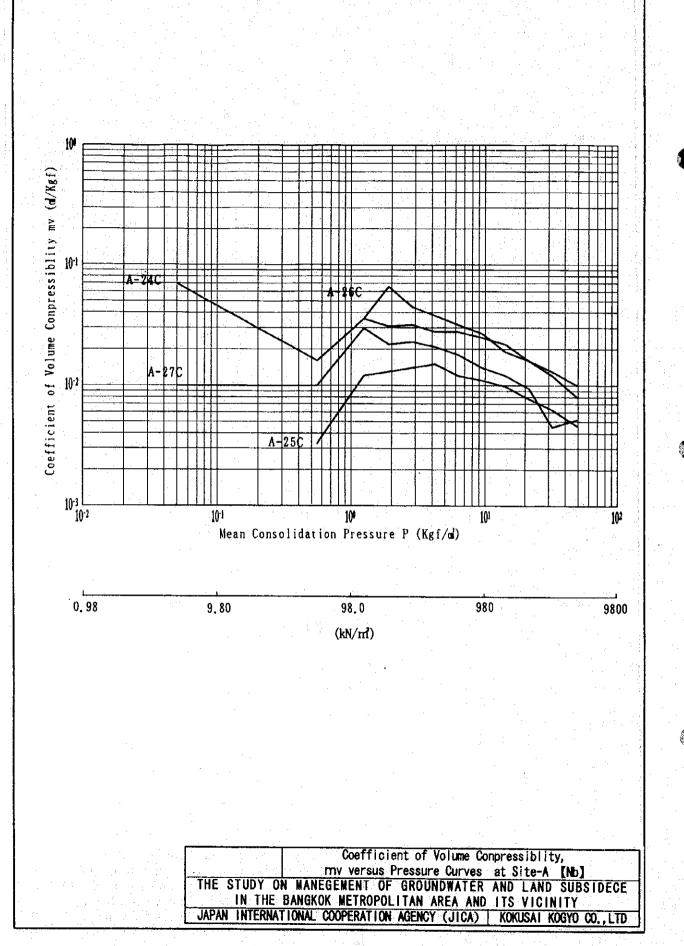


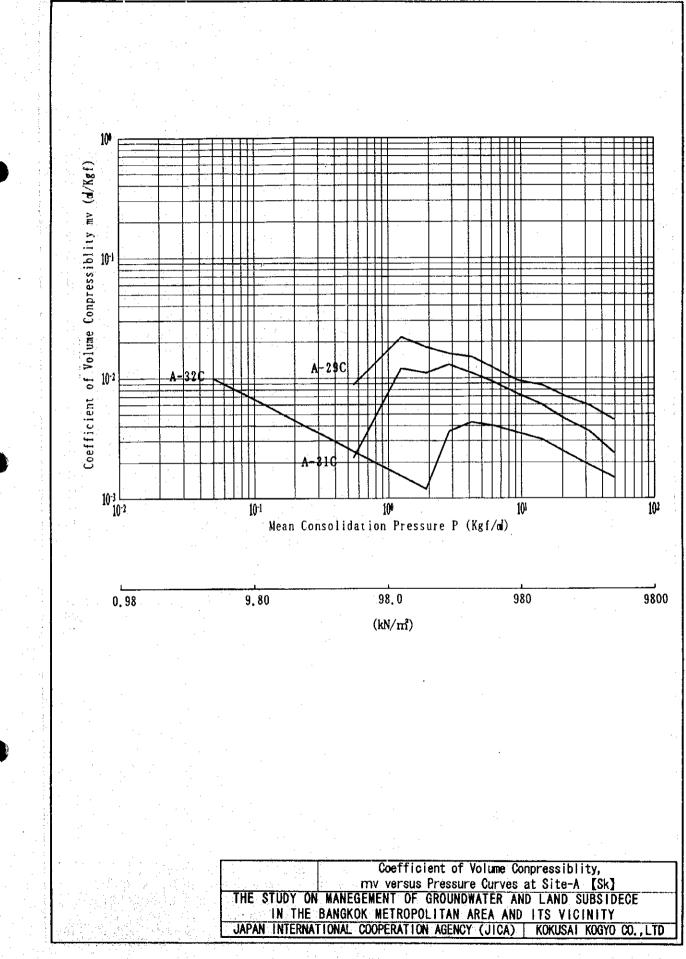


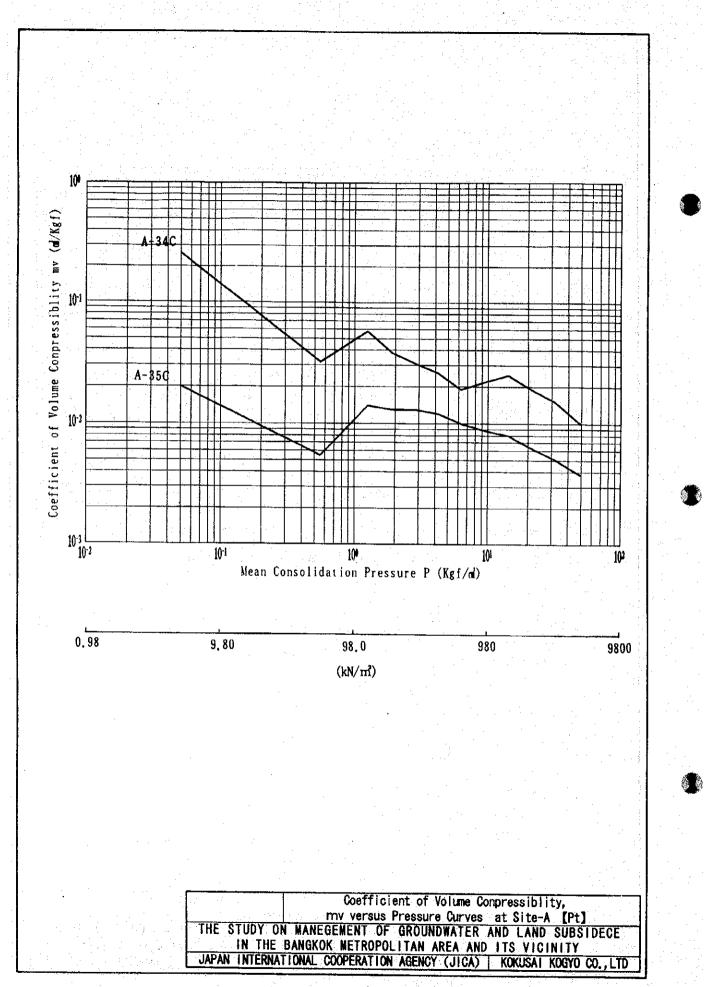




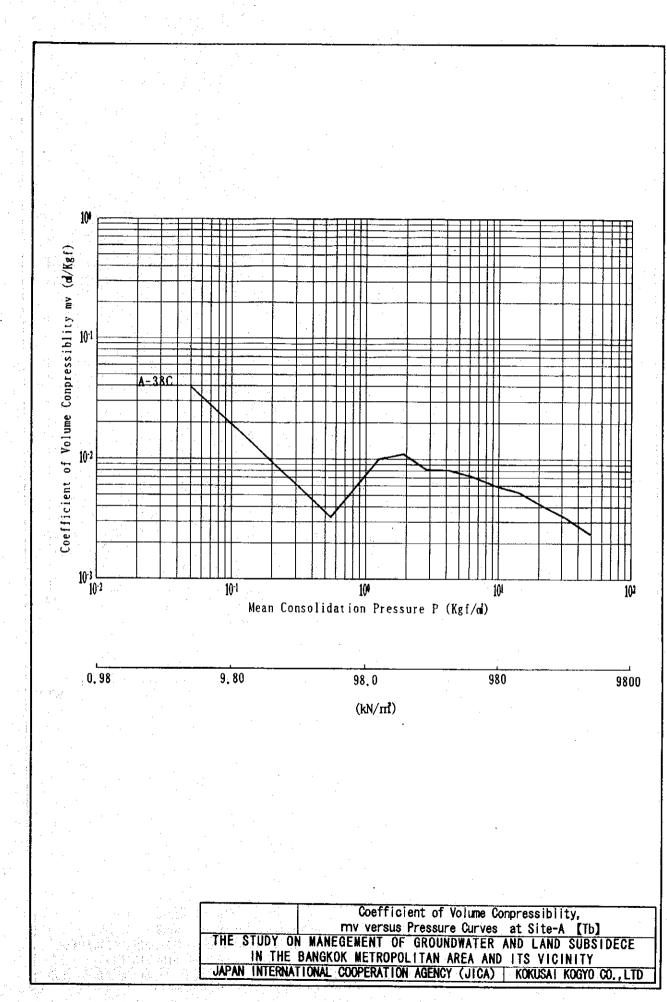


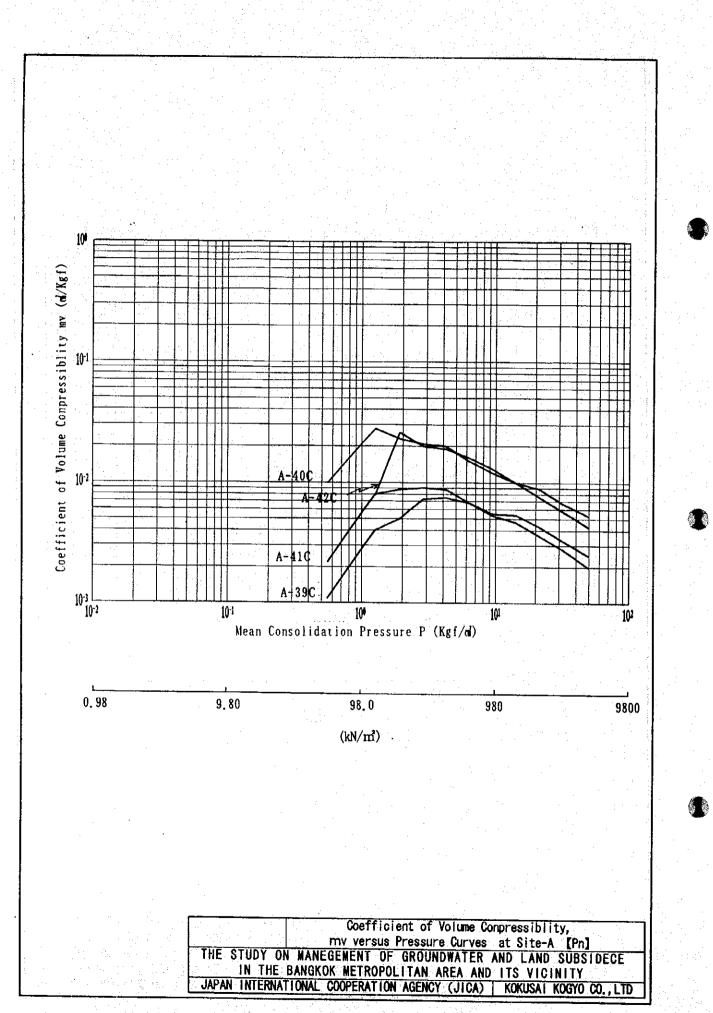






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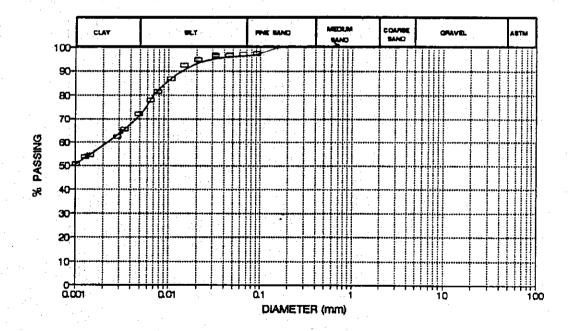


## **GRAIN SIZE ANALYSIS**

Project:	Subs	idence in Bangkok Vicinity	Location:			
Borehole No.:	A	Depth (m) 200-280	Sample No.;		Test No.:	AH-1
Soli Description	n:		Tested By:		Date:	20-1-93
		SIEVE ANALYSIS		LIVIDOMET		
•*					ER ANALYSIS	-
1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -		Rercent		Particle	Percent	
	11	Opening		Size	Finer	
		(mm) (%)		(mm)	(%)	
	i fet	4.76		0.0907	97.50	1
		2.00		0,0643	97.19	1
	ti e s	0.84	i.	0.0456	96.55	1

	Opening	Finer
	(ጠጠ)	(%)
	4,76	
	200	
14	0.84	
	0.59	
:	0.42	
$\gamma_{\rm eff}$	0.30	
	0.15	
1	0.07	
1		and the second second
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	-	

HTDHOME I	ER ANALYSIS
Particle	Percent
Size	Finer
(mm)	(%)
0.0907	97.50
0,0643	97.19
0.0456	96.55
0.0323	96.92
0.0322	96.55
0.0205	94.97
0.01 47	92.44
0.01 07	87.06
0.0077	81.67
0.0064	78.19
0.0048	7218
0.0034	65,85
0.0028	62.37
0.0014	54.46
0.0013	53.82
0.0010	50.65



# **GRAIN SIZE ANALYSIS**

Location:

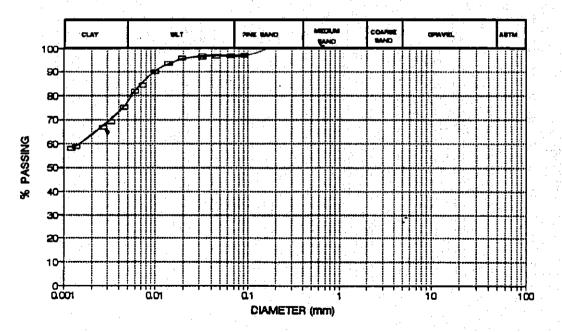
Tested By:

Project;	Subsid	lence in Bangk	ok Vicinity	
Borehole No.:	A	Depth (m)	4.00-4.80	
Soil Description	:			

ľ	Location:	Minb	urt					
	Sample No.:			 Test N	<b>0.:</b> 💡	AH	-2	
Ċ,	Tested By:	· .		 Date:		20	1-93	

SIEVE ANALYSIS								
	Parcent							
Opening	Finer							
(mm)	(%)							
4.76								
2.00								
0.84								
0.59								
0.42								
0.30								
0.15								
0.07								
e en en en ante								

	CH ANALTSIS
Particle	Percent
Size	Finer
(mm)	(%)
0.0916	97.18
0.0649	96.85
0.0469	96.53
0.0325	96.21
0.0324	96.85
0.01 95	96.88
0.01 39	93.61
0.01 00	90.05
0.0073	84.54
0.0060	81.95
0.0046	75.47
0,0033	69,33
0.0027	67.06
0.0014	58.96
0.001 2	57,98
0.001.0	55.07



D-1-34

HYDROMETER ANALYSIS

# **GRAIN SIZE ANALYSIS**

Project:	<u> </u>	Idence in Bangl Depth (m)	6,00-6.8		ocation: Sample No.:	Minburl	Test No.:	AH-3
Borehole No.: Soil Description		- Debui (iti)	0,00-0.0		fested By:		Date:	25-1-9
							— 	
		SIEVE	ANALYSI	s			ETER ANALYSI	5
		Opening		cent ter		Particle Size	Percent. Finer	
•		(mm)	C	61	2 C 1	(mm)	(%)	
		4,76				0.086	9 98.9	0
· · ·		2.00	· 5			0.061	7 98.3	1
		0.84	NE SE		- ÷	0.043	7 97.7	<u>1</u>
		0.59			1	0.031		
		0.42				0.031		
•		0.30	a the second	1.0		0.018		
14 14		0.15				0.013		
		0.07				0,009		
						0.006		
			<u> </u>		·	0.005		
	i de la composición d La composición de la c					0.004		
2						0.003	the second s	
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			·· · ·		-	0.001		
						0.001		
	100 M. 100					0.000	9 60.1	9
		•	· .					
	CLAY		LT 1	-	MELLA		GMAVEL	
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70-			┥┥┥	<b>       </b>	┉┼╌┽┽┼╢	<b> </b>	╷╷╽╴╷	
100 C		•						
SN 60-	Ť	<del>~;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;</del>		†††††††††††				TTTT
PASSING 8 8			┥╍┝	<u> </u>	╺╍╌╞╌╞╌╞╌╞┝	╞╍╍╌╞╌╍┠╺┡╺┝	╫╫	┿┿┿╢
PA ~								
ar 40-	<u>}</u> †-	╾╋╍╋╋╅╢		+++++			╈╋	ttiti (

2 30 20-10 0 10 100 001 äı DIAMETER (mm)

## GRAIN SIZE ANALYSIS

Project:	Subsi	dence in	Bangko	k Vicinity	<u>/                                     </u>
Borehole No.:	A -	Depth (	<b>m)</b>	8.00-9.0	o 8
Soil Description	):			en al Terretaria	<u> </u>

Location: Sample No.: Tested By:

Test No.: Date:

20-1-93

AH-4

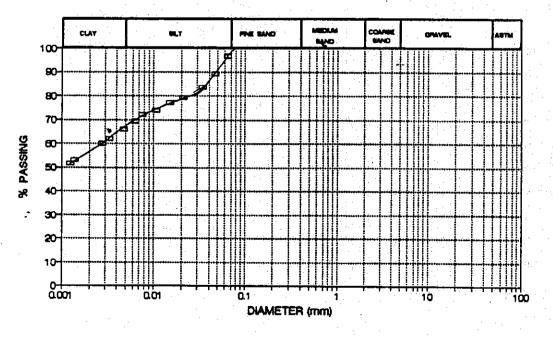
HYDROMETER ANALYSIS

Minburt

Opening	Percent. Finer
(mm)	(%)
4.76	
2.00	
0.84	
0.59	
0.42	
0.30	
0.15	
0.07	

SIEVE ANALYSIS

TIDIONI	ER ANALTSIS
Particle	Percent
Size	Finer
(mm)	(%)
0.0641	96.59
0.0470	89.42
0.0341	83.81
0.0341	83.81
0.0210	79.45
0.01 50	77.27
0.01 07	74.18
0.0077	72.28
0.0063	69.48
0.0047	66.36
0.0033	62.00
0.0027	60.14
0.0014	53.28
0.0012	51.72
0.0010	57.90



#### **GRAIN SIZE ANALYSIS**

Project:	Subsident	ce in Bang	kok Vicinity	Location:	Minburi		
Borehole No.:	A De	pth (m)	10.00-10.80	Sample No.:		Test No.:	AH-5
Soil Description	n:			Tested By:		Date:	20-1-93
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1					
	1. S. 1. S. 1.		ANAL VOIS		HYDROM	ETER ANALYSIS	

	Percent
Opening	Finer
(mm)	(96)
4.76	
200	
0.84	<u></u>
0.59	······
0.42	
0.30	
0.15	
0.07	
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	

HTDROME IER ANALTSIS	
Particle	Percent
Size	Finer
(MM)	(%)
0.0885	97.27
0.0636	94.28
0.0458	90.98
0.0333	85.30
0.0333	85.60
0.0217	79.31
0.01 56	76.32
0.0112	73.33
0.0080	69.73
0.0066	67.94
0.0049	64.95
0.0035	61.06
0.0028	59.27
0.0014	53,58
0,0013	52.38
0.0010	50.28

