CHASANO

(9)

FINAL REPORT

REMEDIAL INVESTIGATION

WORK ASSIGNMENT D002340-20

N. FRANKLIN STREET
WATKINS GLEN (V)

SITE NO. 8-49-002
SCHUYLER (C), NY

Prepared for:

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
50 Wolf Road, Albany, New York

Thomas C. Jorling, Commissioner

DIVISION OF HAZARDOUS WASTE REMEDIATION

Michael J. O'Toole, Jr., P.E. -Director

URS Consultants, Inc.
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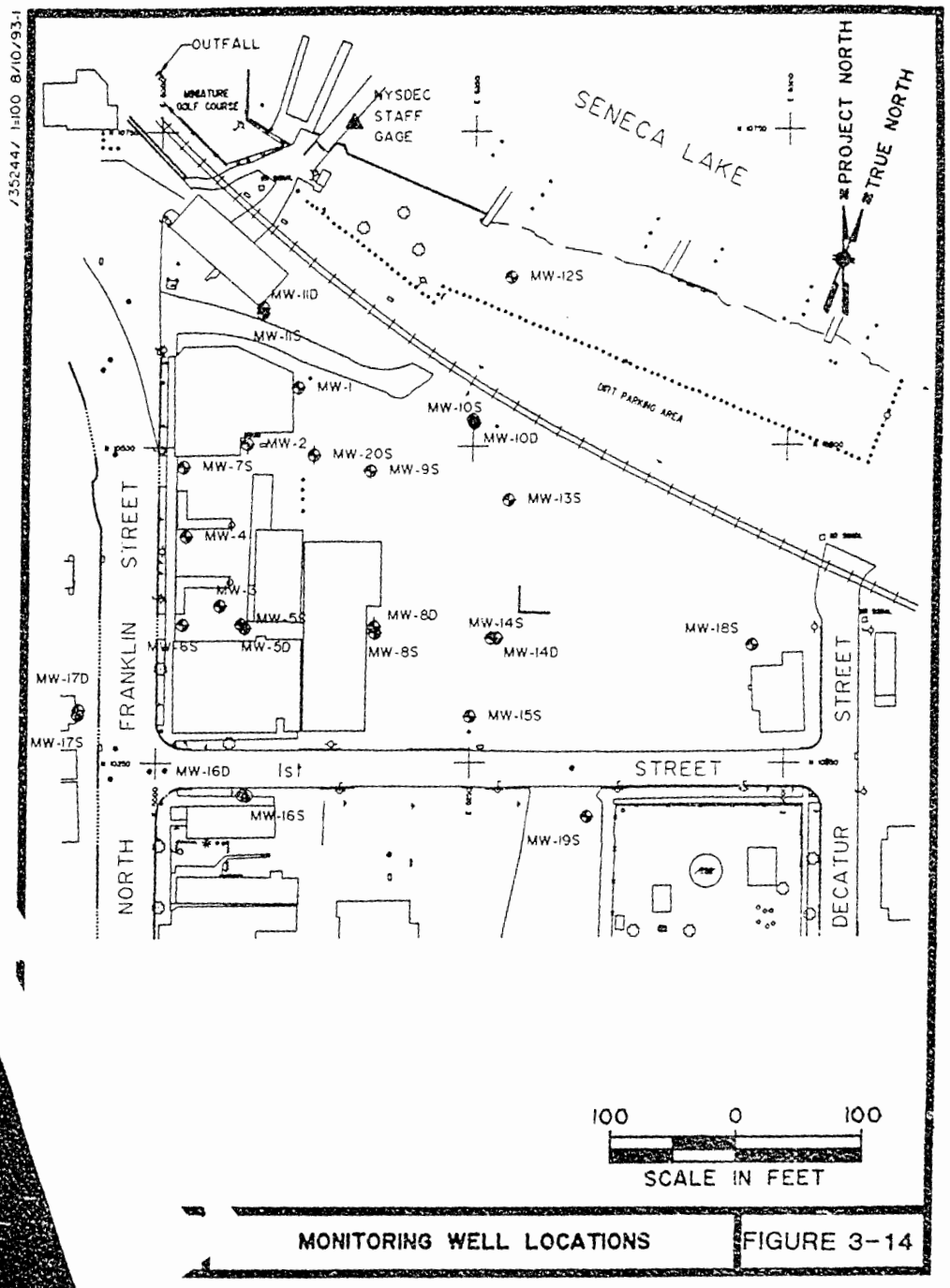
Buffalo, New York 14202

August 1993



MONITORING WELL LOCATIONS

FIGURE 3-14

Appendix E - Soil Boring Logs

									BORING NO.	MW-5D
PROJECT: N. Franklin St.									SHEET NO. 1 OF 1	
CLIENT: New York State Department of Environmental Conservation									JOB NO. :	35244.00
BORING CONTRACTOR: Buffalo Drilling Company									BORING LOCATION:	10557 815'0N 5069.50366E
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	GROUND ELEVATION:	451.62'
DATE	TIME	LEV	TYPE	TYPE		SS	(split-	spoon)	DATE STARTED:	12/16/92
12/18/92		445.37	in monitoring well	DIA.		2"			DATE FINISHED:	12/16/92
				WT.		140#			DRILLER:	Larry Schroeder
				FALL		30"			GEOLOGIST:	Steve Frank
				* POCKET PENETROMETER READING					REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY /PID (ppm)'	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			28	30		Dark	Very Dense	FILL -	GM	o Moist
	XXXX	1*	SS	34	16	50%/7	Brown		regraded silty gravel with some sand		o Clean Fill
	XXXX			9	10			Medium Dense			
3.7	XXXX	2*	SS	12	6	70%/0.7					
5	~/~/~			1	1		Gray	Soft	CLAYEY SILT -	ML/	o Very Low Plasticity
	~/~/~	3*	SS	1	2	95%/7			trace fine sand and gravel	CL	o Very Moist to Wet
	~/~/~			5	5			Medium Stiff			o Low Plasticity
	~/~/~	4	SS	2	7	90%/3					
	~/~/~			4	5			Stiff			
10	~/~/~	5	SS	7	6	95%/1.5					
	~/~/~			5	4						
	~/~/~	6	SS	4	6	95%/0.4					
13	~/~/~			2	4						
	.o~.o~	7	SS	6	10	60%/0	Brown	Medium Dense	STRATIFIED SAND AND GRAVEL -	GW/	o Wet-First Free
15	.~o.~o			9	6				trace to some silt	SM	Water Encountered
	.o~.o~	8	SS	11	8	50%/0					
	.~o.~o			7	6						o Variable Texture:
	.o~.o~	9	SS	6	7	20%/0					Fines more
	.~o.~o			4	5						Abundent in Sandy
20	.o~.o~	10	SS	6	9	10%/0					Zones
	.~o.~o			5	6						
	.o~.o~	11	SS	7	7	15%/0					
22.5	.~o.~o			5	3						
	~.~.~	12	SS	3	3	60%/0	Gray	Loose	SANDY SILT/SILTY SAND -	SM/	
25	~.~.~			3	3				trace clay	ML	
	~.~.~	13	SS	4	5	100%/0					o Some Peat & Wood
	~.~.~			4	4						
28	~.~.~	14	SS	6	10	100%/0					
	~/~/~			2	3		Gray	Medium Stiff	CLAYEY SILT -	ML/	o Small (<5mm)
30	~/~/~	15	SS	3	3	100%/0			trace to some fine sand	MH	shells and shell
	~/~/~			2	3						fragments
32	~/~/~	16	SS	3	3	100%/0					o Laminated
									Boring completed at 32 feet		
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well pair MW-5D and MW-5S at this location (see well construction log).

' Screening of soil core.

* - Environmental samples from 0-5 feet.

PROJECT NO. 35244.00

BORING NO. MW-5D

								BORING NO.	MW-6S
PROJECT:	N. Franklin St.							SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation							JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company							BORING LOCATION:	10360.39155N 5020.28977E
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	
DATE	TIME	LEV	TYPE	TYPE		SS	(split-	spoon)	DATE STARTED: 12/14/92
12/18/92		446.83	in monitoring well	DIA.		2"			DATE FINISHED: 12/14/92
				WT.		140#			DRILLER: Larry Schroeder
				FALL		30"			GEOLOGIST: Steve Frank
				* POCKET PENETROMETER READING					REVIEWED BY: Duane Lenhardt

GROUND ELEVATION: 450.95'

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY /PID (ppm)[1]	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			38	16		Brown	Medium Dense	FILL -	GM	o Moist
	XXXX	1	SS	9	8	50%/0			silty gravel with some sand		o Environmental Sample
3.5	XXXX			5	5						collected at 2-6'
	./~./~.	2*	SS	4	4	50%/0.5	Gray	Soft	CLAYEY SILT -	ML/	o Perched Water at
5	/.~/.~/			1	1				trace sand and gravel	CL	Clayey Silt Contact
	~/.~/.	3*	SS	2	3	75%/1.5					
	/.~/.~/			1	2						o Very Moist - Wet
	/.~o/.	4	SS	2	3	90%/10					
	/.~/.~/			1	2						o 25 ppm PID
10	/.~o/.	5	SS	2	3	100%/25					Inside Augers
	/.~/.~/			1	6			Very Stiff			o Low-Med Plasticity
12	~/.~/.	6	SS	12	12	100%/0					
	.o.o.o.o			6	8		Brown	Medium Dense	SANDY GRAVEL -	GM	o Wet-Free Water
	o.o.o.o.	7	SS	7	5	25%/0			some silt		
15	.o~.o~			8	5						
16	o.o.o.o.	8	SS	6	5	15%/0					
									Boring completed at 16'		
20											
25											
30											
35											

COMMENTS - Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well MW-6S in borehole (see well construction log)

[1] - Screening of soil core.

* - Environmental sample from 2-6 feet.

PROJECT NO. 35244.00

BORING NO. MW-6S

PROJECT: N. Franklin St. | SHEET NO. 1 OF 1

CLIENT: New York State Department of Environmental Conservation | JOB NO. : 35244.00

BORING CONTRACTOR: Buffalo Drilling Company | BORING LOCATION: 10484.755724N 5020.02346E

GROUNDWATER:					CAS.	SAMP.	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SS	(split-	spoon)
12/18/92		444.89	in monitoring well	DIA.		2"		
				WT.		140#		
				FALL		30"		
				* POCKET PENETROMETER READING				

GROUND ELEVATION: 450.68'

DATE STARTED: 12/16/92

DATE FINISHED: 12/16/92

DRILLER: Mike Saeli

GEOLOGIST: Joe Pettorino

REVIEWED BY: Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY /PID (ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			9 24		Black	Dense	Fill - sand and gravel with	SW/	o ~3" Asphalt
	XXXX	1	SS	15 20	50%/#	&		trace silt	GW	o HNu broke down
	XXXX			9 14		Dark	Very Dense			o Oily Texture
4	XXXX	2	SS	37 22	40%/#	Brown				o Moist
5	.~.~.			4 5		Gray	Stiff	Clayey Silt - trace sand	ML/	
6	.~.~.	3	SS	6 8	60%/#				CL	o Low Plasticity
	.o.o.o.o			8 10		Gray	Medium Dense	Gravelly sand - some silt;	SM	o Wet
	o.o.o.o.	4	SS	11 17	50%/#			trace clay		o w/Shale Fragments
	.~.~.			5 7						o Coarse-Fine Sands
10	.o.o.o.o	5	SS	7 7	30%/#					
	o.o.o.o.			3 2		Brownish	Loose to			
	.~.~.	6	SS	2 2	70%/#	Gray	medium dense			
	.o.o.o.o			1 3						o Few Thin Peat Beds
	o.o.o.o.	7	SS	4 3	70%/#					o ½" orange clay seam
15	.~.~.			4 5				-Stratified sand and gravel	SM/	o Fine subrounded gravel
	.o.o.o.o	8	SS	6 7	40%/#				GM	
17	o.o.o.o.									
								Borehole completed at 17'		
20										
25										
30										
35										

COMMENTS: Boring advanced with 6¼" hollow-stem augers; Diedrich D-50 Drill Rig. Installed monitoring well MW-7S in bore hole (see well construction log)

- No PID readings due to instrument malfunction.

* - Environmental sample from 2-4'

PROJECT NO. 35244.00

BORING NO. MW-7S

New York State Department of Environmental Conservation

BORING CONTRACTOR:	Buffalo Drilling Company								JOB NO. :	35244.00
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	BORING LOCATION:	10358.843765N 5172.516978E
DATE	TIME	LEV	TYPE	TYPE		SS	(split-	spoon)	GROUND ELEVATION:	451.29
12/18/92		445.20	In monitoring well	DIA.		2"			DATE STARTED:	12/15/92
				WT.		140#			DATE FINISHED:	12/15/92
				FALL		30"			DRILLER:	Larry Schroeder
				* POCKET PENETROMETER READING					GEOLOGIST:	Steve Frank
									REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY /PID (ppm)*	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			57	30		Dark	Dense	FILL	GM/	o Dry
	XXXX	1*	SS	5	25	40%/0	Brown &		silt and gravel with some sand	ML	o Moist
3	XXXX			16	20		Black		and asphalt		
	o~o~o	2*	SS	17	10	60%/0	Brownish	Dense	Gravelly Silt - trace; some sand	ML	
4.5	~o~o			3	3		Gray				o Moist
	~/~/~	3*	SS	3	4	100%/0	Gray	Medium Stiff	Clayey Silt - trace fine sand and	ML	o Moist
	/~/~/			3	5			to Stiff	gravel		
7.5	~/~/~	4	SS	12	16	90%/0					
	.~o.~o			13	3		Gray	Loose	Silty Sand and Gravel	SM/	o Wet
10	~o.~o.	5	SS	2	4	20%/0				GM	o Fine to Coarse
	.~o.~o			5	6			Medium Dense			Angular to Subround
	~o.~o.	6	SS	7	8	25%/0.2					Gravel
	~o.~o.			10	13						
	.~o.~o	7	SS	12	10	30%/0					
15	~o.~o.			12	6						
	.~o.~o	8	SS	7	8	30%/0					
	~o.~o.			9	7				- Increase in Stratified Gravel	GW	
	~o.~o.	9	SS	5	6	30%/0			lenses with depth		
	~o.~o.			10	7						
20	.~o.~o	10	SS	8	4	25%/0					
	~o.~o.			5	6			Loose		GW/	
22	.~o.~o	11	SS	4	4	25%/0				GM	
	~..~..			4	3		Gray	Very Loose	Silty Sand/Sandy Silt - trace fine	SM/	
	.~..~..	12	SS	1	3	90%/0			gravel; trace clay	ML	
25	.~..~..			1	2			Loose			
	~..~..	13	SS	4	4	90%/0					
	.~..~..			2	5			Medium Dense			
28	.~..~..	14	SS	6	8	90%/0					o Finely Laminated
	~/~/~			12	4		Gray	Stiff	CLAYEY SILT-	ML/	o Small (<5mm)
30	/~/~/	15	SS	6	7	95%/0			some very thin sandy silt interbeds	MH	Shell Fragments
									Boring completed at 30 feet		
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well pair MW-8D and MW8S installed at this loca (see well construction log)

* - Environmental sample from 0-6'

! - Screening of soil core.

PROJECT NO. 35244.00

BORING NO. MW-8D

									BORING NO.	MW-9S
PROJECT:	N. Franklin St.								SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation								JOB NO. :	35244.10.30000
BORING CONTRACTOR:	Buffalo Drilling Company								BORING LOCATION:	10421.121111N 5168.329335E
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	GROUND ELEVATION:	451.53'
DATE	TIME	LEV	TYPE	TYPE		SS	(split spoon)		DATE STARTED:	12/13/92
12/18/92		445.12	in monitoring well	DIA.		2"			DATE FINISHED:	12/13/92
				WT.		140#			DRILLER:	Larry Schroeder
				FALL		30"			GEOLOGIST:	Mindar Hsieh
				* POCKET PENETROMETER READING					REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)*	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			23	24		Brown/	Dense to	FILL -	SM/	o HNu: no detection
	XXXX	1	SS	20	15	80%/0	Yellow	Very Dense	silty sand, some gravel, trace	SW	o 0-6" Wet
	XXXX			12	50/1"				clay		o Difficult Augering
	XXXX	2	SS			15%/0					1.5-6'
5	XXXX			50/1"							o Spoon Refusal 4-6'
6	XXXX	3	SS			0					
	.o~.o~			8	9		Gray	Medium Dense	GRAVELLY SAND -	SM	o Medium-Coarse Sand
	.o~.o~	4	SS	17	15	50%/0		to Dense	trace silt and clay		o Coarse Fragments
	.o~.o~			7	8						up to 1½"
10	.o~.o~	5	SS	10	7	40%/0					o Mixed Lithology
	.o~.o~			12	22						
	.o~.o~	6	SS	13	14	40%/0					
	.o~.o~			5	11						
	.o~.o~	7	SS	6	6	20%/0					
15	.o~.o~			7	6						
16	.o~.o~	8	SS	5	5	20%/0					
									Borehole completed at 16.0'.		
20											
25											
30											
35											

COMMENTS Boring advanced with 6¼" hollow stem augers; CME 55 Drill Rig. Installed monitoring well MW-9S at this location (see well construction log)

' - Screening of soil core.

* - Environmental sample from 0-4'.

PROJECT NO. 35244.10.30000

BORING NO. MW-9S

PROJECT:	N. Franklin St.								SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation								JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company								BORING LOCATION:	10518.564N 5252.925E
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	GROUND ELEVATION:	451.86ft.
DATE	TIME	LEV	TYPE	TYPE		SS	(split-spoon)		DATE STARTED:	12/11/92
12/18/92		445.04	in monitoring well	DIA.		2"			DATE FINISHED:	12/11/92
				WT.		140#			DRILLER:	Mike Saeli
				FALL		30"			GEOLOGIST:	Steve Frank
				* POCKET PENETROMETER READING					REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			54	16		Dark	Dense	FILL -	SM/	o Moist
	XXXX	1*	SS	17	34	60%/#	Brown &		silty sand and gravel road subgrade	GM	
	XXXX			5	7		Black	Medium Dense			o Environmental Sample
	XXXX	2*	SS	7	9	50%/#					collected 0-6'
5	XXXX			10	12		Brown				o Few Brick Fragments
6	XXXX	3*	SS	12	11	70%/#					
	~.o~.o			10	9		Brown	Medium Dense	SILTY SAND AND GRAVEL	GM/	o Wet
	~.o~.o	4	SS	9	10	10%/#				SM	o Fine-Coarse Sand
	~.o~.o			7	8						o Mostly Fine-Med
10	~.o~.o	5	SS	16	15	40%#					Subangular Gravel
	~.o~.o			7	22			Very Dense	- Well Sorted Medium Sand	SW	
	~.o~.o	6	SS	33	31	60%/#			to fine gravel		
	~.o~.o			8	18						
	~.o~.o	7	SS	34	19	60%/#			- Variable Texture	GM/	
15	~.o~.o			9	10			Medium Dense		SM	
	~.o~.o	8	SS	10	14	50%/#					
	~.o~.o			6	9						
	~.o~.o	9	SS	9	9	40%/#					
	~.o~.o			8	9						o Coarse Gravel
20	~.o~.o	10	SS	10	10	5%/#					fragment in end of sampler
	~.o~.o			7	7						
22	~.o~.o	11	SS	10	12	25%/#					
	~.~.~			3	6		Gray	Medium Dense	SILTY SAND/SANDY SILT -	SM/	
	~.~.~	12	SS	13	15	50%/#		to Loose		ML	
25	~.~.~			3	4						
	~.~.~	13	SS	4	6	80%/#					
	~.~.~			WH	2				trace clay		o Wood Fragments
	~.~.~	14	SS	2	3	65%/#					and Peat
29	~.~.~			WH	2				grades to		
30	~\~\~	15	SS	2	2	95%/#	Gray	Soft	CLAYEY SILT	ML	o Sticky-Low plasticity
									Boring completed at 30'		
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers; Diedrich D-50 Drill Rig. Installed monitoring well MW-10D and MW-10S at this location (see well construction log)

* Environmental Sample 0-6'

- No PID readings due to instrument malfunction

PROJECT NO 35244.00

BORING NO. MW-10D

CLIENT:	New York State Department of Environmental Conservation								JOB NO.:	35244.00	
BORING CONTRACTOR:	Buffalo Drilling Company								BORING LOCATION:	[illegible]	
GROUNDWATER:					CAS.	SAMP.	CORE	TUBE	GROUND ELEVATION:	450.92'	
DATE	TIME	LEV	TYPE	TYPE		SS		Shelby	DATE STARTED:	12/10/92	
12/18/92		445.00	in monitoring well	DIA.		2"		3"	DATE FINISHED:	12/10/92	
				WT.		140#			DRILLER:	Larry Schroeder	
				FALL		30"			GEOLOGIST:	Joe Pettorino	
				* POCKET PENETROMETER READING					REVIEWED BY:	Duane Lenhardt	

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			29	18		Black	Medium Dense	FILL -	GM	o Paved Surface
	XXXX	1*	SS	12		50%/#			gravelly sand & gravel with some silt,	SM	o Numerous Orange
	XXXX			5	5		Brown	Loose	asphalt and brick		Mottles
	XXXX	2*	SS	5	4	50%/#	and				
5	XXXX			12	11		Gray	Medium Dense			
6	XXXX	3*	SS	11	10	50%/#					
	.o~.o~			6	5		Brown	Loose	SAND AND GRAVEL -	SM/	o Wet
	.o~.o~	4	SS	3	3	30%/#			trace to some silt	GM	o Fine-Coarse Sand
	.o~.o~			5	5			Medium Dense			o Fine Gravel
10	.o~.o~	5	SS	9	10	40%/#					
	.o~.o~			10	7						
	.o~.o~	6	SS	7	3	20%/#					
	.o~.o~			2	2						
	.o~.o~	7	SS	2	5	0%/#					
15	.o~.o~			10	10						
	.o~.o~	8	SS	4	2	30%/#					
	.o~.o~			6	4						
	.o~.o~	9	SS	8	8	10%/#					
19	.o~.o~			4	8						
20	~.~.~	10	SS	15	24	30%/#	Gray	Loose to	SILTY SAND/SANDY SILT -	SM/	
	~.~.~			2	2			very loose	trace fine gravel	ML	
	~.~.~	11	SS	3	3	50%/#					
	~.~.~			1	2						
	~.~.~	12	SS	1	3	60%/#					
25	~.~.~			WR	2						
	~.~.~	13	SS	3	4	75%/#					o Few Seams of Peat
	~/~/~			1	2		Gray	Medium Stiff	CLAYEY SILT	ML/	
	~/~/~	14	SS	2	4	90%/#				MH	o Finely Laminated
	~/~/~			2	2						
30	~/~/~	15	SS	3	4	100%/#					o Small (<5mm)
	~/~/~										Shells and Shell
	~/~/~	1	ST			100%/#					Fragments
									Borehole completed at 32'		
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well pair MW-11D and MW-11S at this location (see well construction log).

* - Environmental sample 0-6'

\# - No PID reading due to instrument malfunction.

PROJECT NO. 35244.00

BORING NO. MW-11D

SHEET NO. 1 OF 1

CLIENT:	New York State Department of Environmental Conservation								JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company								BORING LOCATION:	[illegible]
GROUNDWATER:		~7 ft.			CAS.	SAMP.	CORE	TUBE	GROUND ELEVATION:	450.59
DATE	TIME	LEV	TYPE	TYPE		SS			DATE STARTED:	12/13/92
12/18/92		444.60	in monitoring wel	DIA.		2"			DATE FINISHED:	12/13/92
				WT.		140#			DRILLER:	Mike Saeli
				FALL		30"			GEOLOGIST:	Joe Pettorino
				* POCKET PENETROMETER READING					REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)[1]	COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			5	9		Dark	Medium Dense	FILL -	SM	
	XXXX	1*	SS	9	7	75%/0	Brown		6" topsoil to sandy fill w/ silt & gravel		
	..o..o..			9	8		Brown	Medium Dense	GRAVELLY SAND -	SW	o Environmental Sample
	..o..o..	2*	SS	18	31	15%/0			trace silt		collected 0-4'
5	..o..o~			9	12						o Fine-Coarse Sand
	..o..o..	3	SS	9	8	0%/0					
	..o..o..			12	6					SW/	o Fine-Medium
	..o..o..	4	SS	5	3	10%/0			- Gravelly seams to 16'	GW	Subangular Gravel
	..o..o..			2	2						
10	..o..o..	5	SS	3	2	10%/0					
	..o..o~			8	12						
	..o..o..	6	SS	11	11	40%/0				SW	
	..o..o..			7	6						
	..o..o~	7	SS	5	5	40%/0					
15	..o..o..			3	3						
16	..o..o..	8	SS	4	4	25%/0					o 1/3" Peat Seam
									Bore hole completed at 16'		
20											
25											
30											
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers; Diedrich D-50 Drill Rig. Installed monitoring well MW-12S in bore hole.
(see well construction log)

* - Environmental sample 0-4'
[1] - Screening of soil core.

PROJECT NO. 35244.00
BORING NO. MW-12S

TEST BORING LOG

BORING NO. MW-13S

PROJECT:	N. Franklin St.
CLIENT:	New York State Department of Environmental Conservation
BORING CONTRACTOR:	Buffalo Drilling Company

GROUNDWATER:					CAS.	SAMP.	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SS	(split-spoon)	
12/18/92		445.05	in monitoring well	DIA.		2"		
				WT.		140#		
				FALL		30"		
				* POCKET PENETROMETER READING				

SHEET NO. 1 OF 1	
JOB NO. :	35244.00
BORING LOCATION:	10458.1643SN 5278.8128SE
GROUND ELEVATION:	452.15
DATE STARTED:	12/13/92
DATE FINISHED:	12/13/92
DRILLER:	Mike Saeli
GEOLOGIST:	Joe Petterino
REVIEWED BY:	Duane Lenhardt

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			20	47	Brown	Very Dense	FILL -	GW/	o Moist
	XXXX	1	SS	10	25	80%/#		sand and gravel w/ trace silt,	SW	o Environmental Sample
	XXXX			14	17		Medium Dense	brick and asphalt becoming sandier		collected 2-6'
4	XXXX	2*	SS	14	15	40%/#		with depth		o Moist
5	\~\~\			2	4	Brown	Medium Stiff	CLAYEY SILT	ML	o Orange Mottles
6	\~\~\	3*	SS	4	6	60%/#				
	..o...o..			6	9	Brown	Medium Dense	STRATIFIED SAND AND GRAVEL -	SW/	o Fine-Coarse
	..o...o..	4	SS	10	11	40%/#		trace silt	GW	Sand and Gravel
	~o.~o.			6	8					
10	..o...o..	5	SS	8	11	40%/#				o Numerous Shale Fragments
	..o...o..			6	14					
	~o.~o.	6	SS	7	8	30%/#				o Some Rounded Gravel
	..o...o..			4	10					
	..o...o..	7	SS	15	21	40%/#				o Shale Fragments
15	~o.~o.			9	16					
16	..o...o..	8	SS	14	16	40%/#				
								Borehole complete at 16'		
20										
25										
30										
35										

COMMENTS Boring advanced with 6¼" hollow-stem augers; Diedrich D-50 Drill Rig. Installed monitoring well MW-13S in borehole. (see well construction log)

* - Environmental sample 2-6'

\# - No PID reading due to instrument malfunction

PROJECT NO. 35244.00

BORING NO. MW-13S

PROJECT:	N. Franklin St.	SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation	JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company	BORING LOCATION:	10349.702889N 5279.179895E
GROUNDWATER:		GROUND ELEVATION:	451.64'
DATE: 12/18/92	TIME:	LEV: 445.14	TYPE: in monitoring well
DATE STARTED:	12/08/92		
DATE FINISHED:	12/08/92		
DRILLER:	Larry Schroeder		
GEOLOGIST:	Steve Frank		
REVIEWED BY:	Duane Lenhardt		

	CAS.	SAMP.	CORE	TUBE
TYPE		SS		Shelby
DIA.		2"		3"
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)¹	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			15	55		Dark	Very Dense	FILL -	ML	o Environmental Sample
	XXXX	1*	SS	45	35	50%/0	Brown		sandy silt matrix w/ some gravel		collected 1-4'
	XXXX			9	10		& Black	Medium Dense	brick and concrete fragments		
4	XXXX	2*	SS	11	11	60%/0					
5	.~.~.			8	6		Brown	Medium Dense	SANDY SILT	ML	o Mottled
6	.~.~.	3	SS	7	11	80%/0	& Gray		trace clay		o Moist, Friable
	..o..~..			4	5		Brown	Loose	SILTY SAND AND GRAVEL	GM/	
	..~..o..	4	SS	3	4	40%/0				SM	o Fine to Medium
	..o..~..			5	2						Gravel-Subround
10	..~..o..	5	SS	8	7	20%/0					to Angular
	..o..~..			10	14			Medium Dense			
	..~..o..	6	SS	12	9	70%/0					
	..o~..o			8	13				GRAVELLY SAND -	SW/	
	..o..o..	7	SS	13	16	25%/0			trace to some silt	SM	
15	..o..o..			10	7						
	..o..o..	8	SS	6	4	60%/0					
	..o..o..			8	9						
	..o~..o	9	SS	18	28	75%/0					
	..o..o..			8	9						
20	..o..o..	10	SS	17	26	50%/0					
	..o..o..			10	13			Dense			
22	..o..o..	11	SS	19	21	30%/0					
	.~..~..			7	6		Gray	Loose	SILTY SAND/SANDY SILT -	SM/	
	.~..~..	12	SS	4	3	50%/0			trace clay	ML	
25	.~..~..			3	3						o Few Wood Fragments
	.~..~..	13	SS	6	8	70%/0					
	.~..~..			3	4			Medium Dense			
	.~..~..	14	SS	8	8	60%/0					
	.~..~..			5	5			Loose			
30	.~..~..	15	SS	5	7	5%/0					
	~/~/~			WR	3		Gray	Stiff to	CLAYEY SILT -	ML/	o Sticky w/ Low
	~/~/~	16	SS	6	8	90%/0		Medium Stiff	trace to some sand, trace gravel	MH	Plasticity
	~/~/~			WR	5						
	~/~/~	17	SS	5	7	100%/0					o Small (<5mm)
35	~/~/~			WH	3						Shells and Shell
	~/~/~	18	ST	4	4	100%/0			Borehole completed w/ Shelby Tube ST-1 36-38'		Fragments

COMMENTS: Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well pair MW-14D and MW-14S at this location (see well construction log).

* Environmental sample at 1-4'

¹ - Screening of soil core.

PROJECT NO. 35244.00

BORING NO. MW-14D

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-15S

PROJECT:	N. Franklin St.	SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation	JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company	BORING LOCATION:	10287.146225N 5249.776605E
GROUNDWATER:		GROUND ELEVATION:	450.69'
DATE: 12/18/92	TIME:	LEV: 445.23	TYPE: in monitoring well
DATE STARTED:	12/09/92		
DATE FINISHED:	12/09/92		
DRILLER:	Larry Schroeder		
GEOLOGIST:	Joe Pettorino		
REVIEWED BY:	Duane Lenhardt		

	CAS.	SAMP.	CORE	TUBE
TYPE		SS	(split-spoon)	
DIA.		2"		
WT.		140#		
FALL		30"		

• POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY PID(ppm)*	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			100/3"		Brown	Very Dense	FILL - sand and gravel	SW/	o Roadfill
2	XXXX	1	SS		20%/0	& Gray			GW	
	~/~/~			2	1	Gray	Soft	CLAYEY SILT	ML/	o Slight Odor
	~/~/~	2	SS	1	2	30%/3			CL	
5	~/~/~			2	2					o Moist
	~/~/~	3	SS	2	3	60%/0				o Dark Color Stained
	~/~/~			4	3		Medium Stiff			o Few Reddish Mottles
	~/~/~	4*	SS	4	5	50%/0				o Environmental Sample collected 6-10'
9	~/~/~			7	9					
10	o.~o.~	5*	SS	7	7	50%/0	Gray	Loose to	SW	o Wet
	o.~o.~			4	4			Medium Dense		o Coarse-Fine Sand
	o.~o.~	6	SS	4	4	30%/0		GRAVELLY SAND - trace silt and clay		o Medium-Fine Gravel
	o.~o.~			5	7					o Mostly Subangular to subround
	o.~o.~	7	SS	5	6	20%/0				
15	o.~o.~			4	4					
16	o.~o.~	8	SS	5	5	15%/0				
								Boring completed at 16 feet		
20										
25										
30										
35										

COMMENTS Boring advanced with 6¼" hollow-stem augers; CME 55 Drill Rig. Installed monitoring well MW-15S in bore hole. (see well construction log)

• Environmental sample 6-10'

' - Screening of soil core

PROJECT NO. 35244.00

BORING NO. MW-15S

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-16D

PROJECT:	N. Franklin St.
CLIENT:	New York State Department of Environmental Conservation
BORING CONTRACTOR:	Buffalo Drilling Company
SHEET NO.	1 OF 1
JOB NO. :	35244.00
BORING LOCATION:	10224.336259N 5969.26646E
GROUND ELEVATION:	451.77
DATE STARTED:	12/12/92
DATE FINISHED:	12/13/92
DRILLER:	Larry Schroeder
GEOLOGIST:	Mindar Hsieh
REVIEWED BY:	Duane Lenhardt

GROUNDWATER:					CAS.	SAMP.	CORE	TUBE
DATE	TIME	LEV	TYPE	TYPE		SS		Shelby
12/18/92		445.61	In monitoring well	DIA.		2"		3"
				WT.		140#		
				FALL		30"		

• POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			31	22		Yellow/	Dense/	FILL -		
	XXXX	1*	SS	8	8	50%/#	Brown	Medium Dense	silty sand, some gravel, trace clay	SM	o Moist
	XXXX			12	6			to Loose			o Very Moist
4.3	XXXX	2*	SS	3	3	20%/#					
5	~/~/~			2	2		Yellow/	Medium Stiff	CLAYEY SILT -	ML/	
	~/~/~	3*	SS	2	3	95%/#	Dark		trace sand and gravel	CL	o Very Moist
	~/~/~			3	6		Brown	Stiff			o Medium Plasticity
	~/~/~	4*	SS	6	6	50%/#					o Saturated
	~/~/~			3	3			Medium Stiff			o Coarse Fragments
10	~/~/~	5	SS	3	4	75%/#					up to 1"
	~/~/~			WR	WH		Gray	Very Loose/	CLAYEY SAND -	SC/	o Organic Matter
12	~/~/~	6	SS	2	2	80%/#		Soft	becoming clay with depth	CL	
	o.~o.~			6	6		Yellow/	Medium Dense	SILTY SAND & GRAVEL	SM/	
	o.~o.~	7	SS	6	7	20%/#	Brown to			GM	
15	o.~o.~			9	6		Yellow				o Mixed Lithology
	o.~o.~	8	SS	5	6	60%/#					o Coarse Fragments
	o.~o.~			8	6						1/4-1" TYP
	o.~o.~	9	SS	7	15	50%/#					
	o.~o.~			2	6			Loose			
20	o.~o.~	10	SS	4	4	20%/#					
	o.~o.~			3	4						
22.2	o.~o.~	11	SS	3	2	20%/#					
	~.~.~			1	1		Gray	Very Loose	SILTY SAND/SANDY SILT	SM/	o Wood Debris
	~.~.~	12	SS	1	2	100%/#			trace to some clay	ML	o Some Sandier Seams
25	~.~.~										Interbedded
	~.~.~	1	ST			95%/#					
	~.~.~			WH	1			Loose			
	~.~.~	13	SS	3	4	100%/#					
	~.~.~			1	2						
30	~.~.~	14	SS	3	4	90%/#					
	~/~/~								CLAYEY SILT -	ML/	o Shell Fragments
32	~/~/~	2	ST			90%/#	Gray		some fine sand	MH	o Low-Med. Plasticity
									Bottom of borehole @ 32.0'.		
35											

COMMENTS Boring advanced with 6¼" hollow stem augers. CME 55 Drill Rig. Installed monitoring well pair MW-16D and MW-16S at this location (see well construction log).

- No PID readings due to instrument malfunction.

• - Environmental sample from 0-8 feet.

PROJECT NO. 35244.00

BORING NO. MW-16D

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-17D

PROJECT:	N. Franklin St.	SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation	JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company	BORING LOCATION:	10292.545277N 4938.56255E
GROUNDWATER:		GROUND ELEVATION:	451.73'
DATE STARTED:	12/09/92		
DATE FINISHED:	12/09/92		
DRILLER:	Mike Saeli		
GEOLOGIST:	Steve Frank		
REVIEWED BY:	Duane Lenhardt		

DATE	TIME	LEV	TYPE
12/18/92		445.09	in monitoring well

	CAS.	SAMP.	CORE	TUBE
TYPE		SS	(split-spoon)	
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY PID(ppm)¹	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			4 5		Dark	Medium Dense	FILL -	ML	o Very Moist
	XXXX	1	SS	9 2	70%/0	Brown		silty fill with some sand and traces		
	XXXX			2 2		& Black	Very Loose	of gravel and clay		
4	XXXX	2	SS	2 2	40%/0					
5	~.~.~			3 4		Brown	Loose	SANDY SILT -	ML	o Very Moist
	~.~.~	3	SS	4 8	90%/0			trace clay		o Rootlets and
7	~.~.~			WH 2						Wood Fragments
	.~o.~o	4	SS	3 5	30%/0	Brown	Medium Dense	SILTY SAND AND GRAVEL -	SM/	o Wet
	.~o.~o			6 9				trace clay	GM	o Mostly Angular Shale
10	.~o.~o	5	SS	9 9	50%/0					Fragments Compose
	.~o.~o			4 5						Gravel
	.~o.~o	6	SS	6 6	40%/0					
	.~o.~o			5 5	-					
	.~o.~o	7	SS	7 5	50%/0					
15	.~o.~o			4 5		Gray	Loose			
	.~o.~o	8	SS	4 5	60%/0					
	.~o.~o			6 6			Medium Dense			o Large Piece of
18	.~o.~o	9	SS	10 14	65%/0					Wood in Spoon
	o~o~o			15 18		Gray	Dense	GRAVELLY SILT -	ML	
20	o~o~o	10	SS	21 15	50%/0			some sand		o Wood Fragments
	o~o~o			12 9			Medium Dense	trace clay		and Some Peat
22	o~o~o	11	SS	10 14	50%/0					
	~/~/~			4 5		Dark	Stiff	CLAYEY SILT -	ML	o Stickey Fines w/
	~/~/~	12	SS	7 9	60%/0	Gray		trace to some gravel		Very Low Plasticity
25	~/~/~			3 4						o Few Gray Mottles
26	~/~/~	13	SS	8 12	80%/0					
	//\//\//	14	SS	100/4"	100%/0	Gray	Very Dense	WEATHERED SHALE AND SANDSTONE		
								Borehole completed at 27.2'.		
								Auger refusal.		
30										
35										

COMMENTS Boring advanced with 6¼" hollow-stem augers. Diedrich D-50 Drill Rig. Installed monitoring well pair MW-17D and MW-17S at this location (see well construction log)

¹ - Screening of soil core.

* - Environemental sample 0-6 feet

PROJECT NO. 35244.00

BORING NO. MW-17D

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-18S

PROJECT:	N. Franklin St.	SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation	JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company	BORING LOCATION:	10343.9098SN 5473.8147SE
GROUNDWATER:		GROUND ELEVATION:	451.26'
DATE: 12/18/92	TIME:	LEV: 445.10	TYPE: In monitoring well
DATE STARTED:	12/17/92		
DATE FINISHED:	12/17/92		
DRILLER:	Larry Schroeder		
GEOLOGIST:	Steve Frank		
REVIEWED BY:	Duane Lenhardt		

	CAS.	SAMP.	CORE	TUBE
TYPE		SS	(split-spoon)	
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"	RECOVERY PID(ppm)*	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			35 20		Brown & Black	Medium Dense	FILL - sandy gravel with trace silt	GW	o Moist
	XXXX	1	SS	10 10	75%/0					
2.5	XXXX			2 2						
4.2	~/~/~	2	SS	3 4	5%/0	Dk. Gray	Medium Stiff	CLAYEY SILT - trace gravel	ML	o Very Moist
5	.~o.~o			4 12		Gray	Medium Dense	SILTY SAND AND GRAVEL -	GM/	o Very Moist
	.~o.~o	3	SS	5 4	50%/15		to Loose	trace clay	SM	o Fine-Coarse Sand and
	.~o.~o			6 2						Gravel, Mostly Subangular
	.~o.~o	4	SS	4 2	15%/5					o Wet
	.~o.~o			5 8					GW/	o Variable Texture -
10	.~o.~o	5	SS	5 5	50%/5			- increasing gravel content	GM	Well Sorted Sediments
	.~o.~o			4 6		Brown				Interbedded w/ Poorly
	.~o.~o	6	SS	8 8	40%/2					Sorted Sediments
	.~o.~o			6 5						
	.~o.~o	7	SS	4 2	25%/0					
15	.~o.~o			4 5						
16	.~o.~o	8	SS	6 3	10%/0					
								Borehole completed at 16'		
20										
25										
30										
35										

COMMENTS Boring advanced with 6¼" hollow-stem augers; Diedrich D-50 Drill Rig. Installed monitoring well MW-18S in borehole.
(see well construction log)
! - Screening of soil core.
* - Environmental sample from 0-6 feet.

PROJECT NO. 35244.00
BORING NO. MW-18S

URS CONSULTANT

PROJECT: N. Franklin St.
CLIENT: New York State Departme
BORING CONTRACTOR: Buffalo Dr
GROUNDWATER:
DATE: 12/18/92 TIME: LEV: 445.2 TYPE: in monitoring well

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"
	XXXX	Not Taken		
2	XXXX	Thick Asphalt		
	/~/~/			3 5
	/~/~/	1*	SS	5 8
5	/~/~/			2 2
6	/~/~/	2	SS	4 7
	.o~.o~			6 10
	.o~.o~	3	SS	8 9
	.o~.o~			4 7
10	.o~.o~	4	SS	7 7
	.o~.o~			7 12
	.o~.o~	5	SS	13 9
	.o~.o~			9 8
	.o~.o~	6	SS	6 13
15	.o~.o~			4 14
16	.o~.o~	7	SS	9 22
20				
25				
30				
35				

COMMENTS Boring advanced with 6¼" hollow-
(see well construction log)
- No PID readings due to instrum
* - Environmental sample taken from

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-19S

PROJECT:	N. Franklin St.	SHEET NO. 1 OF 1	
CLIENT:	New York State Department of Environmental Conservation	JOB NO. :	35244.00
BORING CONTRACTOR:	Buffalo Drilling Company	BORING LOCATION:	10299.5438RN 5345.6560SE
GROUNDWATER:		GROUND ELEVATION:	451.60'
DATE STARTED:	12/16/92		
DATE FINISHED:	12/16/92		
DRILLER:	Mike Saeli		
GEOLOGIST:	Joe Pettorino		
REVIEWED BY:	Duane Lenhardt		

DATE	TIME	LEV	TYPE
12/18/92		445.21	in monitoring well

	TYPE	CAS.	SAMP.	CORE	TUBE
TYPE			SS	(split-spoon)	
DIA.			2"		
WT.			140#		
FALL			30"		

* POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX	Not Taken					Black &		FILL -		o Asphalt Parking Lot
2	XXXX	Thick Asphalt					Gray		asphalt and gravel		o Gravel Subbase
	/~/~/			3	5		Light	Stiff	SILTY CLAY	ML/	
	/~/~/	1*	SS	5	8	70%/#	Brown			CL	
5	/~/~/			2	2			Medium Stiff			o Some Rust Color Mottles
6	/~/~/	2	SS	4	7	80%/#					o Moist
	.o~.o~			6	10		Brow	Medium Dense	SAND AND GRAVEL -	SW/	o Wet
	.o~.o~	3	SS	8	9	50%/#			trace silt	GW	
	.o~.o~			4	7						o Med.-Coarse Sand
10	.o~.o~	4	SS	7	7	30%/#					o Fine-Med. Subround Gravel
	.o~.o~			7	12						
	.o~.o~	5	SS	13	9	0%/#					
	.o~.o~			9	8						
	.o~.o~	6	SS	6	18	20%/#					
15	.o~.o~			4	14						
16	.o~.o~	7	SS	9	22	5%/#					
									Borehole completed at 16'		
20											
25											
30											
35											

COMMENTS Boring advanced with 6¼" hollow-stem augers, Dieldrich D-50 Drill Rig. Installed monitoring well MW-19S in borehole. (see well construction log)

- No PID readings due to instrument malfunction

* - Environmental sample taken from 2-4 feet.

PROJECT NO. 35244.00

BORING NO. MW-19S

URS CONSULTANTS, Inc.

TEST BORING LOG

BORING NO. MW-20S

PROJECT:	N. Franklin St.
CLIENT:	New York State Department of Environmental Conservation
BORING CONTRACTOR:	Buffalo Drilling Company
SHEET NO.	1 OF 1
JOB NO. :	35244.00
BORING LOCATION:	
GROUND ELEVATION:	451.02'
DATE STARTED:	3/29/93
DATE FINISHED:	3/29/93
DRILLER:	Wally Greiner
GEOLOGIST:	Bob Kruezer
REVIEWED BY:	

GROUNDWATER:

DATE	TIME	LEV	TYPE
12/18/92		445.21	in monitoring well

	CAS.	SAMP.	CORE	TUBE
TYPE		SS	(split-spoon)	
DIA.		2"		
WT.		140#		
FALL		30"		

* POCKET PENETROMETER READING

DEPTH FT	STRATA	SAMPLE NO.	SAMPLE TYPE	BLOWS PER 6"		RECOVERY PID(ppm)	DESCRIPTION COLOR	CONSISTENCY HARDNESS	MATERIAL DESCRIPTION	CLASS USCS	REMARKS
	XXXX			9	16		Brown &	DENSE	FILL -		o Moist
	XXXX	1	SS	27	73	35%/0	Gray		sand and gravel	SM/	
	XXXX			3	8			Medium Dense	some silt	GM	o Moist to very moist
4.5	XXXX	2*	SS	11	10	40%/0			wood & brick frag		
5	XXXX			5	2						o Wet
	/~/~/	3	SS	2	2	55%/0	Gray	Loose	FINE SAND AND SILT	ML/	
6.5	/~/~/			3	4				trace clay	SM	
	/~/~/	4	SS	8	2	35%/0					
	.o~.o~			7	10		Brown &	Medium Dense	SAND AND GRAVEL	SM/	o Med Sand to
10	.o~.o~	5	SS	12	15	50%/0	Gray		tr. to some silt	GM	Fine gravel
	.o~.o~			3	12						
	.o~.o~	6	SS	18	15	40%/0					
	.o~.o~			1	3						o Fine Sand to
	.o~.o~	7	SS	3	10	50%/0		Loose			medium gravel
15	.o~.o~			5	7						
	.o~.o~	8	SS	12	20	45%/0		Medium Dense			
	.o~.o~			WH	WH						
	.o~.o~	9	SS	2	5	25%/0		Loose			
	.o~.o~			10	21						
20	.o~.o~	10	SS	33	43	100%/0		Very Dense			
	.o~.o~			14	23						
	.o~.o~	11	SS	49	53	100%/0					
									Borehole completed at 22'		
25											
30											
35											

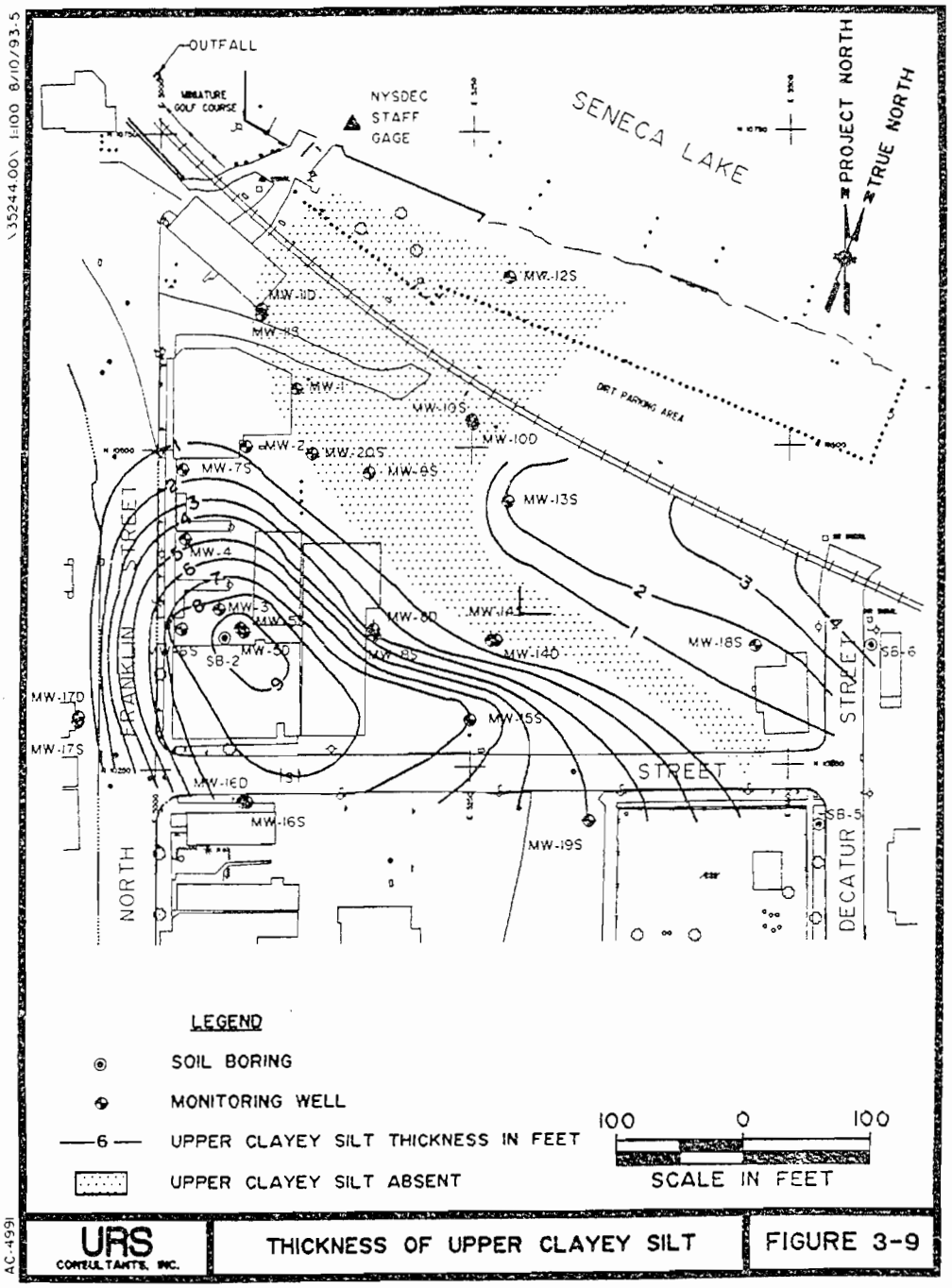
COMMENTS Boring advanced with 6¼" hollow-stem augers; Dieldrich D-50 Drill Rig. Installed monitoring well MW-20S in borehole. (see well construction log for details).

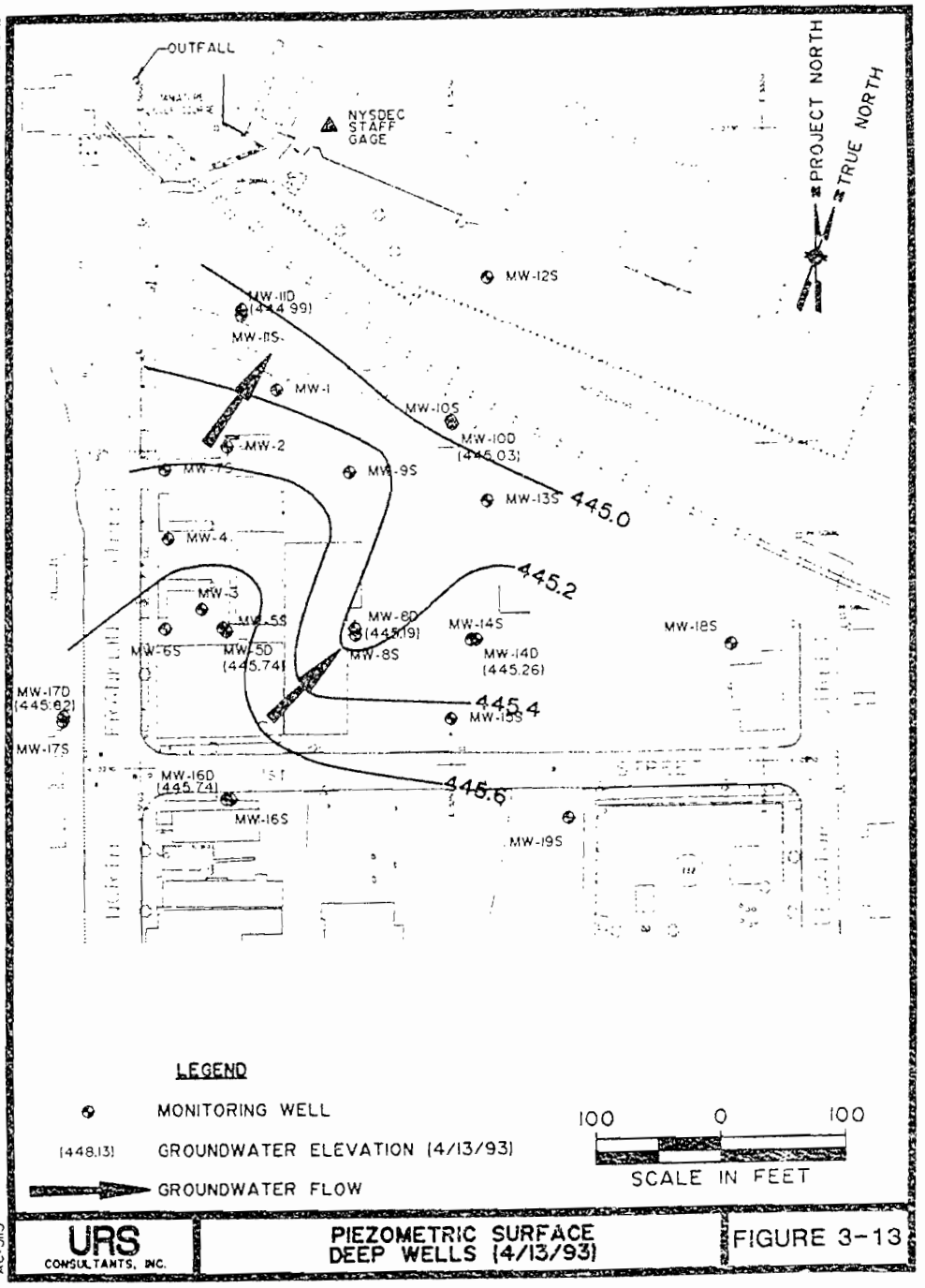
' - Screening of soil core.

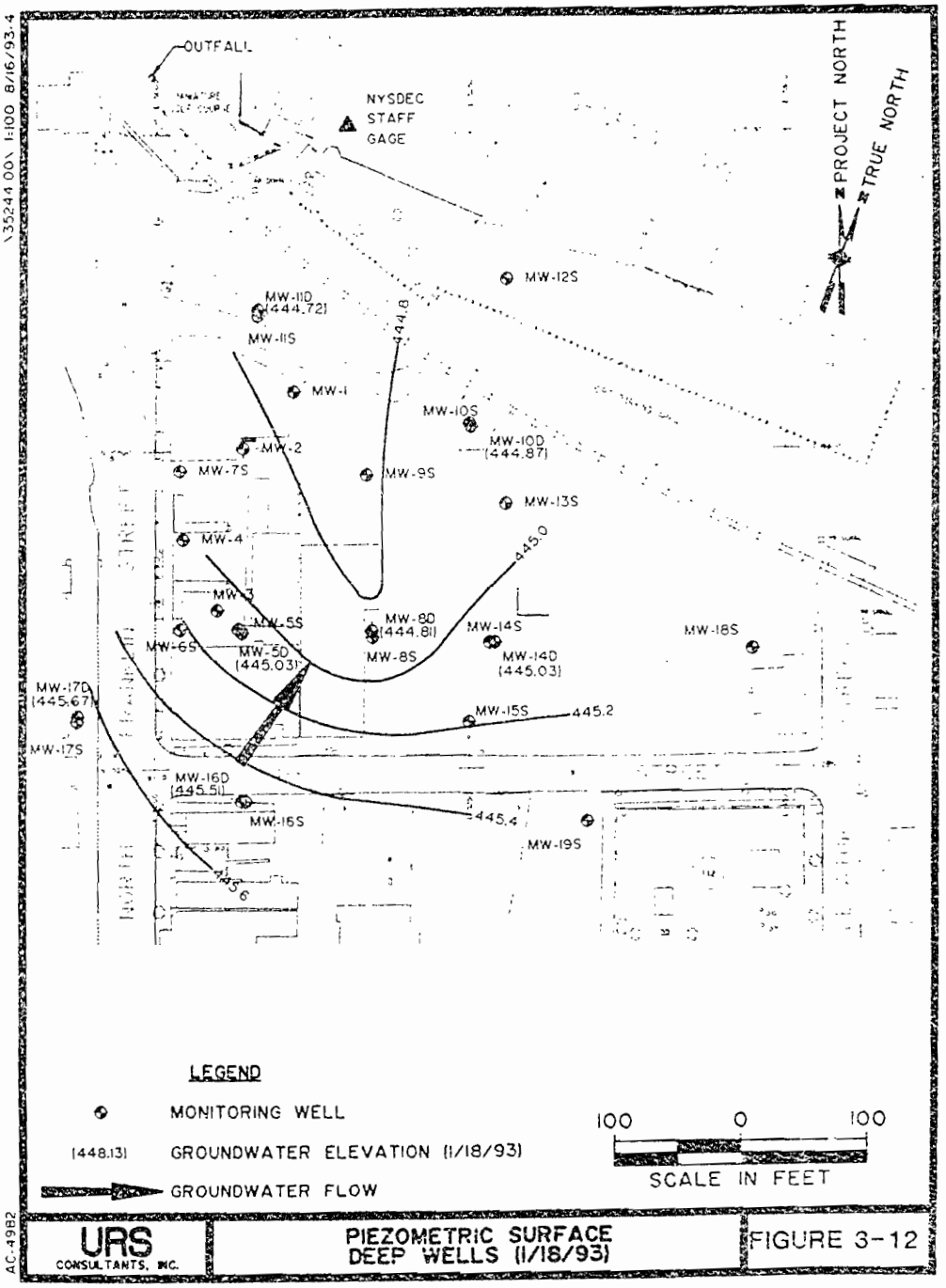
* - Environmental sample taken @ 3-4'.

PROJECT NO. 35244.00

BORING NO. MW-20S


\35244.00\ 1:100 8/10/93.5
OUTFALL
MINIATURE GOLF COURSE
NYSDEC STAFF GAGE
SENECA LAKE
PROJECT NORTH
TRUE NORTH
DIRT PARKING AREA
MW-12S
MW-11D
MW-11S
MW-1
MW-10S
MW-10D
MW-2
MW-20S
MW-9S
MW-7S
MW-13S
MW-4
MW-3
MW-5S
MW-5D
SB-2
MW-8D
MW-14S
MW-8S
MW-14D
MW-18S
SB-6
MW-17D
MW-17S
MW-15S
FRANKLIN STREET
STEUBEN STREET
MW-16D
MW-16S
MW-19S
SB-5
NORTH
DECATUR
LEGEND
SOIL BORING
MONITORING WELL
6 UPPER CLAYEY SILT THICKNESS IN FEET
UPPER CLAYEY SILT ABSENT
100 0 100
SCALE IN FEET
URS CONSULTANTS, INC.
THICKNESS OF UPPER CLAYEY SILT
FIGURE 3-9
AC-4991


\35244.00\ 1-100 8/16/93-2
OUTFALL
NYSDEC STAFF GAGE
PROJECT NORTH
TRUE NORTH
MW-12S
MW-11D (444.99)
MW-11S
MW-1
MW-10S
MW-10D (445.03)
MW-2
MW-9S
MW-13S
445.0
MW-4
445.2
MW-3
MW-5S
MW-8D (445.19)
MW-14S
MW-18S
MW-6S
MW-5D (445.74)
MW-8S
MW-14D (445.26)
MW-17D (445.62)
445.4
MW-15S
MW-17S
MW-16D (445.74)
445.6
MW-16S
MW-19S
LEGEND
MONITORING WELL
(448.13) GROUNDWATER ELEVATION (4/13/93)
GROUNDWATER FLOW
100 0 100
SCALE IN FEET
AC-5115
URS CONSULTANTS, INC.
PIEZOMETRIC SURFACE DEEP WELLS (4/13/93)
FIGURE 3-13


OUTFALL
NYSDEC STAFF GAGE
PROJECT NORTH
TRUE NORTH
MW-12S
MW-11D (444.72)
MW-11S
MW-1
MW-10S
MW-10D (444.87)
MW-2
MW-7S
MW-9S
MW-13S
MW-4
MW-3
MW-5S
MW-6S
MW-5D (445.03)
MW-8D (444.81)
MW-8S
MW-14S
MW-14D (445.03)
MW-18S
MW-17D (445.67)
MW-17S
MW-15S
MW-16D (445.51)
MW-16S
MW-19S
444.8
445.0
445.2
445.4
445.6
LEGEND
MONITORING WELL
(448.13) GROUNDWATER ELEVATION (1/18/93)
GROUNDWATER FLOW
100 0 100
SCALE IN FEET
\35244.00\ 1:100 8/16/93-4
AC-4982
URS CONSULTANTS, INC.
PIEZOMETRIC SURFACE DEEP WELLS (1/18/93)
FIGURE 3-12

RE 3-10

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WATER TABLE SURFACE
SHALLOW WELLS (4/13/93)

FIGURE 3-11

\35244.00\ 1:100 8/10/93 5

AC-4980

URS CONSULTANTS, INC.

WATER TABLE SURFACE
SHALLOW WELLS (1/18/93)

FIGURE 3-10

stratigraphy of the soil units identified at the site is displayed in the geologic cross-sections; Figures 3-6 and 3-8. Figure 3-5 shows the cross-section locations.

The units described below were defined on the basis of composition and position in the stratigraphic sequence with emphasis given to hydrologic properties. The units are described from youngest to oldest (i.e., shallowest to deepest).

Fill: The fill material at the North Franklin St. Site typically consists of regraded gravel, sand and silt with trace amounts of brick, asphalt, wood and cement/mortar. Fill thickness ranged from 2 to 6 feet. In general, the unit composes the vadose groundwater zone but perched water was noted in the unit at MW-6, MW-7 and SB-4. Perched water may also occur at other locations, seasonally or episodically, as dictated by climatic conditions.

Upper Clayey Silt: This unit comprises gray to brownish gray, soft to stiff, moist to wet, slightly plastic clayey silt with trace amounts of fine sand and/or gravel. The unit ranges from absent in the central and northern portions of the study area to 9.5 feet thick in the vicinity of the former dry cleaner building. The top surface of the unit is found at depths ranging from 3.5 to 6 feet where it is present and it appears that the unit grades laterally into a sandy silt/silty sand composition. The unit has low permeability which likely contributes to the localized perched water conditions, and is considered a discontinuous aquitard at the site.

Figure 3-9 displays the distribution and thickness of the upper clayey silt aquitard across the study area. It should be noted, that the groundwater analytical results suggest that a pathway may exist (perhaps as a result of nondeposition or local excavation of the upper clayey silt unit), for the preferential downward migration of groundwater through this aquitard in the vicinity of the former dry cleaner.

Silty Sand and Gravel: This unit comprises brown, loose to very dense, wet, silty sand and gravel which is locally stratified. Well sorted sand and gravel seams or zones that are generally free of silt occur commonly in the unit. The top of the

unit was observed across the entire study area at depths ranging from 2 to 13 feet. The base of the unit is relatively flat and lies approximately 18 to 23 feet below grade.

The silty sand and gravel unit is relatively permeable, particularly in seams where the sediments are washed. Although the unit is locally overlain by the semi-confining upper clayey silt, it is considered a water table aquifer at the site.

Sandy Silt/Silty Sand: This unit comprises laminated, gray, very loose to medium dense, wet silt and sand with trace amounts of clay and wood. The texture is variable ranging from fine sandy silt to silty fine sand. The unit has a sharp upper contact with the overlying silty sand and gravel at a depth of 18 to 23 feet and grades into the underlying clayey silt unit at depths ranging from 22 to 30 feet. It is an areally extensive deposit, underlying the entire study area.

The unit has relatively low permeability but does transmit water. It is considered part of the silty-clayey aquitard which underlies the site.

Lower Clayey Silt: This unit comprises laminated gray, medium stiff to stiff, wet clayey silt interbedded with some fine sandy silt. Small (<5mm) mollusc shells and shell fragments were encountered. The unit's cohesiveness and plasticity characteristics, which reflect an increase in clay content, distinguished it from the overlying sandy silt/silty sand.

The lower clayey silt unit is areally extensive and forms a confining aquitard beneath the site. The top of the unit was encountered at a depth of 22 feet near the western margin of the Seneca Lake valley and it slopes gently to the east, being encountered at a depth of 30 feet in the central portion of the study area. The minimum thickness of the unit was encountered at the westernmost boring location where it is 4 feet thick and underlain by bedrock. The full thickness of the unit was not penetrated during the field investigation in consideration of its ability to impede the potential downward migration of contaminants. It was

observed to be at least 8 feet thick beneath the site and comprises part of a lacustrine sedimentary sequence which may continue to a depth of up to 60 feet below grade (Ref 11).

Bedrock: Bedrock was encountered only at MW-17D near the western margin of the Seneca Lake valley where shale and siltstone were encountered at a depth of 26 feet. The depth to bedrock should increase sharply from west to east. Because of the extreme depth of bedrock below the ground surface in the Seneca Lake valley, its character was not considered significant to the remedial investigation.

3.7.3 Hydraulic Conductivity

Hydraulic conductivity testing consisted of field variable head tests (slug tests) in each of the 27 monitoring wells that currently exist at the site, and laboratory triaxial permeability tests on four undisturbed soil samples from the lower silty-clayey aquitard unit.

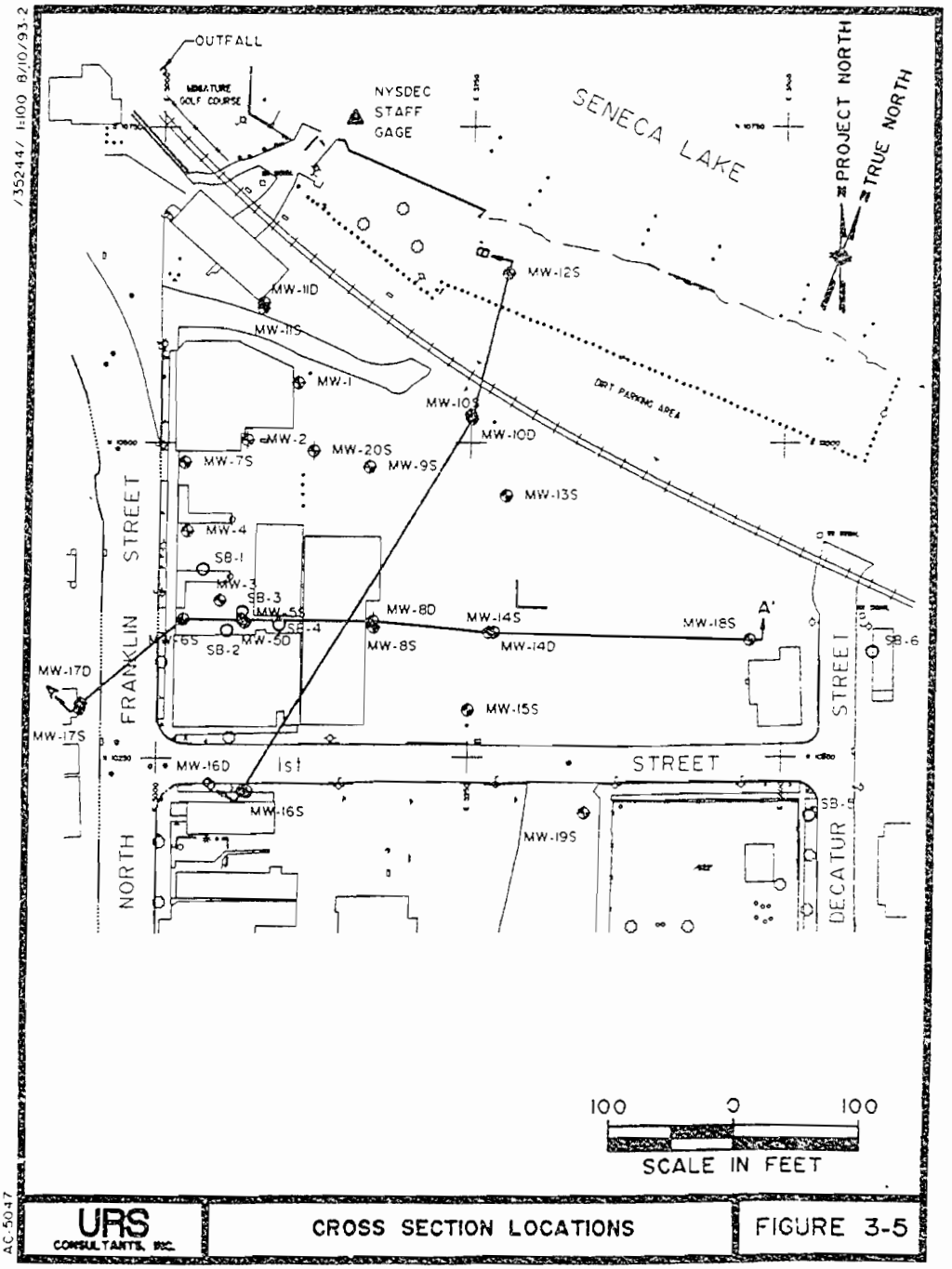
The slug tests were conducted by raising or lowering the water level in a well using a stainless steel slug, and electronically monitoring the water level vs time relationship as the water level returned to the static level. The hydraulic conductivity of the screened unit(s) were calculated from the field data using the methods developed by Bouwer and Rice (Refs Hh, Ii). The slug test results are presented in Table 3-3 and the hydraulic conductivity calculations are presented in Appendix J.

The vertical hydraulic conductivities of Shelby tube samples from the lower clayey silt unit were determined in laboratory triaxial permeability tests. These results are summarized in Table 3-2 and the complete geotechnical testing report is presented in Appendix I.

The range of hydraulic conductivities measured were somewhat consistent within the individual soil units defined at the site. In general, the conductivity in the sandy silt/silty sand unit is one to two orders of magnitude lower than the silty sand and gravel. Conductivity in the

FIGURE 3-4
GENERALIZED GEOLOGIC-HYDROGEOLOGIC COLUMN

HYDROLOGIC UNIT	LITHOLOGIC UNIT	STRATIGRAPHIC PROFILE	MATERIAL DESCRIPTION	HYDROGEOLOGIC PROPERTIES	ORIGIN
VADOSE/PERCHED WATER ZONE	FILL	XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX XXXXXXXXXX	Typical FILL is composed primarily of sand and gravel with lesser amounts of silt and little clay. FILL is areally extensive and dry to wet at the site.	FILL was not tested for permeability. Perched water observed along the east side of N. Franklin St.	Emplaced
DISCONTINUOUS AQUITARD	UPPER CLAYEY SILT	~\~\~\~\~\~ ~\~\~\~\~\~ ~\~\~\~\~\~ ~\~\~\~\~\~ ~\~\~\~\~\~ ~\~\~\~\~\~	Clayey Silt with trace sand. Unit has low to moderate plasticity and is typically gray with few orange/red mottles. Consistency is soft to stiff and moisture content is moist to wet. Rootlets and peat are present. Unit is absent across central portion of study area.	UPPER CLAYEY SILT was not tested for permeability. Similarity in texture to LOWER CLAYEY SILT suggests that permeabilities may be on the order of 10E-6 to 10E-7 cm/sec.	Swampy area or small pond adjacent to stream system.
WATER TABLE AQUIFER	SILTY SAND AND GRAVEL	:.o.~.:O:.~o:.O :.o.~.:O:.~o:.O :.o.~.:O:.~o:.O :.o.~.:O:.~o:.O :.o.~.:O:.~o:.O	Brown sand and gravel with highly variable silt content. Consistency is loose to very dense. Unit is saturated, areally extensive, and underlies the UPPER CLAYEY SILT or FILL.	Rising and falling head tests from this unit indicate k values ranging from 10E-3 to 10E-4 cm/sec.	Braided or anastomosing stream and stream margin deposits.
SILTY/ CLAYEY AQUITARD	SANDY SILT/ SILTY SAND (grades to)	:.~.:.~.:.~.:.~ :.~.:.~.:.~.:.~ :.~.:.~.:.~.:.~ :.~.:.~.:.~.:.~ :.~.:.~.:.~.:.~	Laminated gray sandy silt/silty sand with trace clay and some wood/organic material. Consistency is very loose to medium dense. Unit is wet, areally extensive, and underlies the SILTY SAND AND GRAVEL.	Rising and falling head tests from this unit indicate k values ranging from 10E-5 to 10E-6 cm/sec	Lacustrine (lake) deposits.
	LOWER CLAYEY SILT	\~\~\~\~\~\~ \~\~\~\~\~\~ \~\~\~\~\~\~ \~\~\~\~\~\~ \~\~\~\~\~\~	Laminated, gray clayey silt interbedded with sandy silt. Includes small mollusc shells. Consistency is medium stiff to stiff. Unit is saturated and areally extensive.	Triaxial permeability tests of Shelby tube samples indicate k values ranging from 10E-6 to 10E-7 cm/sec.	Lacustrine (lake) deposits.



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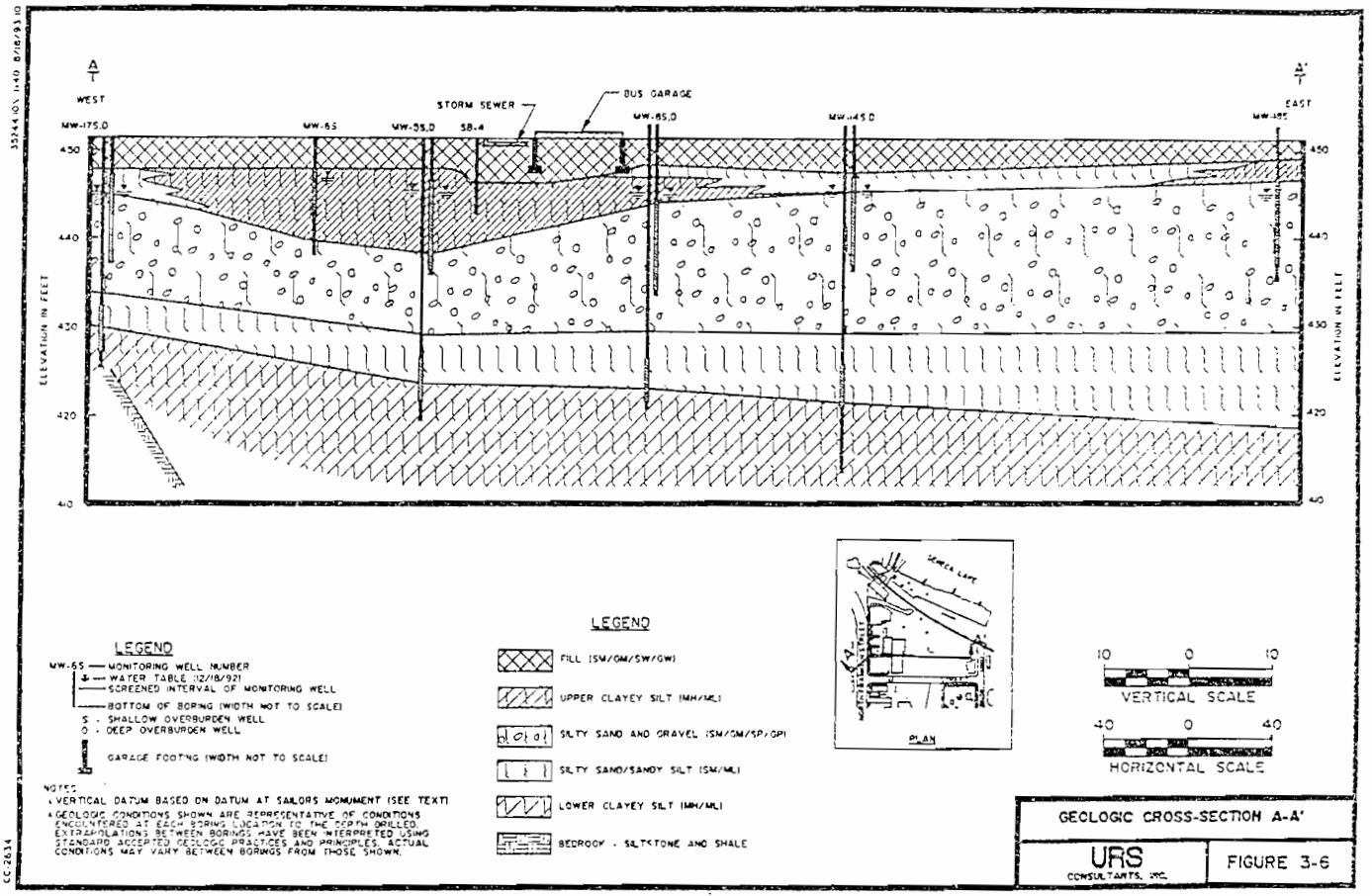
CROSS SECTION LOCATIONS

FIGURE 3-5



GEOLOGIC CROSS-SECTION A-A'

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FIGURE 3-6

AC-5070

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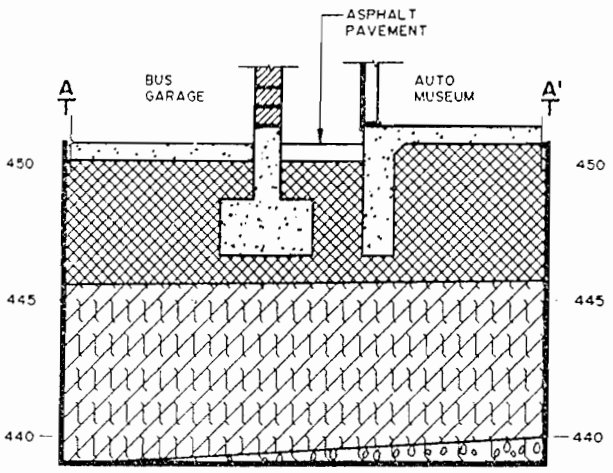
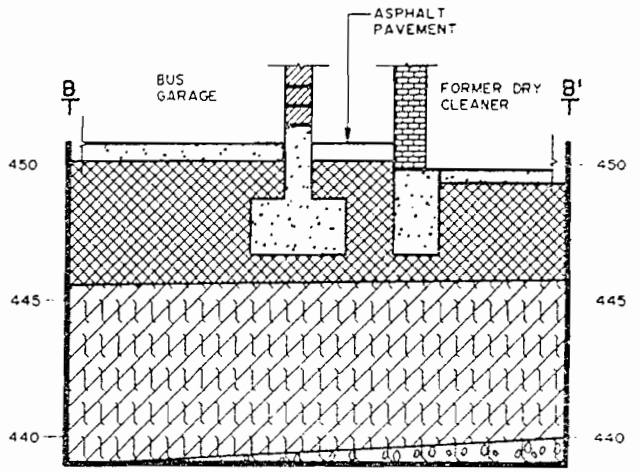


SECTION A-A'

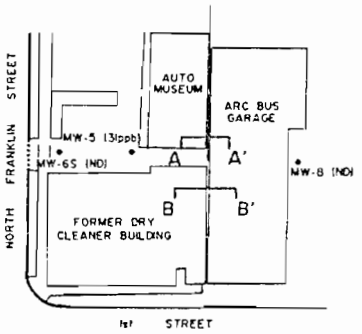


SECTION B-B'

LEGEND

- FILL (SM/GM/SW/GW)
- UPPER CLAYEY SILT (MH/ML)
- SILTY SAND AND GRAVEL (SM/GM/SP/GP)

NOTE:
FOUNDATION DETAILS ARE BASED ON SITE INSPECTION AND PROBING WITH A STEEL ROD ALONG THE WALLS AS NO DRAWINGS ARE AVAILABLE FOR THE BUILDINGS.



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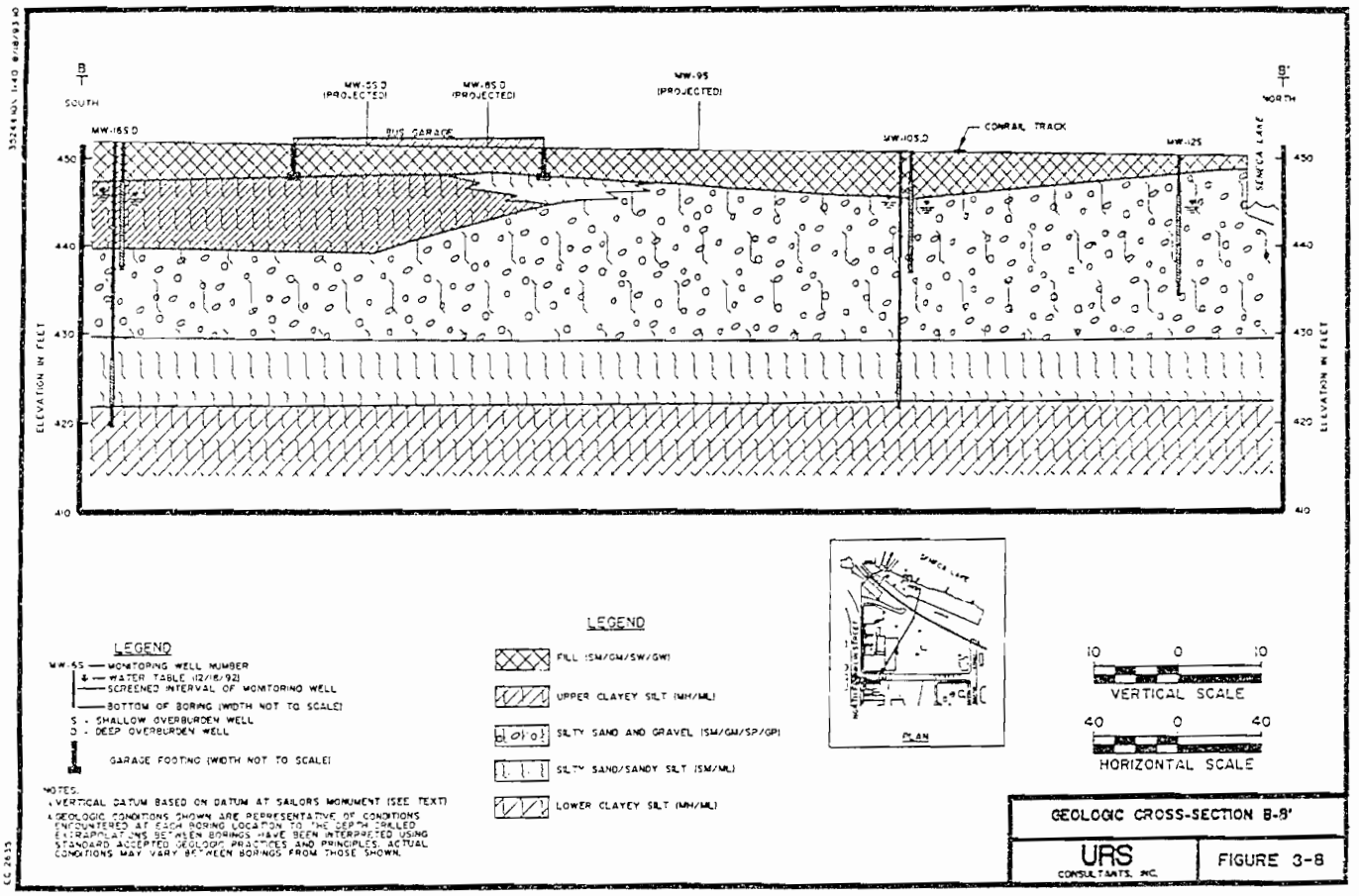
BUILDING FOUNDATION DETAILS

FIGURE 3-7



LEGEND

MW-65 — MONITORING WELL NUMBER
▼ — WATER TABLE (12/16/92)
— SCREENED INTERVAL OF MONITORING WELL
— BOTTOM OF BORING (WIDTH NOT TO SCALE)
S - SHALLOW OVERBURDEN WELL
D - DEEP OVERBURDEN WELL
GARAGE FOOTING (WIDTH NOT TO SCALE)

LEGEND

FILL (SM/GM/SW/GW)
UPPER CLAYEY SILT (MH/ML)
SILTY SAND AND GRAVEL (SM/GM/SP/GP)
SILTY SAND/SANDY SILT (SM/ML)
LOWER CLAYEY SILT (MH/ML)

10 0 10
VERTICAL SCALE
40 0 40
HORIZONTAL SCALE

NOTES:
1. VERTICAL DATUM BASED ON DATUM AT SAILORS MONUMENT (SEE TEXT)
2. GEOLOGIC CONDITIONS SHOWN ARE REPRESENTATIVE OF CONDITIONS ENCOUNTERED AT EACH BORING LOCATION TO THE DEPTH DRILLED. ELEVATIONS BETWEEN BORINGS HAVE BEEN INTERPRETED USING STANDARD ACCEPTED GEOLOGIC PRACTICES AND PRINCIPLES. ACTUAL CONDITIONS MAY VARY BETWEEN BORINGS FROM THOSE SHOWN.

GEOLOGIC CROSS-SECTION B-B'

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FIGURE 3-8