

Appendix B

Previous Investigation Boring Logs and Well Construction Logs



206932

Mueser Rutledge Consulting Engineers Logs – 2002

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

BORING NO. B-14

SURFACE ELEV. _____

PROJECT Lucie's Home Care

PROJECT LOCATION Brooklyn, NY

RES. ENGR. R. N. Nunez

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/03/00 Wed. 20' Sep 1350	10	1	10-6	BLK C-F SAND, SILT, P. GL, WOOD (SM)	(4)			drilled
	3	3-2		(FILL) (SM)				APPROX 8" CONCRETE SURFACE
	20	3	3-3	BWN-M-F SAND, SILT, TR. GL,				2" APPROX.
	5	3-3		CINDERES (FILL) (SM)		5		
	30	5	2-2	DO-20 (FILL) (SM)			MWD	
	7	1-1						
	40	7	2-1	DO-20 (FILL) (SM)				
	9	1-1						
1420						10		
01/04/01 THURS. 20' Sep Cloudy 0640	50	10	WHL/10"	gray blk C-F SAND, SILT, CINDERES, TR. SILT,	(5)			
	12	1-1		GL, BRICK (FILL) (SP-10)				
	60	12	WHL/12"	gray blk C-F SAND, SILT, CINDERES,				
	14	1-1		TR. SILT (FILL) (SM)		14.7		
	70	14	2-1	TR (5")-DO-60 (FILL) (SM)				
	16	1-2		ROT (6")-DO-60 (FILL) (SM)				
	84	16	P. GL, 24"	Soft gray org. silty clay, TR. F. SAND, VEG.,	(6)			SPR. RATE BOT. of
	18	1-2		P. GL (SM)				TR. GL.
	90	18	1-2	TR (6")-BEN P. GL (PE)		18.9		
	20	1-2		ROT (13")-BEN SILTY F-SAND, TR. GL (SM)		20		
	100	20	3-1	DO-90 (BOT) (SM)				
	12	3-3						
						25		
	110	25	7-7	gray m-f SAND, SILT (SM)	(7)			
	27	9-11						
						30		
	120	30	2-4	ROT (11")-gray silty f-sand, TR. GL (SM)				
	32	8-12		ROT (5")-BWN M-F SAND, TR. GL (SP-10)				
						35		
	130	35	8-16	BWN M-F SAND, TR. GL (SP-10)	(8)			
	37	13-15						
						40		
	140	40	5-6	DO-120, TR. GL (SP-10)				
	42	6-5						
						45		
	150	45	1-1	BWN clayey SILT, SILTY F-SAND, TR. MUD (MH)	(9)			
	47	1-1						
						48.5		
						50		
	160	50	11-14	LED-BEN f-s SAND, TR. SILT, GL, SILT CLAYS				
	52	14-12		(SP-10)				

SHEET 2 OF 3

FILE NO. 9446

BORING NO. R-1

SURFACE ELEV.

PROJECT Lowie's Home CTR.

PROJECT LOCATION BROOKLYN, NY

RES. ENGR.

P. NUNEZ

BORING NO. C-412

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT
LOCATION
BORING LOCATION

Low's Home Center
Brooklyn NY

BORING NO.
SHEET
FILE NO.
SURFACE ELEV.
DATUM

B1W
3 OF 3
9446

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG TRUCK CME 75 TYPE OF FEED DURING CORING MECHANICAL CASKING USED ☒ YES ☐ NO
SKID HYDRAULIC ☒ X DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
BARGE OTHER DIA., IN. DEPTH, FT. FROM TO
OTHER DIA., IN. DEPTH, FT. FROM TO

TYPE AND SIZE OF:

D-SAMPLER 2" O.D. split spoon
U-SAMPLER Shelby Tube
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED

☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 4 7/8, 3 7/8, 2 5/16
TYPE OF DRILLING MUD Quick Gel

AUGER USED

☐ YES ☒ NO
TYPE AND DIAMETER, IN.

CASKING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASKING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED

☐ YES ☒ NO

SKETCH SHOWN ON

STANDPIPE: TYPE ID, IN. LENGTH, FT. TOP ELEV.
INTAKE ELEMENT: TYPE OD, IN. LENGTH, FT. TIP ELEV.
FILTER: MATERIAL OD, IN. LENGTH, FT. BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 79.1 NO. OF 3" SHELBY TUBE SAMPLES
3.5" DIA. U-SAMPLE BORING LIN. FT. 2 NO. OF 3" UNDISTURBED SAMPLES
CORE DRILLING IN ROCK LIN. FT. 2 OTHER: obstructions (boulders) 2.9

BORING CONTRACTOR

DRILLER M. Alegria JBD Co. HELPERS T. Felton / D. Keith

REMARKS Grout borehole upon completion

RESIDENT ENGINEER Z. NUNEZ DATE 01/04/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-1U

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

PROJECT Levee Home ONTE

BORING NO. BZ

PROJECT LOCATION Brooklyn, NY

RES. ENGR. R. NUNEZ

SURFACE ELEV. 8.2

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/03/01 WED. 940 18°F Clear	10	1	12-9	Blk f. m. sand, sm silt, Fe. gl. cinders (fill) (SM)	(F)			Safety Hump 1' - Asphalt at surface, and cable flow. Petroleum odor.
	3		6-3					
	20	3	5-6	DO-10 (fill) (SM)				
	5		4-4					
	30	5	3-1	gray m. f. sand, sm silt, Fe. cinders (fill) (SM)				
	7		2-2					
	40	7	3-9	DO-30 (fill) (SM)				
	9		10-11					
	50	10	4-1	DO-30 (fill) (SM)				
	12		1-1					
	60	12	3-3	TOP (10) - BLK CINDER, Fe. gl. (fill) (cinders)	(G)			R-2" L-5" Petroleum odor shores
	14		2-2	TOP (40) - BRN Root				
	70	15	3-2	gray org. silty clay, Fe. veg. (OH)				
	17		1-1					
	80	17	2-2	TOP (10) - DO-70 (OH)				
	19		4-4	BOT (60) - BRN Root (PE)				
	90	20	2-4	gray f. sand, sm silt, Fe. mica (SM)				
	22		4-5					
	100	25	2-9	gray BRN m. f. sand, Fe. silt (sp-sm)				
	27		17-13					
	110	30	3-4	stiff gray clayey silt, Fe. f. sand (MH)	(H)			
	32		7-7					
	120	35	12-15	BRN m. f. sand, Fe. silt (sp-sm)				
	37		25-20					
	130	40	10-16	DO-120 (sp-sm)				
	42		17-14					
	140	45	12-13	gray BRN f. sand, Fe. silt (sp-sm)				
	47		15-7					
	150	50	12-18	BRN m. f. sand, Fe. silt, gl. (sp-sm)				
	52		21-23					

BORING NO. R7

SHEET 2 OF 3
FILE NO. 9446
BORING NO. B-2
SURFACE ELEV. _____

Leave's Home Center

Brooklyn ny

RES. ENGR

SURFACE ELEV.

2. NONE

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
	160	55	30-43	RED f-c SAND, Tr. silt (sp-sm)	(S)	55		
		57	55-56					
						58.5		
						60		
145	170	60	47-42	RED-BRN f-c SAND, sm gl, silt (sm)				
		62	75-71					
21/04/01 HUES. 20' of clay 2645					(T)	65		R-2"
	180	65	100/6	RED-BRN f-c SAND, sm silt, gl (sm)				
		65.5						
						70		
	190	70	28-29	RED-BRN f-c SAND, Tr. silt, gl (sp-sm)				
		72	30-34					
						75		
	200	75	30-38	RED-BRN c-f SAND, sm gl, Tr. silt (sp-sm)				
		77	42-43					
						80		
	210	80	24-31	RED-BRN f-m SAND, sm silt, Tr. gl, mic (sm)				
		82	37-43					
						85		
	220	85	30-33	DO-210 (sm)				
			35-35					
						90		
	230	90	30-35	RED-BRN silty f-m SAND, Tr. gl, clay (sm)				
		92	31-44					
						95		
	240	95	25-32	DO-230 (sm)				
		97	41-53					
						100		
	250	100	37-33	RED-BRN c-f SAND, Tr. silt (sp-sm)				
1230		102	40-34			102		E.O.B @ 102 FT

BORING NO. 9 3

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowe's Home Center
 LOCATION Brooklyn, NY
 BORING LOCATION _____
 BORING NO. B-2
 SHEET 3 OF 3
 FILE NO. 94416
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK CHESS MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" OD. split spoon DIAMETER OF ROTARY BIT, IN. 4 1/8" 3/8"
 U-SAMPLER _____ TYPE OF DRILLING MUD Quik gel
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N
 CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATION

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82.6 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. - NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. - OTHER: _____

BORING CONTRACTOR

DRILLER R. Lynch HELPERS E. FELICIANO
 REMARKS Grouted borehole upon completion.
 RESIDENT ENGINEER R. NUNEZ DATE 01/04/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, Shelby tube samples S, fixed piston samples U. Assign N/A to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-2

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9416

BORING NO. B3

SURFACE ELEV. 100.00

PROJECT Lowe's Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. R. NUNER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/02/01 Thurs. clear windy 18°F 5F wind chill	10	0	76-45	BRN M-f SAND, SM Silt, Tr. Brick (fill) (sm)	(F)		drilled 41000	2" asphalt surface
	20	2	15-19	DO-10, Tr. Cinders (fill) (sm)				Automatic Hammer
	30	4	10-9	gray-brn M-f sand, SM silt, Tr. veg. (fill) (sm)		5		
	40	6	3-3	gray-brn M-f sand, Tr. silt, cinders, shell (fill) (sm)				R=3" sample satur w/ water.
	50	8	1-1	gray-brn M-f sand, SM silt, Tr. veg. (fill) (sm)		10	MVA	
	60	10	3-3	gray-brn M-f sand, Tr. silt, shell (fill) (sm)				
	70	12	1-2	gray-brn M-f sand, Tr. silt, shell (fill) (sm)				
	80	14	1-1	DO-60 (fill) (sm)				
	90	15	1-1	Top (8") - gray-brn silty f-sand, Tr. veg. (fill) (sm)		15		
	100	17	2-2	Bot (6") - BRN Head (PL)		15.7		
	110	19	2-3	DO-80 BOT. (PL)				
	120	20	1-2	BRN f-sand, SM silt (sm)		19.5	V	
	130	22	3-2					
	140	25	6-8	BRN M-f sand, Tr. silt, c. sand (sp-sm)		25		
1415 11/03/01 3700 VED. 3°F clear	150	27	9-8		(S)	30		
	160	30	3-3	gray-brn M-f sand, SM silt (sm)		35		
	170	32	6-4			40		
	180	35	3-5	gray-brn silty f-n sand, Tr. veg. (sm)		45		
	190	37	5-5			50		
	200	40	5-6	gray-brn M-f sand, Tr. silt (sp-sm)				
	210	42	9-9	Tr. HMA				
	220	45	5-5	DO-140 (sp-sm)				
	230	47	5-7					
	240	50	7-10	BRN f-c sand, SM silt, Tr. silt (sp-sm)				
	250	52	14-15					

BORING NO. 10

SHEET 2 OF 3
FILE NO. 9946
BORING NO. B-3
SURFACE ELEV.

LOVE'S HOME CNTR

BKLN NY

RES. ENGR

K. NUNEZ

13. 10. 1944

BORING NO. 20

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowie's Home Center
LOCATION Brockton, MA
BORING LOCATION _____

BORING NO. B-3
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. _____
DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
TRUCK CME 75 MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
SKID _____ HYDRAULIC ☒ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
OTHER _____
TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER 2" O.D. split spoon DIAMETER OF ROTARY BIT, IN. 3 7/8" 5 1/8" 2 1/2" 1 1/2"
U-SAMPLER _____ TYPE OF DRILLING MUD QUICK GEL
S-SAMPLER _____
CORE BARREL _____ AUGER USED ☐ YES ☒ NO
CORE BIT _____ TYPE AND DIAMETER, IN. _____
DRILL RODS N _____
CASING HAMMER, LBS. 200 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
01/02/01		8	5	7	observed sample 40 saturated with water

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82 NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JBD Co
DRILLER M. Blagwas HELPERS D. Keith / Terry Feltow
REMARKS Grouted borehole upon completion.
RESIDENT ENGINEER Z. NUNEZ DATE 01/03/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
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- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
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- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-3

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 5
 FILE NO. 9446
 BORING NO. B4U
 SURFACE ELEV. R. NUNEZ

PROJECT Lowes Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/10/01 WED. 25°F windy 0645					SSS		Drilled AWARD	17" RWD. slab.
	10	1	3-4	BKN M. SAND, Tr. qtz, silt, cinders	④			
		3	6-7	Brick (fill) (sp-sm)				
	20	3	9-9	BKN BKN M. SAND, SM silt, Tr. WOOD				
		5	12-21	SMALLER BRICK (fill) (sm)		5		Rope broke changed
	30	5	19-25	BKN M. SAND, SM qtz, silt, Tr. CINDERS			2WD	Rope for hammer.
		6-4	10/5"	Brick (fill) (sm)				SD-Rock for in the
	40	7	8-4	BKN M. SAND, SM CINDERS, silt, Tr. qtz				tip of the spoon.
		9	5-15	Brick (fill) (sm)				
						10		
	50	10	14-4	NO RECOVERY				2nd attempt and
		12	4-4					Recovery, new trap.
	60	12	4-1	NO RECOVERY				
		14	3-1					
						15		Possible wash, 2-1"
1400 01/11/01 THURS. 32°F sunny cloudy	70	15	7-6	BKN gravel, Tr. WOOD (fill) (sp) (cinders)	⑤			6' broken and cinders
		17	11-6					
	80	17	2-4	BKN M. SAND, SM CINDERS, Tr. qtz, silt				
		19	4-3	(fill) (sp-sm)		20		
	90	20	P-24"	light gray org. silty clay, F (sand) (OH)				
		22	R-21					
	100	22	WON/24"	DO-90 (OH)				
		24				24.5		
	110	25	WON-5	BKN silty f-sand, Tr. mica (sm)				
		27	6-7					
						20		
	120	30	15-20	BKN gray M. SAND, Tr. silt (sp-sm)				
		32	22-23			33.5		
						34		P.P. 1075.5'
	130	35	9-6	gray org. silty clay, SM f-sand, Tr. mica (OH)	⑥			
01/11/01 THURS. 32°F sunny cloudy		37	7-11					
	140	37	P-12"	TOP-DO-130 (OH)				TUBE STOPPED @ 38 FT.
		39	R-12"	BOT. stiff gray silt sand M. SAND Tr. clay (MIL & sp-sm)		39		
	150	40	32-40	BKN M. SAND, Tr. silt, mica (sp-sm)		40		
		42	41-39					
						45		
	160	45	12-13	DO-150 (sp-sm)				
		47	18-12					
						50		
	170	50	13-11	DO-150 (sp-sm)				
		52	16-14					

BORING NO. 9446

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3

FILE NO. 9442

BORING NO. B-44

SURFACE ELEV.

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. J. MUESER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
					S			
	180	55	6.5	BEN. gray clayey f-m sand, sh. silt (SC)	S	55		
		57	10.9					
	190	60	24.19	BEN. M. f sand, Tr. silt (SP-BM)	S	60		
		62	30.26					
	200	65	24.31	BEN. f sand, sh. silt, Tr. mica (JM)	S	65		
		67	45.33					
	210	70	100/5"	BEN. B-W f-m sand, Tr. silt, Tr. mica (SP-BM)	T	70		Too chattering. Good drilling.
		70.4						
	220	75	37.42	BEN. B-W f-m sand, sh. silt, Tr. mica (SP-BM)	T	75		Too chattering. Good drilling. 3" PT. collars.
		77	47.42					
					T			Change logs, logs broke
	230	80	35.58	DO-220	T	80		Spoon sampling.
		81.2	100/2"			81.2		End of R @ 81.2 ft.

12/10/02

BORING NO. B-44

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Low's Home Center
 LOCATION Brooklyn NY
 BORING LOCATION off street 1 ft south

BORING NO. B-4u
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK _____ MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID Archie HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" O.D. split spoon DIAMETER OF ROTARY BIT, IN. 2 1/8, 3 7/8
 U-SAMPLER Shelby Tube TYPE OF DRILLING MUD QUICK GEL
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT Thin Wall Bit TYPE AND DIAMETER, IN. _____
 DRILL RODS N
 CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATION.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 78.2 NO. OF 3" SHELBY TUBE SAMPLES 2
 3.5" DIA. U-SAMPLE BORING LIN. FT. 3 NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JRDCG
 DRILLER R. Lynch HELPERS E. Feliciano
 REMARKS Graded borehole upon completion
 RESIDENT ENGINEER R. Mueser DATE 01/11/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NFI to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-4u

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
 FILE NO. 9446
 BORING NO. B-04
 SURFACE ELEV. _____
 RES. ENGR. R. NUNEZ

PROJECT

Lowe's Home Center

PROJECT LOCATION

BROOKLYN, NY

RES. ENGR.

R. NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/05/00 FRID. 20'50" cloudy. 0945 hrs.	10	1	9-9	BEN F-M SAND, silty, Tr. silty, clumps,	(F)		Drilled	7'-conc. slab.
		3	29-44	BRICK (fill) (SM)			AHEAD	
	20	3	22-45	BEN F-M P-C SAND, silty, Tr. silty,				
		4.4	100/5"	CLUMPS BRICK (fill) (SM)		5		
	30	5	70-41	BEN F-M SAND, silty, Tr. silty (SM)			MOD	20"
		6.3	100/4"					
	40	7	12-8	WOOD (fill)				
		9	6-5					
						10		
	50	10	9-6	gray B.C. f. sand, silty, Tr. silty,				
		12	3-3	CLUMPS BRICK (fill) (SM)				
	60	12	7-10	70-50 (fill) (SM)				R=2"
		14	3-2					
						15		
1400 hrs 01/08/01 MON. cloudy 35°F 0645	70	15	14-3	NO RECOVERY	(G)			
		17	2-2					
	80	17	1-2	BK C-F SAND, silty, clumps, Tr. silty,				
		19	1-2	BRICK (fill) (SM)				
						20		Pen/Log inverted app 19.5 FT
	90	20	P-24"	soft gray org. silty clay, Tr. veg. (OH)				
		22	R-16"					
	100	22	4-3	Top (H) - BEN F-M SAND, silty, Tr. silty (SM)		23.3		
		24	3-5	Bot (H) - BEN F-M SAND, silty, Tr. silty (SM)		25		
	110	25	6-6	BEN F-M SAND, silty, Tr. silty (SM)				
		27	7-12					
						30		
	120	30	19-17	gray M-F SAND, Tr. silty, mica (SP-SM)	(S)			
		32	27-22					
						35		
	130	35	9-13	DO-20 Tr. silty (SP-SM)				
		37	15-17					
						40		
	140	40	17-25	BEN M-F SAND, Tr. silty (SP-SM)				
		42	33-36					
						45		
	150	45	10-21	BEN F-M SAND, silty, Tr. silty (SM)				
		47	29-24					
						50		
	160	50	K-28	BEN F-M SAND, Tr. silty, mica (SP-SM)				
		52	31-34					

BORING NO. 214A

BORING NO. 12

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. B-611
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. _____
DATUM _____

PROJECT Lowie's Home CTR.
LOCATION Brooklyn, NY
BORING LOCATION As planned

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
TRUCK _____ MECHANICAL _____ DIA. IN. 4 DEPTH, FT. FROM 0 TO 20
SKID ACKER HYDRAULIC X DIA. IN. _____ DEPTH, FT. FROM _____ TO _____
BARGE _____ OTHER _____ DIA. IN. _____ DEPTH, FT. FROM _____ TO _____
OTHER _____
TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER 2" O.D. split spoon DIAMETER OF ROTARY BIT, IN. 2 1/4, 3 1/8
U-SAMPLER Shelby Tube TYPE OF DRILLING MUD Drill Gel
S-SAMPLER _____
CORE BARREL _____ AUGER USED ☐ YES ☒ NO
CORE BIT Thin wall bit (car. floor) TYPE AND DIAMETER, IN. _____
DRILL RODS N
CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>NO OBSERVATION</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 75.7 NO. OF 3" SHELBY TUBE SAMPLES 1
3.5" DIA. U-SAMPLE BORING LIN. FT. 2 NO. OF 3" UNDISTURBED SAMPLES 1
CORE DRILLING IN ROCK LIN. FT. — OTHER: obstruction (boulders) 3.5 FT.

BORING CONTRACTOR JSD Co.
DRILLER R. Lynch HELPERS E. FELICIANO
REMARKS Grouted borehole upon completion.
RESIDENT ENGINEER E. NUNEZ DATE 01/09/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-611

MUESER RUTLEDGE CONSULTING ENGINEERS

 SHEET 1 OF 1

 FILE NO. 94416

 BORING NO. B74

 SURFACE ELEV.

 PROJECT Lowie's Home Center

 PROJECT LOCATION Brooklyn, NY

 RES. ENGR. F. MUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/18/01 THREE CLEANING 32°F LT snow 1230 hrs	10	1	7-8	Brown f. m. sand, silty, Tr. cinders	(F)		Drilled	8" core, slab
	3	40-34		Brick (fill) (sm)			blank	
	20	3	40-23	DO-10, Tr. conc. (fill) (sm)				
	5	17-12				5		
	30	5	21-15	Brown f. m. sand, silty, Tr. cinders (fill) (sm)			MUD	
	7	9-11						
	40	7	13-10	DO-30 (fill) (sm)				
	9	14-14						
	50	10	26-19	DO-30 (fill) (sm)		10		
	12	11-9						
	60	12	12-11	Brown c. f. sand, silty, Tr. cinders	(C)			
	14	6-4		CINDER, (fill) (sp-sm)				
	70	15	4-7	NO RECOVERY		15		WASH - sample
	17	5-2						
	80	17	2-2	Red-gray org. silty clay, Tr. veg, f. sand (OH)		18.3		P.P. = 5.1 T.S.F.
	19	2-1				20	V	
	94	20	P=24"	DO-80 (OH)				
	22	P=18"						
	104	22	P=24"	TOP - DO 80 (OH)				
	24	P=22"		POT - BROWN PEAT (PE)				
	110	24	WOB-2	TOP (11") - Soft gray org. silty clay, Tr. f. sand, PEAT (OH)	(S)	24.9		
	26	2-3		POT (13") BROWN silty m. f. sand, Tr. veg (sm)				
						30		P.P. = 0.75 T.S.F.
	120	30	20-21	Brown m. f. sand, Tr. silt, mica (sp-sm)				
	32	26-17						
						33.5		
	130	35	WOB-4	Red-gray org. silty clay, Tr. f. sand, veg (OH)		35		
	37	8-11						
						38.5		
	140	40	15-21	Gray-Brown m. f. sand, Tr. silt (sp-sm)		40		
	42	23-25			(S)			
						45		
	150	45	11-14	DO-140 (sp-sm)				
	47	19-17						
	160	50	19-13	DO-140 (sp-sm)				
	52	18-19						

1/400

1/14/01

0900

BATH

2:04

BORING NO. 07

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3

FILE NO. 9446

BORING NO. B74

SURFACE ELEV. _____

PROJECT Loxley Home Cont.

PROJECT LOCATION Knocklyon, NY

RES. ENGR. R. MUEER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
					(S)	3.5		
	170	55 57	WOB/12" 6-16	Soft gray arg. silty clay, T.F. SAND (OH)	(S)	55		P.P. < 0.5 T.F.P.
						58.5		
	180	60 62	17-27 34-38	BRN f-c SAND, TR S, F (SP. SM)	(S)	60		
					(B)	62.5		ROD CHATTERING @ 62.5
						64		Had drilling to 64 FT.
	190	65 67	39-37 34-45	RED-BRN f-c SAND, SH S, H, TR SILT (SM)	(T)	65		
						70		ROD CHATTERING @ 67.5 FT. to 70 FT.
	200	70 70.4	100/5"	RED-BRN f-c SAND, SH S, H, TR SILT (SM)		70		
						75		
	210	75 75.3	100/4"	RED-BRN f-c SAND, SH S, H, TR SILT (SM)		75		ROD CHATTERING @ 75.5 FT.
						80		
1535	220	80 82	14-40 40-26	RED-BRN f-c SAND, SH S, H, TR SILT (SM)		82		E.O. @ 82 FT.

BORING NO. P74

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowie's Home Center
 LOCATION Brooklyn N.Y.
 BORING LOCATION AS PLANNED

BORING NO. B-74
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID <u>Acker</u>	HYDRAULIC <u>X</u>	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
BARGE	OTHER	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
OTHER			

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER <u>2" O.D. split spoon</u>	DIAMETER OF ROTARY BIT, IN. <u>3 1/8", 2 1/2" 1 1/2"</u>
U-SAMPLER <u>SHELBY TUBE</u>	TYPE OF DRILLING MUD <u>QUALIC GEL</u>
S-SAMPLER _____	
CORE BARREL _____	AUGER USED ☐ YES ☒ NO
CORE BIT <u>Thinwall bit</u>	TYPE AND DIAMETER, IN. _____
DRILL RODS <u>N</u>	

CASING HAMMER, LBS. <u>300</u>	AVERAGE FALL, IN. <u>24</u>
SAMPLER HAMMER, LBS. <u>140</u>	AVERAGE FALL, IN. <u>30</u>

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>No observation.</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>75.5</u>	NO. OF 3" SHELBY TUBE SAMPLES <u>2</u>	
1.5" DIA. U-SAMPLE BORING	LIN. FT. <u>4</u>	NO. OF 3" UNDISTURBED SAMPLES <u>-</u>	
CORE DRILLING IN ROCK	LIN. FT. <u>-</u>	OTHER: <u>obstructions (boulders)</u>	<u>2.5 FT</u>

BORING CONTRACTOR JBD Co.
 DRILLER R. Lynch HELPERS E. Feliciano / Louie Abbate
 REMARKS Grouted borehole upon completion
 RESIDENT ENGINEER R. Nunez DATE 01/19/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B74

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

BORING NO. B8

SURFACE ELEV.

PROJECT LOWE'S HOME CTR

PROJECT LOCATION BROOKLYN NY

RES. ENGR.

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
4/22/01 MON. SUNNY 25°F 0710 hrs	10	1	16-20	gray-bw f. sand, silty, Tr. silty, cinders (fill) (sm)	⑤		drilled	5" conc slab.
	3	27-45					ALLOW	
	20	3	10-15	DO-10 (fill) (sm)				
	3	24-32				5		
	30	5	17-19	gray-bw c. f. sand, silty, cinders, Tr. silty, brick (fill) (sm)			WHD	
	7	24-10						
	40	7	7-8	DO-30, silty brick (fill) (sm)				
	9	12-7				10		
	50	10	23-8	gray-bw c. f. sand, silty, cinders, Tr. silty, brick (fill) (sm)				
	12	9-3						
	60	12	2-2	gray-bw m. f. sand, silty, Tr. very, cinders, brick (fill) (sm)	⑥			
	14	7-8				15		
	70	15	12-8	gray-bw m. f. sand, silty, cinders, Tr. silty, metal (fill) (sm)				
	17	8-5						
	80	17	4-3	gray-bw c. f. sand, silty, cinders, Tr. silty, wood (fill) (sm)				R-3"
	19	4-3				19.5		
	90	20	3-4	BRN Root (PL)				
	22	7-7				23.5		
						25		
	100	25	8-7	BRN f. m. sand, Tr. silty, veg (sp-sm)	⑦			
	27	9-10						
						30		
	110	30	15-20	BRN c. f. sand, Tr. silty (sp-sm)				
	32	23-17				35		
						40		
	120	35	7-4	top (15') - gray, clay, silty, m. f. sand (MU)				
	37	11-9		bot (9') - gray, silty f. sand, Tr. clay (sm)				
						45		
	130	40	20-25	gray m. f. sand, Tr. silty, mica (sp-sm)	⑧			
	42	25-21						
						50		
	140	45	12-15	DO-130 (sp-sm)				
	47	22-21						
						55		
	150	50	12-14	BRN m. f. sand, Tr. silty, mica (sp-sm)				
	52	14-15						
						60		

BORING NO.

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lower House Cape
 LOCATION Brooklyn NY
 BORING LOCATION _____

BORING NO. B-8
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK _____ MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID Helix HYDRAULIC ☒ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" dia. split spoon DIAMETER OF ROTARY BIT, IN. 3 1/2, 4 1/2
 U-SAMPLER _____ TYPE OF DRILLING MUD Quikgel
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N
 CASING HAMMER, LBS. 700 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>NO observation</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 70.0 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. - NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. - OTHER: obstruction (barrier) 5 FT

BORING CONTRACTOR JRD Co.
 DRILLER R. Lynch HELPERS E. Feliciano
 REMARKS Grouted borehole upon completion
 RESIDENT ENGINEER R. NUNEZ DATE 01/24/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type: dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B8

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9440

BORING NO. B41

SURFACE ELEV. _____

PROJECT Low's Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/16/01 0645 P.O.S. 35°F cloudy	10	1	7-17	BW M-f sand, silty, Tr. sh. Brick	⑤		Drilled 8" conc. slab	
		3	18-12	CLAYERS (fill) (sm)			ANRAD	
	20	3	20-14	RY SAND f-sand, silty, sh. BRICK, sh.		5		
		3.9		Tr. Brick (fill) (sm)				
	30	5	21-27	BW f-m sand, silty, CLAYERS, Tr. sh.				
		7	29-15	(fill) (sm)				
	40	7	7-6	BW-BW M-f sand, sh. BRICK, Tr. CLAYERS, sh.				
		9	11-6	Silt (sp. sh) (fill)		10		
	50	10	32-22	BW C-f sand, silty, Tr. BRICK, sh. CLAYERS				
		12	20-8	(fill) (sm)				
	60	12	4-2	gray silty C-f sand, silty, CLAYERS, Tr. sh.	⑥ 3			
		14	3-4	(fill) (sm)		15		
	70	15	5-5	DO-60 (fill) (sm)				
		17	2-2					
	80	17	2-5	DO-60, Tr. veg. (fill) (sm)				
		19	4-2			20		
	90	20	3-4	BW C-f sand, Tr. BRICK, sh. (fill) (sm)				Ref. 1"
		22	5-4					play in water @ 23 ft.
	100	23	P=24"	TOP-gray org. silty clay, sh. f sand (OL)				
		25	R=21"	BOT-BW silty M-f SAND, Tr. veg. (sm)				
	110	25	7-8	DO-KU-BOT (sm)	⑤			
		27	18-16			30		
	120	30	15-15	BW M-f sand, Tr. silt (sp. sm)				
		32	22-21					
	130	35	8-12	BW silty, f-m sand (sm)				
		37	12-11					
	140	40	23-24	BW M-f sand, Tr. silt (sp. sm)				
		42	23-28					
	150	45	10-10	DO-140, Tr. mica (sp. sm)				
		47	13-12					
	160	50	10-14	BW clayey f-sand, silty, Tr. mica				
		52	4-11	(sm) (sm)				

410

SHEET 2 OF 2

FILE NO. 9446

BORING NO. B94

SURFACE ELEV. _____

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. E. NUNEZ1230

4PM NO 4-5

BORING NO. D 313

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowie Home Center
 LOCATION Brooklyn NY
 BORING LOCATION As planned

BORING NO. B94
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK _____ MECHANICAL _____ DIA. IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID acker HYDRAULIC X DIA. IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA. IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2"OD split spoon DIAMETER OF ROTARY BIT, IN. 3 7/8" 2 1/4"
 U-SAMPLER shelby tube TYPE OF DRILLING MUD Quick Gel
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT thinwand bit TYPE AND DIAMETER, IN. _____
 DRILL RODS N

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
01/17/01	1245	82	—	7.2	upon completion

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 80 NO. OF 3" SHELBY TUBE SAMPLES 1
 3.5" DIA. U-SAMPLE BORING LIN. FT. 2 NO. OF 3" UNDISTURBED SAMPLES —
 CORE DRILLING IN ROCK LIN. FT. — OTHER: —

BORING CONTRACTOR JSD Co.
 DRILLER R. Lynch HELPERS B. FELICIANO
 REMARKS Grouted borehole upon completion
 RESIDENT ENGINEER R. NUNGZ DATE 01/17/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B94

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9442

BORING NO. B-11

SURFACE ELEV. _____

PROJECT Levee's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. R. MUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/ft					
12/19/00 Tues. 5:45 Clear 1200 hrs.	10	1	19-33	Bl. f. m. sand, silty, fr. mica (5m)	④		Drilled	Safety Harnessed
		3	24-37	sil. (f. m. sand)			WASH	to depth @ surface
	20	3	10-11	bl. f. m. (f. m. sand)				4" tube
		5	12-15					
	30	5	3-3	Wash sample			WASH	R=2"
		7	4-4					
	40	7	3-4	gray m. f. sand, silty, fr. mica				
		9	6-3					
	50	10	2-1	gray f. m. sand, silty, fr. mica				WASH in wash, extra bit pushed
		12	1-1					
1420 hrs 12/20/00 W60 0630 hrs Windy cloudy 30° F	60	12	2-1	DO-50, to make (f. m. sand)	⑤			
		14	1-1					
	70	15	3-4	silt gray, org. silty clay, fr. mica (5m)				R=2"
		17	4-8					
	80	17	2-2	DO-70 (5m)				PR = C.O.S.T.U.F.
		19	2-2					
	90	20	1-1	gray silty f. m. sand, fr. mica, clay (5m)				
		22	1-1					
	100	25	8-10	bl. m. f. sand, fr. mica (5m)				
		27	15-10					
	110	30	5-4	gray-blu clayey silt, fr. mica, veg (5m)	⑥			
		32	4-5					
	120	35	10-12	bl. m. f. sand, fr. silt, veg (5m)				
		37	12-15					
	130	40	16-14	bl. m. f. sand, fr. silt, mica (5m)				
		42	21-17					
	140	45	10-13	bl. m. f. sand, fr. mica (5m)				
		47	17-17					
	150	50	12-14	DO-140 (5m)				
		52	15-12					

MEM. ENGR. R. Newer

PROJECT LOCATION Brooklyn NY

BORING NO. 2 - 11

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN NY
 BORING LOCATION off lot -> 10' FLW

BORING NO. B-11
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED _____ CASING USED ☒ YES ☐ NO
 TRUCK ONE SS MECHANICAL _____ DIA, IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC _____ DIA, IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA, IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____

TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" o.d. glt spoon DIAMETER OF ROTARY BIT, IN. 5 7/8, 3 1/2, 2 1/2
 U-SAMPLER _____ TYPE OF DRILLING MUD QUICK GEL
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>no observation</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 102 NO. OF 3" SHELBY TUBE SAMPLES -
 3.5" DIA. U-SAMPLE BORING LIN. FT. - NO. OF 3" UNDISTURBED SAMPLES -
 CORE DRILLING IN ROCK LIN. FT. - OTHER: _____

BORING CONTRACTOR JRD Co.
 DRILLER R. Lynch HELPERS E. Feliciano

REMARKS Grouted borehole upon completion.

RESIDENT ENGINEER R. Mung DATE 12/20/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NFI to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-11

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

BORING NO. B-12

SURFACE ELEV.

PROJECT Lee's Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. R. Nunez

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/8"					
12/11/00 30 deg Tues cloudy 12/15 hr	10	0.5	5-10	Bk-Bow M. f. sand, silty, Tr. qtz, coarse	⑤		Drilled	Automatic Home
	2		23	side (fill) (sm)			Also	Concrete @ surface
	20	2	9-19	DO-10 (fill) (sm)				4" thick
	4		12-6					10-1.5 ft sample
	30	4	1-1	Bk. f-m sand, silty, Tr. pnt, qtz		5		
	6		1-1	(fill) (sm)			M.D.	
	40	6	2-2	Bk. gray f-m sand, silty, coarse Tr. pnt,				
	8		2-2	weak (fill) (sm)				
	50	8	2-3	Bk. gray f-m sand, silty, coarse Tr. qtz		10		
	10		3-4	(fill) (sm)				
1415 12/10/00 Wed. 0630 hrs windy cloudy 16 hr	60	10	2-2	DO-50 (fill) (sm)	⑥			
	12		1-1					
	70	12	2-2	DO-50 (fill) (sm)				
	14		2-1					
	80	14	1-1	TOP (G)-DO-50 (fill) (sm)		15		R-12"
	16		1-1	BOT (G) gray silty clay, silty, Tr. pnt (sm)				
	90	16	1-1	DO-80-BOT (sm)				
	18		1-1					
	100	20	1-1	gray silty f-m sand, Tr. veg (sm)		20	↓	
	22		1-2					
	110	25	4-6	Bk. M. f. sand, Tr. silt (sp-sm)	⑦	25		
	27		8-8					
	120	30	3-3	Top (G)-Bk. G. f. sand, Tr. silt (sp-sm)		30		
	32		2-2	Bot (G)-Stiff gray Bk. silt, silty sand (sm)				Bot. PD = 15 F.S.F.
	130	35	5-8	Bk. M. f. sand, Tr. silt, mica (sp-sm)		35		
	37		12-15					
	140	40	6-8	DO-130 (sp-sm)		40		
	42		11-11					
	150	45	3-3	DO-150, Tr. qtz. (sp-sm)		45		
	47		5-4					
	160	50	4-4	Bk. silty f. sand, Tr. mica (sm)		50		
	52		6-5					

BORING NO. B-12

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowe's Home Center
 LOCATION Brooklyn, NY
 BORING LOCATION off Rt 169 SW

BORING NO. B-12
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK CME 75 MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" o.d. split spoon DIAMETER OF ROTARY BIT, IN. 3 7/8", 5 7/8", 2 1/4"
 U-SAMPLER _____ TYPE OF DRILLING MUD Quik Gel
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 150 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>No observation.</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 99.5 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: obstruction (boulders) 2.5

BORING CONTRACTOR JRSD Co.
 DRILLER M. Magowan HELPERS D. Keith
 REMARKS Grouted borehole upon completion
 RESIDENT ENGINEER T. NUNER DATE 12/20/00

- NOTES:
- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
 - In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
 - All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
 - Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
 - Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
 - List changes of material in strata column and list generalized strata descriptions.
 - List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
 - For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
 - Include sample description by Unified Soil Classification System.
 - Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-12

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9440

BORING NO. B-13

SURFACE ELEV. _____

PROJECT Lucas's Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. T. NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
12/20/00 Wed. Windy Clear 30° SE 3-50 hrs	10	0-5	24-15	dk f-s sand, silty, to under, silty	④			Drilled Automatic Hammer
		2	17	Brick (fill) (sm)				4" thick concrete
	20	2	7-11	DO-10 (fill) (sm)				Surface
		4	16-6					
	30	4	4-4	DO-10 (fill) (sm)		5		Still problem w/
		6	2-2					
	40	6	1-1	gray f-s sand, silty, to, veg, silty				
		8	1-1	Brick (fill) (sm)				
	50	8	2-1	DO-40, to, under (fill) (sm)				
		10	2-2			10		
	60	10	4-2	Brick f-s sand, silty, cinders, to, veg, silty				
		12	2-1	Brick (fill) (sm)				
	70	12	1-1	dk-gray f-s sand, silty, cinders, to				
		14	1-1	Brick (fill) (sm)				
1/6/15 hrs 12/21/10 Tues 20° SE Breezy cloudy	80	15	8-6	Black cinders, to, f-s sand, to, veg, silty	⑤	15		R=1"
		17	5-5	(fill) (cinders)		17		
	90	17	2-1	Bwn Peat (pt)				
		19	1-1					
	100	20	Wash/18"	gray silty f-s sand, to, peat (sm)		19.5	▼	
		22	1					
						23.5		
						25		
	110	25	4-5	Bwn f-s sand, to, silty, mica (sp sm)				
		27	5-9					
						30		
	120	30	8-7	Bwn silty f-s sand, to, mica (sm)				
		32	4-4					
						33.5		
	130	35	2-2	stiff gray org. silty clay, silty sand (OH)	⑥	35		PA 1.25 T.S.F
		37	7-5					
						38.5		
	140	40	3-5	gray m-f sand, to, silty, mica (sp sm)		40		
		42	4-6					
						45		
	150	45	4-4	DO-140 (sp sm)				
		47	4-7					
						50		
	160	50	2-4	gray f-s sand, silty (sm)				
		52	4-6					

BORING NO. B-13

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 3

FILE NO. 9446

BORING NO. B-B

SURFACE ELEV. 100.00

PROJECT Low's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. E. Mueser

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
					(S)			
						53.5		
	110	55	57	Wet soft gray org. silty clay, with f-sand (OH)	(O)	55		P.D. = 20.5 T.S.F.
						58.5		
	180	60	62	Red-brown silty f-c sand, Tr. gul, rock frag (sm)	(T)	60		R=2"
						65		
	190	65	67	DO-18 IV (sm)				2-3" rock frag in the tip of the spoon.
						70		
	200	70	72	Red-brown f-c sand, soft, silty (sm)				
					(S)	75		Hard drilling @ 73 ft. boulder.
	210	75	77	DO-20 D (sm)				
						80		Spindle caused in boulder rolled into borehole.
	220	80	82	DO-20 D, sm Rock frag. (sm)				Rec: 3" Rock frag in the tip of the spoon.
					(T)	85		Spindle caused in hole to boulder to 70 ft. Reamed boulder to 85 ft.
	230	85	87	Red-brown f-c sand, silty, gul (sm)				
					(S)	90		Hard drilling from 89-90.
	240	90	92	DO-23 D (sm)				
						95		
	250	95	97	DO-23 D (sm)				
						100		
	260	100	102	DO-23 D (sm)				E.O.B. @ 102

1410

BORING NO. B-B

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowe's Home Center
 LOCATION Brooklyn, NY
 BORING LOCATION 2nd Ave #7

BORING NO. B-13
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK CME 75 MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. Split Spoon
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 2 3/16, 3 1/8, 4 1/8
 TYPE OF DRILLING MUD Quick Set
 AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12/21/00	1400	102	20	11.0 ±	Mud/water level upon completion.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 100 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: Obstruction (barbers) 2 Ft

BORING CONTRACTOR JEN CO.
 DRILLER M. Blawie HELPERS D. Keith
 REMARKS Grouted borehole upon completion.
 RESIDENT ENGINEER R. Mueser DATE 12/21/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, Shelby tube samples S, fixed piston samples U. Assign NPT to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B-13

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-14
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.4
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
06:30	1D	0.0	20-23	Black fine to medium sand, some silt, trace gravel, cinders (Fill) (SM)	F		DRILLED	
12-12-00		2.0	15-18				AHEAD	
Friday	2D	2.0	10-21	Black brown coarse to fine sand, some silt, trace cinders, gravel, brick (Fill) (SM)			4"	
Light Snow		4.0	18-23					
30°F						5		
	3D	5.0	1-1	Blk brn silty fine to coarse sand, tr gravel, cinders, brick, vegetation (Fill) (SM)				
		7.0	1-2	Do 3D (Fill) (SM)				
	4D	7.0	3-1					
		9.0	3-3			10		
	5NR	10.0	1-1	No recovery	O			WC=73
		12.0	1-1					
	6D	12.0	1-1	Black cinders (Fill)				
		14.0	1-1			15		
	7D	15.0	1-1	Gray coarse to fine sand, some silt, trace clay, cinders (Fill) (SM)		17		
		17.0	1-1					
	8D	17.0	2-2	Soft gray organic silty clay, trace vegetation (OH)				
		19.0	2-2			20	Y	
	9D	20.0	1-1	Do 8D (OH)	S1			WC=58
		22.0	2-2			22		
	10D	25.0	8-13	Brown fine to medium sand, some silt (SM)				
		27.0	16-18					
					M	28.5		WC=24 Percent Passing No. 200 Sieve=76 11D: Petroleum odor.
						30		
	11D	30.0	7-5	Gray brown fine to medium sandy silt, trace clay pocket (ML)				
		32.0	7-7					
						33.5		
						35		
	12D	35.0	12-17	Brown fine to medium sand, some silt (SM)	S1			
		37.0	21-22					
						40		
	13D	40.0	11-12	Gray brown fine to medium sand, some silt (SM)				
		42.0	12-11					
						45		
	14D	45.0	10-11	Gray brown silty fine sand, trace clay (SM)				
		47.0	14-13					
						50		
	15D	50.0	9-12	Gray brown silty fine sand (SM)				
		52.0	17-14					

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-14
 SHEET 2 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.4
 RES. ENGR. RANDOLPH NUNEZ

DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
PROGRESS	NO.	DEPTH	BLOWS/6"					
Cont'd				Do 15D, trace fine to medium sand seams (SM)	S1			REC=3"
12-12-00								
Friday								
Light Snow								
30°F							55	
	16D	55.0	15-16					
		57.0	25-20					
							60	
	17D	60.0	100/5"					
		60.4						
					65			
	18NR	65.0	100/0"	No recovery				
						70		
	19D	70.0	84-100/4"	Brown gravelly fine to coarse sand, some silt (SM)				19D-20D: Rock frag- ments in tip of spoon. 19D: REC=4"
		70.9						
						75		
	20D	75.0	61-75	Top: Brown coarse to fine sandy gravel, trace silt (GP-GM)		76		
		76.2	100/3"	Bot: Red brown silt, trace fine sand (ML)				
					M			
						80		
	21D	80.0	21-30	Do 20D, Bottom (ML)				WC=25
		82.0	38-40			82		Percent Passing No. 200 Sieve=96 End of Boring at 82'.
14:30								
						85		
								WC=Water Content in percent of dry weight.
						90		
						95		
						100		

BORING NO. B-14

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-14
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.4
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-55</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC ☒	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT: TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER: MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>80.3</u>	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.	NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.	OTHER: OBSTRUCTION (BOULDERS)	<u>1.7</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-22-00

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-15
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.7
 RES. ENGR. RANDOLPH NUNE

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"				BLOWS	
06:30	1D	0.0	13-5	Brown fine to coarse sand, some silt, trace brick, cinders (Fill) (SM)	F		DRILLED	
02-22-00		2.0	8-6				AHEAD	
Friday	2D	2.0	6-5	Brown medium to fine sand, trace silt (Fill) (SP)			4"	
Light		4.0	4-5					
Snow	3D	4.0	3-2	Gray brown medium to fine sand, trace silt, brick, cinders (Fill) (SP-SM)		5		
30°F		6.0	2-2					
	4D	6.0	2-2	Gray brown fine to coarse sand, some silt, trace cinders, vegetation (Fill) (SM)				
		8.0	2-2					
	5D	8.0	3-2	Black fine to coarse sand, some cinders, silt, trace gravel, brick, clay (Fill) (SM)		10		
		10.0	2-2					
	6D	10.0	1-1	Brown silty fine to medium sand, trace cinders, vegetation, gravel (Fill) (SM)	O			WC=214 REC=4" Water in jar.
		12.0	1-1					
	7D	12.0	1-1	Gray brown fine to coarse sand, sm cinders, tr silt, gravel, brick (Fill) (SP-SM)		14		
		14.0	1-1					
	8D	14.0	1-1	Brown soft organic silty clay, some vegetation (OH)		15		
		16.0	2-1					
	9D	16.0	2-2	Do 8D (OH)				
		18.0	2-2			19		
						20	✓	
	10D	20.0	1-2	Gray brown fine sand, some silt, trace vegetation (SM)	S1			
		22.0	3-3					
	11D	25.0	6-6	Brown fine sand, some silt (SM)				
		27.0	10-11					
						28.5		
					M	30		WC=23
	12D	30.0	3-2	Brown fine sandy silt (ML)				
		32.0	2-5					
						33.5		
						35		
	13D	35.0	3-4	Gray brown fine sand, some silt (SM)	S1			
		37.0	9-12					
						40		
	14D	40.0	6-7	Brown fine sand, some silt (SM)	M			WC=39
		42.0	9-9					
						45		
	15D	45.0	5-4	Brown fine to medium sand, trace silt (SP-SM)	M			
		47.0	6-8					
						48.5		
						50		
	16D	50.0	1-1	Soft gray clayey silt, trace fine sand (ML)	M			
		52.0	1-1					

BORING LOG

PROJECT:

LOWE'S HOME CENTER

LOCATION :

BROOKLYN, NEW YORK

BORING NO. B-15

SHEET 2 OF 3

FILE NO. 9446

SURFACE ELEV. 10.7

RES. ENGR. RANDOLPH NI

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd								
02-22-00					M			
Friday								
Light						53.5		
Snow						55		
30°F	17D	55.0	10-14	Gray brown fine sand, some silt (SM)	S1			
		57.0	15-17					Hard drilling at 58'.
						58		
						60		
	18D	60.0	11-12	Red brown silty fine to medium sand, some gravel (SM)				Hard drilling at 62'.
		62.0	11-10					
						65		
	19D	65.0	10-13	Red brown silty fine to medium sand, trace gravel (SM)				Hard drilling at 67.5'.
		67.0	12-14					
					S2			
						70		
	20D	70.0	24-15	Red brown fine to coarse sand, some gravel, silt (SM)				
		72.0	17-37					
						75		
	21D	75.0	29-65	Do 20D (SM)				
		77.0	40-38					
						80		
	22D	80.0	25-21	Red brown gravelly coarse to fine sand, some clay (SC)				End of Boring at 82'.
4:30		82.0	46-52			82		
								WC=Water Content in percent of dry weight.
						85		
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NEW YORK
BORING LOCATION SEE PLAN

BORING NO. B-15
SHEET 3 **OF** 3
FILE NO. 9446
SURFACE ELEV. 10.7
DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG CME-75
TRUCK MECHANICAL
SKID HYDRAULIC ☒ **YES**
BARGE OTHER ☐ **NO**
OTHER

TYPE OF FEED DURING CORING
CASING USED 4 **DIAM., IN.**
DEPTH, FT. FROM 0 **TO** 20
DEPTH, FT. FROM **TO**
DEPTH, FT. FROM **TO**

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. SPLIT SPOON
U-SAMPLER
S-SAMPLER
CORE BARREL
CORE BIT
DRILL RODS N

DRILLING MUD USED ☒ **YES** ☐ **NO**
DIAMETER OF ROTARY BIT, IN. 2-15/16, 3-7/8, 5-7/8
TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ **YES** ☒ **NO**
TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 **AVERAGE FALL, IN.** 24
***SAMPLER HAMMER, LBS.** 140 **AVERAGE FALL, IN.** 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ **YES** ☒ **NO** **SKETCH SHOWN ON**

STANDPIPE: TYPE **ID, IN.** **LENGTH, FT.** **TOP ELEV.**
INTAKE ELEMENT: TYPE **OD, IN.** **LENGTH, FT.** **TIP ELEV.**
FILTER: MATERIAL **OD, IN.** **LENGTH, FT.** **BOT. ELEV.**

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING **LIN. FT.** 79.1 **NO. OF 3" SHELBY TUBE SAMPLES**
3.5" DIA. U-SAMPLE BORING **LIN. FT.** **NO. OF 3" UNDISTURBED SAMPLES**
CORE DRILLING IN ROCK **LIN. FT.** **OTHER: OBSTRUCTION (BOULDERS)** 2.9

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
DRILLER MIKE BLEJWAS **HELPERS** DENNIS KEITH
REMARKS BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER RANDOLPH NUNEZ **DATE** 12-22-00

BORING NO. B-15

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-15AS
 SHEET 1 OF 2
 FILE NO. 9446
 SURFACE ELEV. 10.7
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"				BLOWS	
10:00							DRILLED	Drilled ahead to 50';
01-24-01							AHEAD	obtained 1S tube.
Wednesday							4"	No sampling in the
Partly								top 50'.
Cloudy						5		For strata, see
30°F								Boring Log B-15.
					F			
						10		
						14		
						15		
					O			
						19		
						20	✓	
					S1	25		
						28.5		
						30		
					M			
						33.5		
						35		
						40		
					S1			
						45		
						48.5		
						50		
	1S	50.0	PUSH=24"	Soft gray organic silty clay, some fine sand	M/O			End of Boring at
12:00		52.0	REC=24"	(OH)		52		52'.

BORING NO. B-15AS

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT <u>LOWE'S HOME CENTER</u>	BORING NO. <u>B-15AS</u>
LOCATION <u>BROOKLYN, NEW YORK</u>	SHEET <u>2</u> OF <u>2</u>
BORING LOCATION <u>SEE PLAN</u>	FILE NO. <u>9446</u>
	SURFACE ELEV. <u>10.7</u>
	DATUM <u>BOROUGH PRESIDENT OF BROOKLYN HIGHWAY</u>

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-55</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER	DIAMETER OF ROTARY BIT, IN. <u>3-7/8</u>
U-SAMPLER	TYPE OF DRILLING MUD <u>QUIK - GEL</u>
S-SAMPLER <u>SHELBY TUBE</u>	
CORE BARREL	AUGER USED ☐ YES ☒ NO
CORE BIT	TYPE AND DIAMETER, IN.
DRILL RODS <u>N</u>	

CASING HAMMER, LBS.	AVERAGE FALL, IN.
SAMPLER HAMMER, LBS.	AVERAGE FALL, IN.

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>52</u>	NO. OF 3" SHELBY TUBE SAMPLES	<u>1</u>
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES	_____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER:	_____

BORING CONTRACTOR <u>JERSEY BORING & DRILLING CO. INC.</u>	DATE <u>1-24-01</u>
DRILLER <u>RAY LYNCH</u>	HELPERS <u>EDWIN FELICIANO</u>
REMARKS <u>BOREHOLE GROUTED UPON COMPLETION.</u>	
RESIDENT ENGINEER <u>RANDOLPH NUNEZ</u>	BORING NO. <u>B-15AS</u>

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-16
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 11.1
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
06:30	1D	0.0	55-100/5"	Gray white gravel, trace concrete, coarse to fine sand, cinders (Fill) (GP-GM)	F		DRILLED	4" Asphalt at surface.
12-27-00		0.9					AHEAD	
Wednesday	2D	1.0	34-26	Black coarse to fine sand, some silt, trace gravel, cinders (Fill) (SM)			4"	
		3.0	7-5					
19°F	3D	3.0	3-3	Brown fine to coarse sand, some silt, trace gravel, cinders, brick (Fill) (SM)		5		
		5.0	2-3					
	4D	5.0	3-3	Black brown coarse to fine sand, some silt, cinders, trace gravel, brick (Fill) (SM)				
		7.0	3-6					
	5D	7.0	3-4	Do 4D (Fill) (SM)		10		
		9.0	3-3					
	6D	9.0	1-1	Brown silty fine to coarse sand, trace gravel, brick (Fill) (SM)				
		11.0	2-1					
	7D	11.0	1-1	Brown gray fine to coarse sand, some silt, trace gravel, wood, cinders (Fill) (SM)				
		13.0	1-1					
	8D	13.0	3-2	Brown fine to coarse sand, some silt, gravel, trace wood, cinders (Fill) (SM)		15		
		15.0	2-3			16		
	9D	15.0	1-2	Brown peat, trace vegetation (Pt)	O			WC=286
		17.0	1-2					
	10D	17.0	2-2	Do 9D (Pt)				WC=322
		19.0	2-2			19.5		
	11D	20.0	2-2	Red brown fine sand, some silt, trace vegetation (SM)	S1			
		22.0	1-1					
						25	✓	
	12D	25.0	5-7	Red brown fine to medium sand, trace silt (SP-SM)				
		27.0	7-9					
						30		
	13D	30.0	2-4	Brown fine sand, some silt, silt layers (SM)	S1			
		32.0	4-4					
						35		
	14D	35.0	2-3	Gray medium sand, some silt (SM)				
		37.0	7-8					
						40		
	15D	40.0	4-4	Gray fine to medium sand, trace silt (SP-SM)	M			
		42.0	7-10					
						45		
	16D	45.0	3-4	Gray fine sand, some silt (SM)	M			
		47.0	3-3					
						48.5		
						50		
	17D	50.0	WH/18"	Top 18": Gray fine sandy silt (ML)				17D Top: WC=32
		52.0	4	Bot 6": Gray silty fine sand (SM)		51.5		

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION : BROOKLYN, NEW YORK

BORING NO. B-16
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 11.1
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"			DEPTH	
Cont'd					M		
12-27-00						51.5	
Wednesday							
19°F					S1	55	
	18D	55.0	8-11	Gray brown fine sand, some silt, gravel (SM)			
		57.0	12-12				
						58.5	
						60	
	19NR	60.0	30-39	No recovery			Wash in sample.
		62.0	50-47				
							Hard drilling at 63.5'.
						65	
	20D	65.0	20-20	Red brown fine to coarse sand, some gravel, silt, trace clay (SM)			
		67.0	25-27				
							Hard drilling at 69'.
					S2	70	
	21D	70.0	18-19	Red brown fine to coarse sand, some gravel, silt (SM)			
		72.0	19-21				
						75	
	22D	75.0	27-23	Do 21D (SM)			
		77.0	25-26				
						80	
	23D	80.0	24-22	Do 21D (SM)			End of Boring at 82'.
14:15		82.0	19-28			82	
							WC=Water Content in percent of dry weight.
						85	
						90	
						95	
						100	

BORING NO. B-16

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-16
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 11.1
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-75</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>25</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-27-00	14:15	82	25	9	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT.	<u>79.5</u>	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.		NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.		OTHER: OBSTRUCTION (BOULDERS)	<u>2.5</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-27-00

BORING NO. B-16

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-17
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
06:45	1D	0.0	77-100/1"	Gray white fine to coarse sand, gravel, trace silt, concrete (Fill) (SP-SM)	F		DRILLED	Drilled ahead to 1'.
12-18-00		0.5					AHEAD	2D-4D, 13D-14D:
Monday	2D	1.0	6-4	Black brown fine to coarse sand, sm gravel, tr silt, brick, cinders (Fill) (SP-SM)			4"	Petroleum odor.
		3.0	4-5					
30°F	3D	3.0	4-3	Black brown coarse to fine sand, some silt, trace gravel, cinders, brick (Fill) (SM)		5		
		5.0	6-6				MUD	
	4D	5.0	3-3	Gray brown fine to coarse sand, some silt, trace gravel, cinders, brick (Fill) (SM)				
		7.0	2-5					
	5D	7.0	2-2	Gray brown coarse to fine sand, some silt, gravel, trace cinders, brick (Fill) (SM)		10		
		9.0	6-5					
	6D	9.0	1-1	Gray black fine to coarse sand, some silt, cinders, trace shells (Fill) (SM)				REC=5"
		11.0	1-1					
	7D	11.0	1-1	Gray silty fine to coarse sand, trace gravel, shells, brick, cinders (Fill) (SM)				
		13.0	1-2					
	8D	13.0	2-1	Gray silty fine sand, trace wood, mica (Fill) (SM)		15		
		15.0	1-3					
	9D	15.0	1-2	Gray silty fine sand, trace vegetation (Fill) (SM)				
		17.0	2-2					
	10D	17.0	1-2	Gray silty fine sand, some silt, trace organic clay layers, brick (Fill) (SM)		20	✓	
		19.0	2-1					
	11D	20.0	1-2	Gray fine sand, some silt, trace vegetation (Fill) (SM)				
		22.0	1-1					
					S1	23.5		
						25	✓	
	12D	25.0	4-6	Gray fine sand, some silt, trace mica (SM)				
		27.0	8-11					
					M	28.5		
						30		WC=23
	13D	30.0	5-3	Gray silt, trace fine sand (ML)				
		32.0	5-5					
					S1	33.5		
						35		
	14D	35.0	4-8	Gray fine sand, some silt, trace silt layers, trace mica (SM)				
		37.0	11-13					
						40		
	15D	40.0	6-5	Brown silty fine sand, trace clay pockets, mica (SM)				
		42.0	9-7					
						45		
	16D	45.0	9-10	Do 15D (SM)				
		47.0	13-13					
						50		
	17D	50.0	10-12	Red brown silty fine sand with medium to fine sand layers (SM)				Sand layer in middle of sample.
		52.0	13-20					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-17
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	CASING		REMARKS
	NO.	DEPTH	BLOWS/6"			DEPTH	BLOWS	
Cont'd								
12-18-00								
Monday								
30°F						55		
	18D	55.0	5-11	Top 10": Red brown silty fine sand, trace mica (SM)	S1			
		57.0	13-14	Bot 8": Brown fine to medium sand, trace silt, gravel (SP-SM)				
						60		
	19D	60.0	13-12	Brown fine to medium sand, some gravel, trace silt (SP-SM).	S2	63.5		
		62.0	12-12			65		
	20D	65.0	19-37	Brown fine to coarse sand, some silt, gravel, decomposed rock fragments, trace mica (SM)				Decomposed mica schist fragments.
		67.0	28-25					
						70		
	21D	70.0	17-21	Red brown silty fine to medium sand, trace gravel, clay, mica (SM)				
		72.0	16-20					
						75		
	22D	75.0	20-25	Red brown gravelly fine to coarse sand, some silt, trace clay (SM)				
		77.0	22-30					
						80		
	23D	80.0	23-26	Red brown gravelly fine to coarse sand, some clay (SC)				End of Boring at 82'.
14:00		82.0	19-15			82		
								WC=Water Content in percent of dry weight.
						85		
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-17
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-75</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT: TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER: MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>82</u>	NO. OF 3" SHELBY TUBE SAMPLES
3.5" DIA. U-SAMPLE BORING	LIN. FT.	NO. OF 3" UNDISTURBED SAMPLES
CORE DRILLING IN ROCK	LIN. FT.	OTHER:

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-18-00

BORING NO. B-17

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-18
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. +10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"				BLOWS	
06:30	1D	0.0	19-24	Brown fine to coarse sand, some silt, trace gravel, brick, cinders (Fill) (SM)	F		DRILLED	5D-6D: Petroleum odor. REC=6"
12-15-00		2.0	22-18				AHEAD	
Friday	2D	2.0	15-15	Gray coarse to fine sand, trace silt, brick, cinders, concrete (Fill) (SP-SM)			4"	
		4.0	12-10					
30°F	3D	4.0	2-2	Brown fine to coarse sand, some silt, trace brick, cinders (Fill) (SM)		5		
		6.0	4-2					
	4D	6.0	2-2	Black brown fine to coarse sand, some silt, trace cinders (Fill) (SM)				
		8.0	5-5					
	5D	8.0	4-3	Black fine to coarse sand, some silt, trace gravel, cinders (Fill) (SM)		10		
		10.0	5-7					
	6D	10.0	2-3	Black gray fine to coarse sand, some silt, trace brick, cinders (Fill) (SM)	O			8D Bot: WC=236 WC=302
		12.0	4-3					
	7D	12.0	4-3	Red brown silty fine to medium sand, trace gravel (Fill) (SM)				
		14.0	1-1			15		
	8D	15.0	WH/18"	Top 7": Brn f-m sand, sm silt, tr gvl (SM)				
		17.0	1	Bot 6": Soft gray brn org si cl, sm veg (OH)		16.4		
	9D	17.0	1-1	Do 8D, Bottom (OH)				
		19.0	3-2			19.5		
	10D	20.0	1-1	Gray silty fine sand, trace vegetation (SM)				
		22.0	1-2					
					S1			WC=23
	11D	25.0	5-7	Gray fine sand, some silt (SM)	M			WC=27
		27.0	6-9					
	12D	30.0	4-1	Gray silt, some fine sand, trace clay (ML)	S1			WC=31
		32.0	1-2					
	13D	35.0	1-2	Medium clayey silt, trace fine sand (ML)	M			WC=32
		37.0	3-5					
	14D	40.0	6-7	Gray brown fine sand, trace silt (SP-SM)	S1			15D Top: WC=32
		42.0	9-11					
	15D	45.0	1-4	Top 14": Medium gray clayey silt, trace mica, fine sand (ML)	S1			15D Top: WC=32
		47.0	13-12	Bot 10": Gray fine sand, some silt, trace mica (SM)				
	16D	50.0	9-12	Red brown micaceous fine sand, some silt (SM)	S2			
		52.0	13-16					

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-18
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. +10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd								
12-15-00								
Friday								Hard drilling from 54' to 55'.
30°F						55		
	17D	55.0	17-12	Red brown fine to medium sand, some silt,				
		57.0	9-14	gravel, trace clay, mica (SM)				
								Hard drilling from 59' to 60'; possible boulder.
						60		
	18D	60.0	18-5	Red brown fine to medium sand, some				
		62.0	15-11	gravel, silt (SM)				
						65		
	19D	65.0	34-17	Red brown coarse to fine sandy gravel,				
		67.0	30-19	some silt (GM)				Hard drilling from 67.5' to 69'; possible boulder.
						70		
	20D	70.0	14-44	Red brown fine to medium sand, some silt,				
		72.0	82-37	gravel, trace clay (SM)				
								Hard drilling boulder from 74' to 75'.
					S2	75		REC=5"
	21D	75.0	100/5"	Red brown fine to medium sand, some				Rods chattering at 76'. Hard drilling from 76' to 77.5'; possible boulder.
		77.0		gravel, silt, trace coarse sand (SM)				
						80		
	22D	80.0	20-25	Red brown fine to medium sand, some silt,				
		82.0	24-25	gravel (SM)				
						85		
	23D	85.0	100/3"	Red brown fine to medium sand, some silt,				REC=3"; hard drilling from 85.2' to 87.5'; possible boulder.
		87.0		gravel, trace clay (SM)				
						90		
	24D	90.0	46-26	Red brown gravelly fine to medium sand,				
		92.0	23-27	some silt, trace clay (SM)				
						95		
	25D	95.0	53-41	Gray brown gravel, trace fine to medium				Rock fragments in tip of spoon.
		97.0	52-39	sand, silt (GP-GM)				WC=Water Content in percent of dry weight.
						100		End of Boring at 102'.
	26D	100.0	29-30	Red brown fine to medium sand, some				
		102.0	23-20	gravel, silt, trace clay (SM)				
15:40						102		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-18
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. +10.5
 DATUM BOROUGH PRESIDENT OF
BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-75</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN.
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-15-00	15:40	102	20	10	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>102</u>	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.	NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.	OTHER: OBSTRUCTIONS	<u>6</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-15-00

BORING NO. B-18

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-19
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 RES. ENGR. RANDOLPH NUN

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"				BLOWS	
06:30	1D	0.0	5-6	Brown coarse to fine sand, some gravel silt,	F		DRILLED	2D-4D, 8D, 13D: Petroleum odor. Hard drilling from 4' to 7'.
12-13-00		2.0	4-4	trace brick, concrete (Fill) (SM)			AHEAD	
Wednesday	2D	2.0	4-5	Light gray coarse to fine sand, some gravel,			4"	
Sunny		3.6	25-50/1"	silt (Fill) (SM)			5	
20°F								
	3D	7.0	5-3	Black brown silty fine to coarse sand, trace				REC=6"
		9.0	2-3	gravel, vegetation (Fill) (SM)				
	4D	9.0	2-1	Black coarse to fine sand, some silt,		10		
		11.0	2-2	cinders, trace shells (Fill) (SM)				
	5D	11.0	2-2	Do 4D (Fill) (SM)				
		13.0	1-2					REC=1"
	6D	13.0	2-2	Do 4D (Fill) (SM)				
		15.0	3-6			15		
	7D	15.0	1-2	Black cinders (Fill)				WC=289 Sheen in wash at 20'.
		17.0	3-1			17		
	8D	17.0	2-2	Brown peat (Pt)				
		19.0	2-2		O	19.5		
	9D	20.0	2-2	Brown fine sand, some silt, trace	S1			
		22.0	3-2	vegetation, mica (SM)				
						25		
	10D	25.0	8-9	Gray brown fine sand, some silt, trace mica				
		27.0	12-12	(SM)				
					M	30		
	11D	30.0	8-8	Gray brown fine sand, some clay pockets,				
		32.0	6-7	silt (SM)				
						33.5		
						35		pp=1.0, WC=30
	12D	35.0	4-4	Medium gray clayey silt, some micaceous	S1			
		37.0	3-4	fine sand (ML)				
						37.5		
						40		
	13D	40.0	6-4	Gray fine to medium sand, some silt, trace				
		42.0	3-17	mica (SM)	M			
						45		
	14D	45.0	6-8	Gray fine to medium sand, trace silt				
		47.0	10-7	(SP-SM)				
						48.5		
					M	50		15D: WC=20 Percent Passing No 200 Sieve=74
	15D	50.0	4-2	Gray brown micaceous fine sandy silt, trace				
		52.0	2-3	clay (ML)				

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-19
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd 12-13-00 Wednesday Sunny 20°F								
	16D	55.0	WR-2	Gray micaceous fine sandy silt (ML)	M	55		WC=29 Percent Passing No. 200 Sieve=59
		57.0	1-3					
	17D	60.0	7-11	Do 16D (ML)	S1	60		
		62.0	16-12					
	18D	65.0	22-18	Brown fine to coarse sand, some gravel, silt (SM)	S2	63.5		REC=8" Roller bitted boulder from 76.4' to 78.2'. End of Boring at 82'. pp=Pocket Penetrometer Unconfined Compressive Strength in tsf. WC=Water Content in percent of dry weight.
		67.0	23-15			65		
	19D	70.0	19-16	Top 12": Red brown silty fine to medium sand, trace gravel (SM)		68.5		
		72.0	10-18	Bot 4": Red brown fine to medium sand, some silt, trace silt (SM)		70		
	20D	75.0	35-24	Red brown some fine to coarse sand, silt, gravel (GM)		75		
		77.0	100/4"					
14:00	21D	80.0	20-22	Red brown fine to coarse sandy gravel, some silt (GM)		80		
		82.0	22-19			82		
						85		
						90		
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-19
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 DATUM BOROUGH PRESIDENT OF
BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-75</u>	MECHANICAL <u> </u>	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID <u> </u>	HYDRAULIC <u>X</u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
BARGE <u> </u>	OTHER <u> </u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
OTHER <u> </u>			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-13-00	14:00	82		10	CASING REMOVED UPON COMPLETION.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE:	TYPE <u> </u>	ID, IN. <u> </u>	LENGTH, FT. <u> </u>	TOP ELEV. <u> </u>
INTAKE ELEMENT:	TYPE <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	TIP ELEV. <u> </u>
FILTER:	MATERIAL <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	BOT. ELEV. <u> </u>

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>80.2</u>	NO. OF 3" SHELBY TUBE SAMPLES <u> </u>	
3.5" DIA. U-SAMPLE BORING	LIN. FT. <u> </u>	NO. OF 3" UNDISTURBED SAMPLES <u> </u>	
CORE DRILLING IN ROCK	LIN. FT. <u> </u>	OTHER: BOULDER <u> </u>	<u>1.8</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-13-00

BORING NO. B-19

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-20
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
	NO.	DEPTH	BLOWS/6"				BLOWS	
13:45	1D	0.0	11-38	Brown fine to coarse sand, some silt, trace brick, cinders, gravel (Fill) (SM)	F		DRILLED	2D, 4D-5D, 7D: REC=3" 3D, 18D: REC=2" Petroleum odor. REC=1" 8D Top: WC=292
12-20-00		2.0	49-56				AHEAD	
Wednesday	2D	2.0	100/6"	Do 1D (Fill) (SM)			4"	
Windy,		2.5						
Clear						5		
30°F-50°F	3D	5.0	8-2	Black brown coarse to fine sand, some silt, trace cinders, brick (Fill) (SM)				
		7.0	4-5	Do 3D (Fill) (SM)				
	4D	7.0	7-3					
		9.0	3-2			10		
	5D	10.0	2-1	Do 3D (Fill) (SM)				
		12.0	1-1					
	6D	12.0	1-2	Black silty fine to coarse sand, trace gravel, cinders (Fill) (SM)				
		14.0	1-1			15		
	7D	15.0	3-3	Black coarse to fine sand, some silt, cinders, trace brick (Fill) (SM)		17		
		17.0	3-3	Top 22": Brown peat (Pt)	O			
	8D	17.0	4-5	Bot 2": Brown silty fine sand, trace peat (SM)		18.9		
16:15			8-5			20	✓	
06:30	9D	20.0	2-2	Gray silty fine sand, trace concrete, vegetation (Fill) (SM)	S1			
12-21-00		22.0	4-4					
Thursday								
Cloudy						25		
20°F	10D	25.0	10-17	Brown fine sand, some silt (SM)				
		27.0	20-14					
						30		
	11D	30.0	3-6	Brown silty fine sand (SM)				
		32.0	5-5					
						33.5		
	12D	35.0	5-4	Soft gray clayey silt, trace fine sand, mica (ML)	M	35		WC=38
		37.0	2-2					
						40		
	13D	40.0	2-2	Soft gray clayey silt, trace fine sand, trace mica (ML)				pp=0.5, WC=44
		42.0	2-2					
						45		
	14D	45.0	WR/12"	Do 13D (ML)				WC=39
		47.0	2-2					
						50		
	15D	50.0	WR-2	Do 13D (ML)				WC=38
		52.0	2-3					

BORING NO. B-20

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-20
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd								
12-21-00								
Thursday								
Cloudy								
20°F								
	16D	55.0	14-15	Gray brown fine to medium sand, some silt, trace mica (SM)	M			
		57.0	18-19					
						54.5		
					S1			
						58		Hard drilling at 57.9'.
								Boulder from 58' to 60'.
						60		
	17D	60.0	20-20	Red brown silty fine to coarse sand, trace gravel (SM)	S2			
		62.0	35-37					
						65		
	18D	65.0	100/2"	Do 17D (SM)				
		65.2						
						70		
	19D	70.0	20-100/5"	Gray brown gravel, trace fine to coarse sand, silt (GP-GM)				REC=4"
		70.9						Possible wash.
						75		
	20D	75.0	41-32	Red brown silty fine to medium sand, trace gravel (SM)				
		77.0	32-43					
						80		
	21D	80.0	36-38	Red brown fine to medium sand, some gravel, silt (SM)				Rock fragments in tip of spoon.
		82.0	56-51					End of Boring at 82'.
12:45								
						85		
								pp=Pocket Penetrometer
								Unconfined Compressive Strength in tsf.
						90		
								WC=Water Content in percent of dry weight.
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-20
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-55</u>	MECHANICAL <u> </u>	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID <u> </u>	HYDRAULIC <u>X</u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
BARGE <u> </u>	OTHER <u> </u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
OTHER <u> </u>			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16
 TYPE OF DRILLING MUD QUIK - GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE <u> </u>	ID, IN. <u> </u>	LENGTH, FT. <u> </u>	TOP ELEV. <u> </u>
INTAKE ELEMENT: TYPE <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	TIP ELEV. <u> </u>
FILTER: MATERIAL <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	BOT. ELEV. <u> </u>

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>100</u>	NO. OF 3" SHELBY TUBE SAMPLES <u> </u>	
3.5" DIA. U-SAMPLE BORING	LIN. FT. <u> </u>	NO. OF 3" UNDISTURBED SAMPLES <u> </u>	
CORE DRILLING IN ROCK	LIN. FT. <u> </u>	OTHER: OBSTRUCTION (BOULDERS) <u>2</u>	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-21-00

BORING NO. B-20

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 2

FILE NO. 9446

BORING NO. B20M

SURFACE ELEV. _____

PROJECT Low's Home CTR.PROJECT LOCATION BROOKLYN NYRES. ENGR. E. NUNGER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
1/24/01 Wed. 0715 locking drill 30' 50"				Drilled Annular 35 FT, obtained 2 - U-TUBES, no sampling in the top 35 FT.			Drilled Annular	
						5	MD	
						10		
						15		
						20	↓	
						25		
						30		
						35		
	1U	35 37	P=24" L=20"	soft gray reg. silty clay, Tr. F (OH) (OH)				
					⊙	40		
						45		
0930	2U	45 47	P=24" L=19"	DO-1U(OH)				
						47		E.O.B. @ 47 FT

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Leeds Home Center BORING NO. B-20A
 LOCATION Brooklyn NY SHEET 2 OF 2
 BORING LOCATION 5 FT EAST of B20 FILE NO. Q446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK Q455 MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER _____ DIAMETER OF ROTARY BIT, IN. 3 7/8
 U-SAMPLER Shelby Tube TYPE OF DRILLING MUD Guillote
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N
 CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
 SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>no observation</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 43 NO. OF 3" SHELBY TUBE SAMPLES 2
 3.5" DIA. U-SAMPLE BORING LIN. FT. 4 NO. OF 3" UNDISTURBED SAMPLES 1
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JROCO
 DRILLER R. Lynch HELPERS G. Falciano
 REMARKS Quoted borehole upon completion
 RESIDENT ENGINEER R. Lynch DATE 01/24/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type: dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. B20A

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-20P
 SHEET 1 OF 4
 FILE NO. 9446
 SURFACE ELEV. 10.5
 RES. ENGR. RANDOLPH NUNEZ

DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS
PROGRESS	NO.	DEPTH	BLOWS/6"				BLOWS	
08:00							DRILLED	Drilled to 30' for piezometer instal- lation. Drilled borehole with water. For strata, see Boring Log B-20.
12-21-00							AHEAD	
Thursday							4"	
Cloudy								
20°F						5		
					F	10		
						15		
						17		
					O			
						18.9		
						20	✓	
					F			
						25		
						30		

MUESER RUTLEDGE CONSULTING ENGINEERS

PIEZOMETER RECORD

PROJECT LOWE'S HOME CENTER PIEZOMETER NO. B-20P
 LOCATION BROOKLYN NY
 PIEZOMETER LOCATION 4 FT ± Northwest from boring B-20 DATE OF INSTALLATION 12/21/00
☐ SEE SKETCH ON BACK RES. ENG. R. NUNGER

STRATA		PIEZOMETER INSTALLATION DETAILS	DEPTH (FT.)	PIEZOMETER TYPE <u>SC440 slotted PVC</u>			
GROUND SURFACE ELEV. <u>10.5</u>				INTAKE POINT			
				depth, to bottom, ft = <u>30</u> depth to top, ft = <u>24</u> length, ft = <u>6</u> = L diameter, in = <u>4</u> , ft = <u> </u> = 2R			
				STANDPIPE/RISER			
				elevation of rim, ft = <u>10.2</u> diameter, in = <u>1 1/4</u> , ft = <u> </u> = 2r			
(F)			0				
			14				
(Pt)			20				
			22.5				
(+)			24				
			25				
			30				
				READING TIME	DEPTH - RIM TO WATER (ft.)	ELEVATION OF WATER	REMARKS
				DATE	CLOCK		
				12/21/00	0850	7.6	Riser → 0.3 ft below ground surface.
				12/21/00	0915	7.6	
				12/21/00	1200	7.55	
				12/28	0715	7.5	
				12/29	0710	7.7	
				01/02	1135	7.9	
				01/03	1024	7.8	
					1245	7.85	
				01/04	0720	7.7	
				01/05	0940	7.7	
				01/08	0754	7.8	
				01/09	0813	7.75	
				01/10	1210	7.9	
				01/12	0915	7.9	
				01/16	1123	7.5	
				01/19	1120	7.2	
				01/23	1150	7.2	

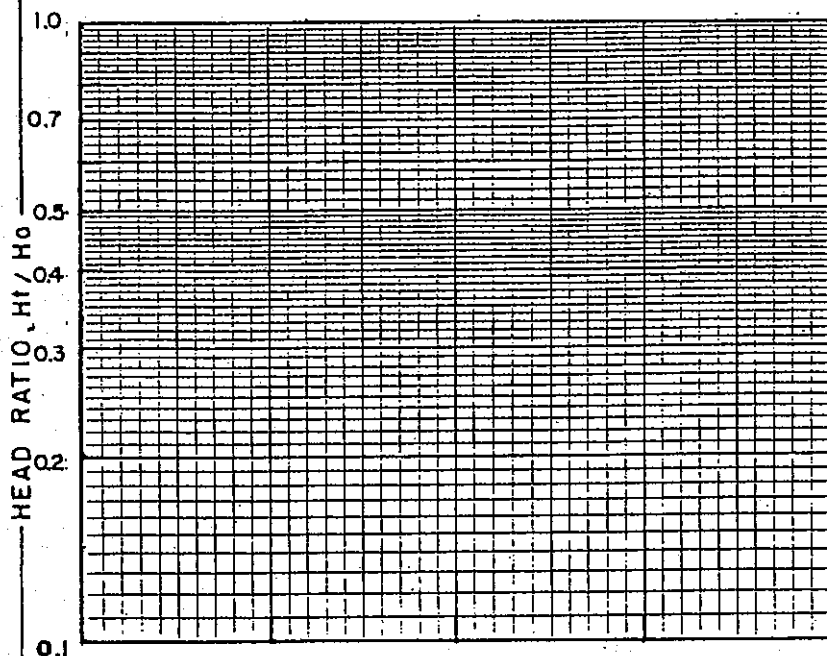
Sand Bentonite
 Gravel Grout

GROUND SURFACE ELEV. 10.5

PIEZOMETER NO. B-20P

VARIABLE HEAD PERMEABILITY TEST☐ BOREHOLE OR ☒ PIEZOMETER NO. B-20PTEST NO. 1PROJECT LOWE'S HOME CENTER RES. ENG. R. NUNEZLOCATION BROOKLYN, NY CALC. BY _____ DATE _____

PIEZOMETER LOCATION _____ CH'KD BY _____ DATE _____

INTAKE POINTdepth to bottom, ft = 30depth to top, ft = 24length, ft = 6 = Ldiameter, in = 4, ft = _____ = 2RSTANDPIPE / RISERdiameter, in = 1/4, ft = _____ = 2r

depth of casing, ft = _____

depth to which stand-
pipe was bailed, ft = _____ = ZELAPSED TIME, Δt , MIN.

READING TIME			TEST DEPTH- RIM TO WATER ft.	DEPTH- RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO Ht/Ho	REMARKS
DATE	CLOCK	Δt MIN.					
12/27/00	0855	—	0.0	7.6	0		STATIC WATER LEVEL
		0.5	0.8				Riser is 0.3 FT. below ground
		1	1.8				surface
		2	2.4				min depth (cont test)
		3	3.1			15	7.3
		4	4.0			16	7.35
		5	4.9			17	7.45
		6	5.4			18	7.5
		7	5.8			19	7.5
		8	6.0			20	7.6
		9	6.3				
		10	6.55				
		11	6.9				
		12	7.0				
		13	7.1				
		14	7.2				

PIEZOMETER NO. B-20P

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-20P
 SHEET 4 OF 4
 FILE NO. 9446
 SURFACE ELEV. 10.5
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-55</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
BARGE	OTHER	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
OTHER			

TYPE AND SIZE OF:	DRILLING MUD USED ☐ YES ☒ NO
D-SAMPLER _____	DIAMETER OF ROTARY BIT, IN. <u>3-7/8</u>
U-SAMPLER _____	TYPE OF DRILLING MUD _____
S-SAMPLER _____	
CORE BARREL _____	AUGER USED ☐ YES ☒ NO
CORE BIT _____	TYPE AND DIAMETER, IN. _____
DRILL RODS <u>N</u>	
	CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
	SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-27-00	8:50			7.6	PIEZOMETER READING.
12-27-00	9:15			7.6	AFTER FALLEN HEAD TEST.

PIEZOMETER INSTALLED ☒ YES ☐ NO SKETCH SHOWN ON SEE SHEET 3 OF 4

STANDPIPE:	TYPE <u>SCHEDULE 40 PVC</u>	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT:	TYPE <u>SLOTTED PVC</u>	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER:	MATERIAL <u>SAND</u>	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. _____	NO. OF 3" SHELBY TUBE SAMPLES _____	
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____	
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: BORING WITHOUT SAMPLING	<u>30 LIN. FT.</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS PLACED MANHOLE COVER 5" DIAMETER.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-21-00

BORING NO. B-20P

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. B-21
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS	
	NO.	DEPTH	BLOWS/6"				BLOWS		
06:45	1D	0.0	40-29	Brown fine to coarse sand, some silt, trace gravel, brick (Fill) (SM)	F		DRILLED	WC=125	
12-18-00		2.0	32-31				AHEAD		
Monday	2D	2.0	9-20	Brown coarse to fine sand, some gravel, silt, trace brick (Fill) (SM)			4"		
		4.0	23-15						
30°F							5		
	3D	5.0	1-3	Brown fine to coarse sand, some silt, trace brick, cinders, vegetation (Fill) (SM)					
		7.0	3-3						
	4D	7.0	1-1	Brown gray peat, some silty clay (Pt)					
		9.0	1-1				10		
	5D	10.0	1-1	Brown peat, trace vegetation (Pt)					
		12.0	1-1						
	6D	12.0	5-7	Top 7": Do 5D, tr gravel, bricks, glass (Pt)					
		14.0	9-6	Bot 12": Gray brown fine to medium sand, some silt, trace gravel, mica (SM)		15			
	7D	15.0	1-1	Brown fine sand, some silt (SM)					
		17.0	2-2						
	8D	17.0	3-1	Top 11" Do 7D, trace vegetation (SM)		17.9			
		19.0	2-2	Bot 13": Brown peat, trace vegetation (Pt)	O				
						19.5			
	9D	20.0	1-1	Gray silty fine sand, trace peat (SM)	S1				
		22.0	2-1						
							25		
	10D	25.0	10-12	Gray silty fine sand, trace mica (SM)	M				
		27.0	16-19						
							28.5		
						30			
	11D	30.0	5-3	Soft gray clayey silt, trace fine sand (ML)	M				
		32.0	6-5						
							35		
						36			
	12D	35.0	WH/12"	Top 10": Do 11D (ML)	S1				
		37.0	13-17	Bot 7": Gray brown fine sand, some silt, mica (SM)					
							38.5		
						40			
	13D	40.0	WR-4	Soft gray clayey silt, some fine sand, trace mica (ML)	M				
		42.0	4-3						
							43.5		
						45			
	14D	45.0	15-20	Brown fine sand, some silt, trace gravel (SM)	S1				
		47.0	21-23						
						50			
	15D	50.0	18-26	Brown fine sand, some silt, trace mica (SM)					
		52.0	24-26						

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-21
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.5
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd								
12-18-00								
Monday								
30°F								
	16D	55.0	16-19	Brown fine sand, some silt, vegetation, mica (SM)	S1	55		Petroleum odor.
		57.0	28-21					
						60		
	17D	60.0	17-19	Brown fine sand, some silt, mica (SM)				
		62.0	22-24					
						65		
	18D	65.0	16-18	Brown fine to medium sand, some silt, trace gravel (SM)				
		67.0	22-20					
						70		
	19D	70.0	19-18	Brown gravelly coarse to fine sand, some silt (SM)				Heavy petroleum odor.
		72.0	26-31					
						75		
	20D	75.0	36-37	Do 19D (SM)				
		77.0	48-36					
						80		
	21D	80.0	50-100/3"	Brown silty fine to coarse sand, some gravel (SM)			80.8	REC=5"
		80.8						End of Boring at 80.8'.
						85		pp=Pocket Penetrometer
								Unconfined Compressive Strength in tsf.
					90		WC=Water Content in percent of dry weight.	
					95			

BORING NO. B-21

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-21
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.5
 DATUM BOROUGH PRESIDENT OF
BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME-55</u>	MECHANICAL <u> </u>	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID <u> </u>	HYDRAULIC <u>X</u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
BARGE <u> </u>	OTHER <u> </u>	DIA., IN. <u> </u>	DEPTH, FT. FROM <u> </u> TO <u> </u>
OTHER <u> </u>			

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER <u>2" O.D. SPLIT SPOON</u>	DIAMETER OF ROTARY BIT, IN. <u>3-7/8</u>
U-SAMPLER <u> </u>	TYPE OF DRILLING MUD <u>QUIK - GEL</u>
S-SAMPLER <u> </u>	
CORE BARREL <u> </u>	AUGER USED ☐ YES ☒ NO
CORE BIT <u> </u>	TYPE AND DIAMETER, IN. <u> </u>
DRILL RODS <u>N</u>	

CASING HAMMER, LBS. <u>300</u>	AVERAGE FALL, IN. <u>24</u>	
*SAMPLER HAMMER, LBS. <u>140</u>	AVERAGE FALL, IN. <u>30</u>	

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE:	TYPE <u> </u>	ID, IN. <u> </u>	LENGTH, FT. <u> </u>	TOP ELEV. <u> </u>
INTAKE ELEMENT:	TYPE <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	TIP ELEV. <u> </u>
FILTER:	MATERIAL <u> </u>	OD, IN. <u> </u>	LENGTH, FT. <u> </u>	BOT. ELEV. <u> </u>

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>82</u>	NO. OF 3" SHELBY TUBE SAMPLES <u> </u>	
3.5" DIA. U-SAMPLE BORING	LIN. FT. <u> </u>	NO. OF 3" UNDISTURBED SAMPLES <u> </u>	
CORE DRILLING IN ROCK	LIN. FT. <u> </u>	OTHER: <u> </u>	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-18-00

BORING NO. B-21

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-22
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
13:00	1D	0.0	33-26	Brown fine to coarse sand, some gravel,	F		DRILLED	3D, 5D, 9D: Petrol- leum odor. Sheen in wash.
12-13-00		2.0	21-34	silt, trace brick (Fill) (SM)			AHEAD	
Wednesday	2NR	2.0	100/1"	No Recovery			.4"	
		2.1					MUD	
30°F	3D	4.0	2-1	Black fine to coarse sand, some silt, trace		5		
		6.0	2-2	gravel, brick (Fill) (SM)				
	4D	6.0	4-6	Do 3D (Fill) (SM)				
		8.0	19-14					
						10		
	5D	10.0	3-5	Brown fine to coarse sand, some silt, trace				
		12.0	4-4	gravel (Fill) (SM)	S1			REC=5"
	6D	12.0	4-10	Brown silty fine sand, trace gravel, trace				
		14.0	10-7	wood (Fill) (SM)				
	7D	14.0	11-8	Brown silty fine sand, some gravel, trace		15		
		16.0	9-2	vegetation (Fill) (SM)				
	8D	16.0	1-1	Brown fine sand, some silt, gravel (Fill) (SM)				REC=1"
		18.0	1-1					Driller placed new
						19		trap; 19' clay
	9D	20.0	1-1	Brown silty fine sand, trace vegetation (SM)		20		in wash.
		22.0	3-3					
					M	25		
	10D	25.0	10-13	Gray fine sand, some silt (SM)				
14:30		27.0	22-16					
06:30						28.5		
12-15-00						30		Percent Passing
Friday	11D	30.0	5-5	Gray fine sandy silt, trace fine sand (ML)				No. 200 Sieve=90
30°F		32.0	5-10					WC=36
						35		
	12D	35.0	4-3	Medium gray clayey silt, some fine sand				pp=0.75, WC=31
		37.0	6-6	(ML)				
					S1	40		
	13D	40.0	2-3	Stiff gray clayey silt, some fine sand (ML)				pp=1.0, WC=35
		42.0	3-4					
						43.5		
	14D	45.0	9-13	Brown fine sand, some silt (SM)		45		
		47.0	19-13					
						50		
	15D	50.0	7-20	Brown silty fine sand, trace micaceous (SM)				
		52.0	19-22					

BORING NO. B-22

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-22
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
Cont'd								
12-15-00								
Friday								
30°F								
	16D	55.0	11-15	Gray brown fine sand, some silt (SM)	S1	55		
		57.0	20-24					
						58.5		
						60		
	17D	60.0	18-30	Red brown silty fine sand, trace gravel, trace micaceous (SM)				
		62.0	28-20					
						65		
	18D	65.0	16-23	Red brown fine sand, some silt, trace gravel (SM)				REC=6"
		67.0	38-43					
						70		
	19D	70.0	28-35	Red brown fine to medium sand, some gravel, silt (SM)				
		72.0	40-22					
						75		
					S2			
						80		Driller overdrilled to 80'.
	20D	80.0	23-30	Red brown fine to medium sand, some gravel, silt (SM)				
		82.0	22-24					
						85		
	21D	85.0	60-88	Red brown fine to coarse sand, some gravel, silt (SM)				Rock fragments in the tip of spoon.
		86.3	100/4"					
						90		
	22D	90.0	62-53	Red brown fine to coarse sand, some gravel, silt (SM)				REC=5" pp=Pocket Penetrometer Unconfined Compressive Strength in tsf.
		92.0	50-31					
						95		
	23D	95.0	46-68	Red brown fine to coarse sand, some gravel, silt (SM)				WC=Water Content in percent of dry weight. REC=7"
		96.0	100/2"					
						100		End of Boring at 102'.
	24D	100.0	76-64	Do-23D (SM)				
		102.0	55-36					
15:00						102		

BORING NO. B-22

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT	LOWE'S HOME CENTER	BORING NO.	8-22
LOCATION	BROOKLYN, NEW YORK	SHEET	3 OF 3
BORING LOCATION	SEE PLAN	FILE NO.	9446
		SURFACE ELEV.	10.4
		DATUM	BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK CME-55	MECHANICAL	DIA., IN. 4	DEPTH, FT. FROM 0 TO 25
SKID	HYDRAULIC ☒	DIA., IN.	DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM TO
OTHER			

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER 2" O.D. SPLIT SPOON	DIAMETER OF ROTARY BIT, IN.
U-SAMPLER	TYPE OF DRILLING MUD QUIK - GEL
S-SAMPLER	
CORE BARREL	AUGER USED ☐ YES ☒ NO
CORE BIT	TYPE AND DIAMETER, IN.
DRILL RODS N	

CASING HAMMER, LBS. 300	AVERAGE FALL, IN. 24	
*SAMPLER HAMMER, LBS. 140	AVERAGE FALL, IN. 30	

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO **SKETCH SHOWN ON** _____

STANDPIPE:	TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT:	TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER:	MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. 98.5	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.	NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.	OTHER: OBSTRUCTION (BOULDERS)	3.5

BORING CONTRACTOR	JERSEY BORING & DRILLING CO. INC.
DRILLER	RAY LYNCH HELPERS EDWIN FELICIANO
REMARKS	BOREHOLE GROUTED UPON COMPLETION.
RESIDENT ENGINEER	RANDOLPH NUNEZ
	DATE 12-15-00
	BORING NO. B-22

**MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG**

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. B-23
SHEET 1 OF 3
FILE NO. 9446
SURFACE ELEV. 10.4
RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
11:00	1D	0.0	5-9	Brown fine to coarse sand, some silt,	F		DRILLED	REC=13"
02-12-00		2.0	23-32	gravel, trace brick, concrete (Fill) (SM)			AHEAD	
Tuesday	2D	2.0	36-50	Do 1D (Fill) (SM)			4"	
Windy		4.0	38-100/3"					
						5		
	3NR	5.0	100/0"	No recovery				Spoon bouncing.
								Hard drilling from
	4NR	7.0	100/0"	No recovery				5' to 7'. Spoon
						10		bouncing.
								4NR: Rock frag-
					O			ments in wash.
	5D	12.0	1-2	Gray silty fine to coarse sand, trace peat,				Hard drilling from
		14.0	2-2	wood (SM)				5' to 11.5'.
						15		5D: WC=46
	6D	15.0	4-2	Soft gray organic silty clay, some	S1			WC=124
		17.0	2-2	vegetation, fine sand layers (OH)				
	7D	17.0	1-2	Soft gray organic silty clay, some				WC=107
		19.0	1-1	vegetation, trace fine sand (OH)		19.5		
	8D	20.0	4-6	Gray brown silty fine sand, trace mica (SM)	M			
		22.0	10-13					
						25		
						28.5		
	9D	25.0	9-18	Do 8D (SM)	S1			
		27.0	24-26			30		
						35		
	10D	30.0	5-6	Red brown fine sandy silt, trace fine sand	M			WC=23
		32.0	6-7	seams (ML)				
						40		
	11D	35.0	1-2	Soft gray clayey silty trace micaceous fine	S1			WC=33
		37.0	2-5	sand (ML)				Percent Passing
								No. 200 Sieve=93
						45		
14:30	12D	40.0	1-2	Soft gray fine sandy silt (ML)	S1			WC=37
06:30		42.0	2-2					Percent Passing
12-13-00								No. 200 Sieve=64
Wednesday								
Sunny					S1			
20°F	13D	45.0	4-3	Do 12D (ML)				WC=31
		47.0	4-4					
						48.5		
					S1	50		
	14D	50.0	4-15	Brown fine sand, some silt, trace mica (SM)				
		52.0	19-23					

BORING NO. B-23

BORING LOG

LOWE'S HOME CENTER

BROOKLYN, NEW YORK

BORING NO. B-23

SHEET 2 OF 3

FILE NO. 9446

SURFACE ELEV. 10.4

RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS	
	NO.	DEPTH	BLOWS/6"				BLOWS		
Cont'd					S1				
12-13-00									
Wednesday									
Sunny							53.5		
20°F						55			
	15D	55.0	15-13	Red brown silty fine to medium sand, trace gravel (SM)					
		57.0	18-21						
						60			
	16D	60.0	50-28	Do 15D (SM)				Hard drilling	
		62.0	15-14					from 62.5' to 65';	
								possible boulders.	
								Spoon bouncing.	
						65			
	17NR	65.0	100/2"	No recovery	S2			Possible boulder.	
		65.2							Hard drilling from
									65' to 69'.
							70		
	18D	70.0	40-67	Red brown fine to medium sand, some					
		72.0	38-32	gravel, silt, trace coarse sand, clay pockets,					
				mica (SM)					
							75		
	19D	75.0	45-51	Red brown fine to medium sand, some					
		77.0	43-41	gravel, silt, trace coarse sand, mica (SM)					
						80		End of Boring at	
12:30	20D	80.0	41-100/6"	Red brown fine to medium sand, some silt,		81		81'.	
		81.0		gravel, trace coarse sand (SM)					
								WC=Water Content	
								in percent of dry	
						85		weight.	
						90			
						95			
						100			

BORING NO. B-23

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. B-23
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 10.4
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES	☐ NO	
TRUCK <u>CME-55</u>	MECHANICAL	DIA., IN. <u>4</u>			DEPTH, FT. FROM <u>0</u> TO <u>15</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN. _____			DEPTH, FT. FROM _____ TO _____
BARGE	OTHER	DIA., IN. _____			DEPTH, FT. FROM _____ TO _____
OTHER					

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 4-7/8
 TYPE OF DRILLING MUD QUIK - GEL
 AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>81</u>	NO. OF 3" SHELBY TUBE SAMPLES	_____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES	_____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER:	_____

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-13-00

BORING NO. B-23

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3
 FILE NO. 9446
 BORING NO. PR-1
 SURFACE ELEV. _____
 RES. ENGR. E. NUNEZ

PROJECT Low's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. _____

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
2/19/80 HAP. KMS	1D	3	35-31	concrete (fill) (con-1)	④			Drilled with Hammer At 10' 3' from surface
		5	38-34					
	2D	5	11-17	BRN M. f. sand, silty, blk. Tr. Brick (fill) (con)		5		R=2"
		7	18-18				400	
	3D	7	15-14	RED-BRN silty M. f. sand, silty Brick Tr. and (fill) (con)				
		9	15-17					
	4D	10	4-2	BRN silty M. f. sand, silty clinders Tr. Brick (fill) (con)	⑤	10		R=2"
		12	2-1					
	5D	12	2-2	NO Recovery				
		14	2-2					
								WOOD IN WASH.
	6D	15	6-4	gray org silty clay, silty sand, Tr. wood (OH)	⑥	14.5		
		17	2-2					
	7D	17	1-2					
		19	2-1					
	8D	20	1-1	silt-gray org silty clay, silty sand (OH)		20	V	
		22	1-1					
	9D	25	1-2	DO-80, Tr. shell (OH)	⑦	25		
		27	1-1					
	10D	30	7-10	gray f. c. sand, Tr. silt (sp-sil)		28.5 30		
		32	12-14					
	11D	35	5-8	gray-brn c. f. sand, Tr. silt (sp-sil)	⑧	35		R=100mm in sample
		37	17+16					
	12D	40	14-19	gray M. f. sand, Tr. silt (sp-sil)		40		
		42	22-15					
	13D	45	10-11	gray f. c. sand, Tr. silt, blk (sp-sil)	⑨	45		
		47	12-14					
	14D	50	7-9	DO-130 (sp-sil)	⑩	50		
		52	14-16					

SHEET 2 OF 3
FILE NO. 7446
BORING NO. PR-1
SURFACE ELEV. _____

Lowes Home Cntr

Brooklyn, NY

RES, ENGR

R. NUNEZ

BORING NO. PA-1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO.

PB-1

SHEET

3 OF 3

FILE NO.

9446

SURFACE ELEV.

DATUM

PROJECT

Louie's Home Center

LOCATION

Brooklyn NY

BORING LOCATION

As shown

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG

 TYPE OF FEED
DURING CORING

CASING USED

☒ YES

☐ NO

TRUCK

One SS

MECHANICAL

DIA., IN.

4

DEPTH, FT. FROM

0

TO 20

SKID

HYDRAULIC

☒

DIA., IN.

DEPTH, FT. FROM

TO

BARGE

OTHER

DIA., IN.

DEPTH, FT. FROM

TO

OTHER

TYPE AND SIZE OF:

DRILLING MUD USED

☒ YES

☐ NO

D-SAMPLER

2" OD split spoon

DIAMETER OF ROTARY BIT, IN.

3 1/8, 5 1/8

U-SAMPLER

TYPE OF DRILLING MUD

QUIK GEL

S-SAMPLER

CORE BARREL

AUGER USED

☐ YES

☒ NO

CORE BIT

TYPE AND DIAMETER, IN.

DRILL RODS

N

CASING HAMMER, LBS.

300

AVERAGE FALL, IN.

21

SAMPLER HAMMER, LBS.

140

AVERAGE FALL, IN.

38

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation.

PIEZOMETER INSTALLED

☐ YES

☒ NO

SKETCH SHOWN ON

STANDPIPE:

TYPE

ID, IN.

LENGTH, FT.

TOP ELEV.

INTAKE ELEMENT:

TYPE

OD, IN.

LENGTH, FT.

TIP ELEV.

FILTER:

MATERIAL

OD, IN.

LENGTH, FT.

BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING

LIN. FT.

82

NO. OF 3" SHELBY TUBE SAMPLES

—

3.5" DIA. U-SAMPLE BORING

LIN. FT.

—

NO. OF 3" UNDISTURBED SAMPLES

—

CORE DRILLING IN ROCK

LIN. FT.

—

OTHER:

—

BORING CONTRACTOR

DRILLER

R. Lynch

HELPERS

E. Feliciano

REMARKS

Grouted boreholes upon completion

RESIDENT ENGINEER

R. NUNEZ

DATE

12/29/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NFR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the ROD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO.

PB-1

R. NUNO

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION Brooklyn, NY

RES. ENGR.

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
31/02/01	10	0	14-16	BRN. H. / SAND, SM. S. I. T. C. G. C. I. G. S. S. (fill) (SM)	⑤		Drilled 4440	safety hammer
res.	20	2	19-19	BRN. H. / SAND, T. C. G. C. I. G. S. S. (fill) (SM)				
clear		2.7	48-100/2	BRN. H. / SAND, T. C. G. C. I. G. S. S. (fill) (SM)				
windy 18°F	30	5	14-16	gray gravel, T. metal (gr) (fill)		5		MUD R=3"
5°F	40	7	10-12	gray gravel, T. calc. (fill)				R=4"
wind chill		9	8-8	gray gravel, T. calc. (fill)				
UPUS			11-13					
	50	10	10-9	RED-BRN H. / SAND, M. G. T. T. S. I. T. (sp. an)		10		
		12	12-20			12		
	60	12	8-2	gray arg. silty clay, SM. veg. f. sand (OH)	①			
		14	2-2			15		
	70	15	1-1	soft gray arg. silty clay, T. f. sand, shells (OH)				
		17	1-1					
	80	17	1-1	DO-70, T. veg. (OH)				
		19	1-1					
	90	20	1-1	no recovery		20		Drilled down to 20'
		22	3-3					sample depth, unable to take specimen below sample 90.
						20.5		
	100	25	W. H. / T. S. I. T. (SM)	⑤	25			
		27	3-4					
	110	30	13-22	BRN H. / SAND, T. S. I. T. (sp. an)		30		
		32	28-21					
	120	35	10-12	RED-BRN silty f. sand (SM)		35		
		37	13-16					
	130	40	12-18	RED-BRN H. / SAND, T. S. I. T. (sp. an)	⑤	40		
		42	13-14					
	140	45	9-9	BRN H. / SAND, T. S. I. T. (sp. an)		45		
		47	12-12					
	150	50	12-13	DO-140 (sp. an)		50		
		52	14-15					

BORING NO. PA-5

SHEET 2 OF 3
FILE NO. 9440
BORING NO. P-52
SURFACE ELEV. _____
R. NUMBER 72

PROJECT

Low's Home Center

PROJECT LOCATION

ERKENNT, NU

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SURFACE ELEV.

TZ NVNBZ

1410
010301
was.
1800
1100

0915

BORING NO. 00-5

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Low's Home Sctr.
LOCATION Brooklyn NY
BORING LOCATION _____

BORING NO. PB-2
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. _____
DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>CME 55</u>	MECHANICAL _____	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID _____	HYDRAULIC <u>X</u>	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
BARGE _____	OTHER _____	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
OTHER _____			

TYPE AND SIZE OF:	DRILLING MUD USED	☒ YES ☐ NO
D-SAMPLER <u>2" O.D. split spoon</u>	DIAMETER OF ROTARY BIT, IN. <u>3 7/8" 4 1/8" 2 15/16"</u>	
U-SAMPLER _____	TYPE OF DRILLING MUD <u>Quik Gel</u>	
S-SAMPLER _____		
CORE BARREL _____	AUGER USED	☐ YES ☒ NO
CORE BIT _____	TYPE AND DIAMETER, IN. _____	
DRILL RODS <u>N</u>		

CASING HAMMER, LBS. <u>500</u>	AVERAGE FALL, IN. <u>24</u>
SAMPLER HAMMER, LBS. <u>190</u>	AVERAGE FALL, IN. <u>30</u>

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>no observation.</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>82</u>	NO. OF 3" SHELBY TUBE SAMPLES	_____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES	_____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER:	_____

BORING CONTRACTOR JRBD Co.
DRILLER R. Lynch HELPERS G. Feliciano
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER R. Mueser DATE 01/03/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress columns indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB-2

SHEET 1 OF 3
FILE NO. 9446
BORING NO. PB-3
SURFACE ELEV. _____
R. NUMBER _____

Lowé's Home Center

Brockton, MA

程世S. 程NG投

SURFACE ELEV

2. Suffer

BORING NO. P.B. - 3

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lucie's Home Intl.
LOCATION Brooklyn NY
BORING LOCATION As planned

BORING NO. PB-3
SHEET 3 OF 3
FILE NO. 9446
SURFACE ELEV. _____
DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED _____ CASING USED ☒ YES ☐ NO
TRUCK ONE SS MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO _____
SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
OTHER _____

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. split spoon
U-SAMPLER _____
S-SAMPLER _____
CORE BARREL _____
CORE BIT _____
DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 2 1/4" 5 7/8" 3 7/8"
TYPE OF DRILLING MUD Drill gel
AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. _____ NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JBD Co.
DRILLER M. Blegwas HELPERS D. Keith
REMARKS Grouted borehole upon completion
RESIDENT ENGINEER R. NUNEZ DATE 12/28/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, Shelby tube samples S, fixed piston samples U. Assign NPI to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB-3

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9496

BORING NO. PB-4

SURFACE ELEV. _____

PROJECT Love's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. K. NUNDE

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
12/8/96 Fair 70°F windy clear 64-65	10	0	100/6"	BRN C-f sand, Br silt, silty, some (fill) (sp-sil)	F		Drilled	Automatic transfer
		0-5					NEED	
	20	2	22-18	BRN C-f sand, Br silt, silty, some (fill) (sp-sil)				
		4	12-7					
	30	4	8-2	DO-20 (fill) (sil)		5		
		6	2-2				MUD	
	40	6	1-1	gray Brk-M-f sand, sm silt, Tr. clay, clumps (fill) (sil)				
		8	1-1					
	50	8	2-1	DO-40 (fill) (sil)				
		10	2-1			10		
	60	10	2-2	BRN P-C sand, sm silt, Tr. brick clumps (fill) (sil)				Sample saturated w/ water R=5"
		12	2-2					R=6"
	70	12	2-2	DO-60 (fill) (sil)				
		14	3-3			14-5		
	80	15	100/10"	soft gray org. silty clay, Tr. f sand, shells (OH)		15		
		17	2-3					
	90	17	100/6"	soft gray org. silty clay, Tr. f sand, clay (OH)	G			
		19	100/10"			20		
	100	20	1-3	DO-90 (OH)				
		22	3-3					
						23.5		
						25		
	110	25	1-1	gray M-f sand, sm silt, Tr. clay, shells (sil)				
		27	2-1					
						30		
	120	30	13-19	BRN C-f sand, Tr. silt (sp-sil)				
		32	23-24					
						35		
	130	35	5-7	RED BRN silty f-sand (sil)				
		37	9-8					
						40		
	140	40	6-8	BRN M-f sand, Tr. silt (sp-sil)				
		42	10-10					
					H	45		
	150	45	5-6	BRN C-f sand, Tr. silt (sp-sil)				
			6-7					
						50		
	160	50	4-5	BRN M-f sand, Tr. silt (sp-sil)				
		52	6-8					

BORING NO. DR-4

SURFACE ELEV. _____

PROJECT Low's Home CTR

PROJECT LOCATION BROOKLYN NY

RES. ENGR. E. Nunez[illegible]

BORING NO. AP-4

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. PR-4

SHEET 3 OF 3

FILE NO. 9446

SURFACE ELEV. _____

DATUM _____

PROJECT Loan's Home Entry

LOCATION Brooklyn NY

BORING LOCATION As Shown

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG CME 75 TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK _____ MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC ☒ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____

TYPE AND SIZE OF:

D-SAMPLER 2" O.D. split spoon
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO

DIAMETER OF ROTARY BIT, IN. 3 1/8" 4 1/2"

TYPE OF DRILLING MUD Quik Gel

AUGER USED ☐ YES ☒ NO

TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 360

AVERAGE FALL, IN. 21

SAMPLER HAMMER, LBS. 140

AVERAGE FALL, IN. 50

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>no observation</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO

SKETCH SHOWN ON _____

STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82 NO. OF 3" SHELBY TUBE SAMPLES -
 3.5" DIA. U-SAMPLE BORING LIN. FT. - NO. OF 3' UNDISTURBED SAMPLES -
 CORE DRILLING IN ROCK LIN. FT. - OTHER: _____

BORING CONTRACTOR JBD Co.

DRILLER M. Blucas

HELPERS D. Keith

REMARKS Quik Gel borehole upon completion

RESIDENT ENGINEER E. Nunez

DATE 12/29/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, Shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PR-4

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 4

FILE NO. 9446

BORING NO. PR-4P

SURFACE ELEV. _____

PROJECT Lowie's Home Center

PROJECT LOCATION Brooklyn, NY

RES. ENGR. K. NUNO

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
01/02/01				Piezometer installation.			drilled PIEZOM	
7:45 AM				Drilled to 30 FT.				
1:00 PM				No Sampling.		5		
2:00 PM						10		
						15		
						20	V	
						25		
10:40 AM						30		5:00 PM

BORING NO. PR-4P

PROJECT Lower East Side Center PIEZOMETER NO. PB-4P
LOCATION Brooklyn NY
PIEZOMETER LOCATION _____ DATE OF INSTALLATION 01/02/01
☐ SEE SKETCH ON BACK RES. ENG. R. NUNEZ

 Sand
  Bentonite
 Gravel
  Grout

GROUND SURFACE ELEV. _____

PIEZOMETER NO. PB-4P

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 2 OF 4

FILE NO. 0446

SUBCODE

VARIABLE HEAD PERMEABILITY TEST

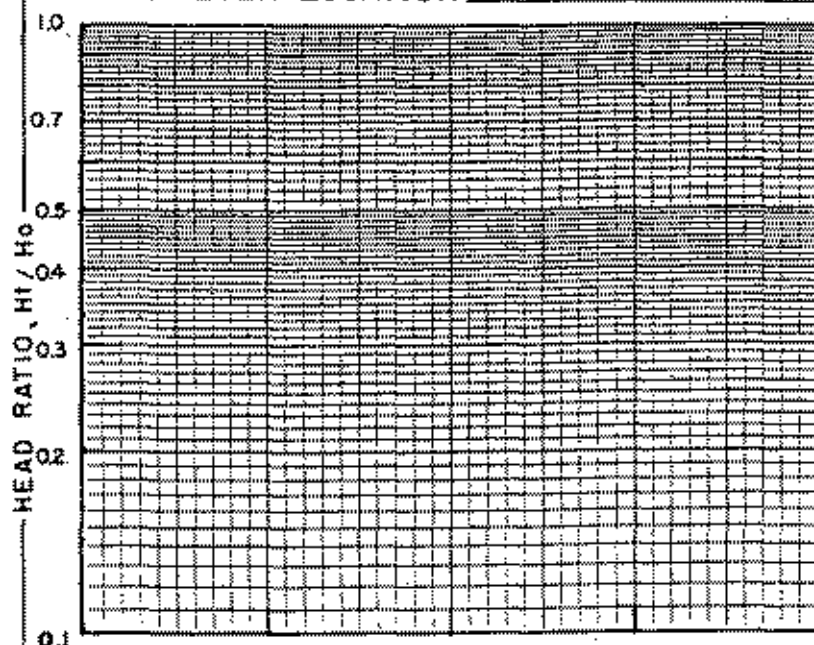
☐ BOREHOLE OR ☒ PIEZOMETER NO. PB-4P

TEST NO. 1

PROJECT Lowe's Home Center RES. ENG. R. NUNEZ

LOCATION Brooklyn NY CALC. BY DATE

PIEZOMETER LOCATION CH'KD BY DATE



INTAKE POINT

depth to bottom, ft = 30

depth to top, ft = 22

length, ft = 8 = L

diameter, in = 4, ft = 2R

STANDPIPE / RISER

diameter, in = 1 1/4, ft = 2r

depth of casing, ft =

depth to which stand-
pipe was bailed, ft = = Z

ELAPSED TIME, Δt , MIN.

READING TIME			TEST DEPTH- RIM TO WATER ft.	DEPTH- RIM TO TIDE OR GWL ft.	UNBALANCED HEAD H ft.	HEAD RATIO Ht/Ho	REMARKS
DATE	CLOCK	Δt MIN.					
01/06/01	0948	0		4.8	0		STATIC WATER LEVEL
		0.5	0.8				
		1	1.8				
		2	3.2				
		3	4.3				
		4	5.0				
		5	5.6				
		6	5.8				
		7	5.9				
		8	6.1				
		9	6.4				
		10	6.45				
		11	6.55				
		12	6.6				
		13	6.7				
		14	6.75				
		15	6.75				
		16	6.8				

PIEZOMETER NO. PB-4P

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Loe's Home Center
 LOCATION Brooklyn NY
 BORING LOCATION _____

BORING NO. PB4P
 SHEET 4 OF 4
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK CHE 75 MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 20
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____
 TYPE AND SIZE OF: _____ DRILLING MUD USED ☐ YES ☒ NO
 D-SAMPLER _____ DIAMETER OF ROTARY BIT, IN. 3 1/8
 U-SAMPLER _____ TYPE OF DRILLING MUD _____
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N
 CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
 SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
5/10/01	1147			7.3	Piez. Reading approx. one hour after installation

PIEZOMETER INSTALLED ☒ YES ☐ NO SKETCH SHOWN ON _____
 STANOPIPE: TYPE SC440 ID, IN. 1 1/4" LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE staged PVC OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL SAND OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 30 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JBD
 DRILLER M. Blencoe HELPERS D. Keith
 REMARKS _____

RESIDENT ENGINEER Z. KNOX DATE 5/10/01

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB4P

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

BORING NO. PB-5

SURFACE ELEV. _____

PROJECT Louie's Home Center

PROJECT LOCATION Brooklyn NY

RES. ENGR. _____

E. Nunez

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
2/25/00 THURS. 5:40 hrs windy Clear 20°F no wind work	10	1	6-28	WHT f-c sand Tr. silt (fill) ?	④		Drilled	Safety Harness
		3	56-37	Bot (5") Blk f-c sand Tr. silt Tr. wood (fill) (fill)			Reamed	1" conc. at surface.
	20	3	104/6"	No Recovery				
		3.5						
	30	5	4-3	Rock frag. Tr. conc. (fill)		5		
		7	2-1				MUD	
	40	7	1-1	NO RECOVERY				Rock frag. in the
		9	1-1					Tip of the spoon.
	50	10	1-1	Blk c-f. silt Tr. f. sand shells (fill) (fill)		10		R=3"
		12	1-1					
	60	12	2-2	Rock frag. Tr. wood (fill) :				R=2"
		14	3-7					
	70	15	4-2	NO RECOVERY		15		Large fill spoons
		17	2-2					Have new traps
	80	17	2-4	Top (15") - soft gray blk ag. silty clay, Tr.				
		19	4-3	f. sand, Tr. wood (OH)				
				Bot (9") - gray silty f. sand Tr. wood (OH) (fill)				
	90	20	2-1	gray stone, Tr. clay (fill) (GP)		20		R=1"
		22	2-1					
	100	25	1-1	gray silty m. sand Tr. clay (sm)		25	↓	
		27	1-1					
	110	30	Wht-2	Wht-2 / MED gray org. silty clay, Tr. f. sand	⑤	30		RP=0.75 P.SIF
		32	2-3	veg (OH)				
	120	35	Wht-12	BRN c-f sand Tr. silt, qtz (sp)	⑥	35		
		37	16-22					
	130	40	2-10	BRN f-c sand Tr. silt (sp-sm)		40		
		42	13-16					
	140	45	10-10	BRN c-f sand Tr. silt (sp-sm)		45		
		47	16-19					
	150	50	9-17	BRN gravelly c-f sand Tr. silt (sp-sm)	⑦	50		18 halom in
		52	18-13					sp. 1E

BORING NO. PB-5

RES. ENGR. R. R. R. R. R.

PROJECT LOCATION Brooklyn NY

141045

BORING NO. PP-5

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT Lowie's Home Cntc
 LOCATION Brooklyn NY
 BORING LOCATION As planned

BORING NO. PB-5
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED _____ CASING USED ☒ YES ☐ NO
 TRUCK ONE SS MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 25
 SKID _____ HYDRAULIC X DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____

TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" O.D. split spoon DIAMETER OF ROTARY BIT, IN. 2 1/4" 4 1/2" 3 7/8"
 U-SAMPLER _____ TYPE OF DRILLING MUD Quik Gel
 S-SAMPLER _____ AUGER USED ☐ YES ☒ NO
 CORE BARREL _____ TYPE AND DIAMETER, IN. _____
 CORE BIT _____
 DRILL RODS N

CASING HAMMER, LBS. 350 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. - NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. - OTHER: _____

BORING CONTRACTOR JBD Co.
 DRILLER R. Lynch HELPERS E. Feliciano
 REMARKS Grouted borehole upon completion
 RESIDENT ENGINEER K. NUNEZ DATE 12/28/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NFR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB-5

MUESER RUTLEDGE CONSULTING ENGINEERS

SHEET 1 OF 3

FILE NO. 9446

PROJECT Low's Home Center

BORING NO. PB6

PROJECT LOCATION Brooklyn NY

RES. ENGR. R. NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
12/27/00 OGJO WED 10:00	10	1	2-4	BRN f-c sand, silty, Tr. sh. Brk (F.H. (sm))	⑤			Drilled safety Hammer AHEAD
		3	4-5					
	20	3	2-3	BRN H-f sand, silty, Tr. sh. Brk, silty (F.H. (sm))				
		5	4-4	BRN f-c sand, silty, Tr. sh. Brk (F.H. (sm))				
	30	5	1-1	gray BRN f-c sand, silty, Tr. sh. Brk (F.H. (sm))		5		
		7	1-1					
	40	7	1-1	gray BRN H-f sand, silty, Tr. sh. Brk (F.H. (sm))				
		9	1-1					
						9.5		
	10	1-1		gray org. silty clay, Tr. veg. f. sand (OH)	⑥	10		
	12	1-1						
	60	12	2-1	gray org. silty clay, Tr. f. sand (OH)				
		14	2-1					
	70	15	1-1	DO-60 (OH)		15		
		17	1-1					
	80	17	1-2	DO-60 (OH)				
		19	1-1					
	90	20	3-4	gray BRN silty f. sand, Tr. clay (sm)	⑦	20		
		22	8-16					
	100	25	5-7	BRN gray silty H-f sand (sm)		25		
		27	8-10					
	110	30	11-20	BRN f-c sand, Tr. silty (sp-sm)		30		
		32	20-10					
	120	35	12-13	DO-110 (sp-sm)	⑧	35		
		37	11-12					
	130	40	14-26	DO-110 (sp-sm)		40		
		42	31-38					
	140	45	15-20	BRN H-f sand, Tr. silty (sp-sm)		45		
		47	21-25					
	150	50	13-11	BRN f-c sand, Tr. silty (sp-sm)	⑨	50		
		52	13-14					

BORING NO. PR-6

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN NY
 BORING LOCATION Street 159 NE

BORING NO. PB-6
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. _____
 DATUM _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED _____
 DURING CORING _____
 TRUCK CHEV MECHANICAL _____ CASING USED ☒ YES ☐ NO
 SKID _____ HYDRAULIC X DIA., IN. 4 DEPTH, FT. FROM 0 TO 15
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____

TYPE AND SIZE OF: _____ DRILLING MUD USED ☒ YES ☐ NO
 D-SAMPLER 2" O.D. split spoon DIAMETER OF ROTARY BIT, IN. 3 1/8, 4 1/8
 U-SAMPLER _____ TYPE OF DRILLING MUD GLUE GEL
 S-SAMPLER _____
 CORE BARREL _____ AUGER USED ☐ YES ☒ NO
 CORE BIT _____ TYPE AND DIAMETER, IN. _____
 DRILL RODS N

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					No observation

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING LIN. FT. 82 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR JBD Co.
 DRILLER R. Lynch HELPERS E. Feliciano
 REMARKS Grouted boreholes upon completion
 RESIDENT ENGINEER R. NUNO DATE 12/21/00

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, Shelby tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. PB-6

MUESER RUTLEDGE CONSULTING ENGINEERS

 SHEET 1 OF 3

 FILE NO. 9416

 BORING NO. PB-7

 SURFACE ELEV. 100.00

 PROJECT Lowe's Home Center

 PROJECT LOCATION Brooklyn, NY

 RES. ENGR. MUESER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
12/14/00	10	0	1-13	Brown f. sand, Tr. silt, gl. (sp. sm)	①		Drilled	Automatic Hammer
11:00 AM	2	2	15-16				10' mark	
30°C	20	2	9-26	dk gray c.f. sand, Tr. silt, gl. (sp. sm)				
1430 hrs	4	4	26-46	gray f. m. sand, Tr. silt, gl. (sp. sm)		5		
	30	6	6-8				run	
	6	7-5						
	40	6	1-1	gray f. m. sand, sm silt, Tr. silt, gl. (sp. sm)				
	8	1-1						
	50	8	1-1	DO-40 (FIN) (sm)				
	10	1-1				10		
	60	10	WOB-1	Brown f. c. sand, Tr. silt, gl. (sp. sm), V. s. silt, gl. (sp. sm)	②			
	12	1-1						
	70	12	1-1	dk gray f. m. sand, sm silt, Tr. silt, gl. (sp. sm)				2-2"
	14	1-2		WOB (FIN) (sm)				
	80	14	WOB-1	Silt-Gray or silty clay, Tr. silt, gl. (sp. sm)		15		RP-0575.5
	16	1-1		V. s. silt, gl. (sp. sm)				
	90	16	WOB-12"	DO-80 (OH)				
	18	WOB-12"				18-5		
						20		
1645	100	20	1-3	Brown f. m. sand, sm silt (sm)	③			
12/14/00	22	2-3						
11:00 AM								
30°C								
clayey						25		
0045 hrs	110	25	4-7	Brown f. m. sand, Tr. silt, gl. (sp. sm)				
	27	7-8						
						30		
	120	30	6-5	Brown f. m. sand, sm silt (sm)				
	32	8-9						
						35		
	130	35	8-10	Brown f. m. sand, Tr. silt, gl. (sp. sm)	④			
	37	4-3						
						40		
	140	40	5-8	Brown f. m. sand, sm silt, Tr. silt, gl. (sp. sm)				
	42	11-11						
						45		
	150	45	5-5	Brown f. m. sand, Tr. silt, gl. (sp. sm)				
	47	6-5						
						50		
	160	50	3-5	Brown c.f. sand, Tr. silt, gl. (sp. sm)				
	52	5-7						

 BORING NO. PB-7

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. PB-7
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 8.9
RES. ENGR. RANDOLPH NUNEZ

DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
PROGRESS	NO.	DEPTH	BLOWS/6"					
Cont'd					S1			
12-19-00								
Tuesday								
Cloudy								
30°F							55	
	17D	55.0	6-6	Brown fine to medium sand, trace silt				
		57.0	8-7	(SP-SM)				
							58.5	
							60	
	18D	60.0	13-13	Red brown fine to medium sand, some	S2			
		62.0	12-10	gravel, silt, trace mica (SM)				
							65	
	19D	65.0	9-8	Red brown fine to medium sand, some silt,				
		67.0	6-7	trace gravel (SM)				
	20D	70.0	18-15	Red brown fine to medium sand, some			70	
		72.0	22-20	gravel, silt, trace clay, mica (SM)				
							75	
	21D	75.0	18-37	Red brown fine to medium sand, some				
		77.0	17-16	gravel, silt (SM)				
							80	
	22D	80.0	14-15	Do 21D, trace clay (SM)				
11:35		82.0	24-19			82	End of Boring at 82'.	
							pp=Pocket	
						85	Penetrometer	
							Unconfined Compressive Strength in tsf.	
							WC=Water Content	
						90	in percent of dry weight.	
						95		
						100		

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. PB-7
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 8.9
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES	☐ NO	
TRUCK <u>CME-75</u>	MECHANICAL	DIA., IN. <u>4</u>			DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.			DEPTH, FT. FROM TO
BARGE	OTHER	DIA., IN.			DEPTH, FT. FROM TO
OTHER					

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER <u>2" O.D. SPLIT SPOON</u>	DIAMETER OF ROTARY BIT, IN. <u>3-7/8, 4-7/8</u>
U-SAMPLER	TYPE OF DRILLING MUD <u>QUIK - GEL</u>
S-SAMPLER	
CORE BARREL	AUGER USED ☐ YES ☒ NO
CORE BIT	TYPE AND DIAMETER, IN.
DRILL RODS <u>N</u>	

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*AUTOMATIC HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
12-19-00		82	20	11	MUD/WATER UPON COMPLETION.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>82</u>	NO. OF 3" SHELBY TUBE SAMPLES _____	
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____	
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: _____	

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER MIKE BLEJWAS HELPERS DENNIS KEITH
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-19-00

BORING NO. PB-7

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING LOG

PROJECT: LOWE'S HOME CENTER
 LOCATION: BROOKLYN, NEW YORK

BORING NO. PB-8
 SHEET 1 OF 3
 FILE NO. 9446
 SURFACE ELEV. 7.4
 RES. ENGR. RANDOLPH NUNEZ

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING	REMARKS	
	NO.	DEPTH	BLOWS/6"				BLOWS		
12-18-00 Monday 30°F	1D	0.0	16-26	Brown medium to fine sand, some silt, trace gravel, brick, cinders (Fill) (SM) Do 1D, some gravel (Fill) (SM)	F		DRILLED	3D,7D, 10D-12D & 17D: Petroleum odor.	
		2.0	30-31				AHEAD		
	2D	2.0	17-19				4"		
		4.0	16-14						
						5			
	3D	5.0	2-2	Brown fine to medium sand, some silt, trace gravel (Fill) (SM) Do 3D (Fill) (SM)					
		7.0	2-2						
	4D	7.0	2-2						
		9.0	3-4						
						10			
5D	10.0	2-3	Red brown fine to medium sand, some silt, trace gravel (Fill) (SM) Do 5D (Fill) (SM)						
	12.0	6-6							
6D	12.0	4-4							
	14.0	6-8							
				15					
7D	15.0	3-2	Gray brown fine to medium sand, some silt, trace gravel, metal, cinders (Fill) (SM) Brown fine to medium sand, some silt, rock fragments, trace wood (Fill) (SM)						
	17.0	3-3							
8D	17.0	5-16							
	19.0	31-14							
				20					
9D	20.0	12-7	Rock fragments (Fill)				REC=1"; rock fragments in tip of spoon.		
	22.0	9-9							
16:15					23.5				
06:45					25	✓			
12-19-00									
Tuesday									
Cloudy	10D	25.0	9-14	Brown fine to medium sand, some silt (SM)	S1				
30°F		27.0	20-16						
					29				
					30				
	11D	30.0	5-9	Stiff gray brown clayey silt, trace fine sand (MH)	M			Silt & clay in wash at 29'.	
		32.0	14-18						
					33.5				
					35				
	12D	35.0	7-12	Brown gray silty fine to medium sand (SM)					
		37.0	12-12						
					40				
	13D	40.0	9-13	Brown silty fine sand (SM)	S1				
		42.0	14-13						
					45				
	14D	45.0	10-12	Brown fine sand, some silt (SM)				Heavy petroleum odor oil in sample.	
		47.0	12-14						
					50				
	15D	50.0	11-15	Brown fine to medium sand, some silt (SM)					
		52.0	26-29						

BORING NO. PB-8

MUESER RUTLEDGE CONSULTING ENGINEERS
BORING LOG

PROJECT: LOWE'S HOME CENTER
LOCATION: BROOKLYN, NEW YORK

BORING NO. PB-8
SHEET 2 OF 3
FILE NO. 9446
SURFACE ELEV. 7.4
RES. ENGR. RANDOLPH NUNEZ

DAILY	SAMPLE			SAMPLE DESCRIPTION	STRATA	CASING		REMARKS	
PROGRESS	NO.	DEPTH	BLOWS/6"			DEPTH	BLOWS		
Cont'd									
12-19-00									
Tuesday									
Cloudy									
30°F						55			
	16D	55.0	8-14	Brown fine to medium sand, trace silt (SP-SM)	S1				
		57.0	15-19						
	17D	60.0	5-15	Gray brown fine to medium sand, some silt, gravel (SM)			60		
		62.0	38-55						
	18D	65.0	18-15	Gray fine to medium sand, some gravel, silt, trace coarse sand (SM)			65		
		67.0	15-8						
	19D	70.0	22-18	Red brown silt, some fine sand, trace clay seams, gravel (ML)		68.5	Hard drilling at 62.5'. Possible boulder & cobbles from 62.5' to 65'.		
		72.0	18-18			70			
	20D	75.0	27-27	Red brown silty fine to medium sand, trace gravel, coarse sand, clay (SM)	S2	75			
		77.0	25-16						
	21D	80.0	48-26	Red brown fine to medium sand, some silt, trace gravel, coarse sand (SM)			80	End of Boring at 82'.	
11:45		82.0	28-15				82		
						85			
						90			
						95			
						100			

BORING NO. PB-8

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NEW YORK
 BORING LOCATION SEE PLAN

BORING NO. PB-8
 SHEET 3 OF 3
 FILE NO. 9446
 SURFACE ELEV. 7.4
 DATUM BOROUGH PRESIDENT OF BROOKLYN HIGHWAY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES	☐ NO
TRUCK <u>CME-55</u>	MECHANICAL	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u>	TO <u>25</u>
SKID	HYDRAULIC <u>X</u>	DIA., IN.	DEPTH, FT. FROM	TO
BARGE	OTHER	DIA., IN.	DEPTH, FT. FROM	TO
OTHER				

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. SPLIT SPOON
 U-SAMPLER
 S-SAMPLER
 CORE BARREL
 CORE BIT
 DRILL RODS N

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3-7/8, 2-15/16
 TYPE OF DRILLING MUD QUIK - GEL
 AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN.

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 *SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

*SAFETY HAMMER USED.

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE.

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON

STANDPIPE: TYPE	ID, IN.	LENGTH, FT.	TOP ELEV.
INTAKE ELEMENT: TYPE	OD, IN.	LENGTH, FT.	TIP ELEV.
FILTER: MATERIAL	OD, IN.	LENGTH, FT.	BOT. ELEV.

PAY QUANTITIES

2.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>79.5</u>	NO. OF 3" SHELBY TUBE SAMPLES	
3.5" DIA. U-SAMPLE BORING	LIN. FT.	NO. OF 3" UNDISTURBED SAMPLES	
CORE DRILLING IN ROCK	LIN. FT.	OTHER: OBSTRUCTION (BOULDER)	<u>2.5</u>

BORING CONTRACTOR JERSEY BORING & DRILLING CO. INC.
 DRILLER RAY LYNCH HELPERS EDWIN FELICIANO
 REMARKS BOREHOLE GROUTED UPON COMPLETION.
 RESIDENT ENGINEER RANDOLPH NUNEZ DATE 12-19-00

BORING NO. PB-8

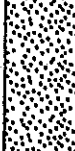
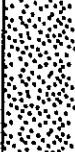
PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx. el. 7.4 [BBHDD]	
DRILLING EQUIPMENT Mobile B61 Truck Mounted Rig		DATE STARTED 10/20/98	DATE FINISHED 10/20/98
SIZE AND TYPE OF BIT 4 7/8" (0'-3") and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 16	DIST. 16
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft) 18	WATER LEVEL (ft.) 8	UNDIST. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		COMPLETION DEPTH 80 ft.	
SAMPLER HAMMER 140		DRILLING FOREMAN Ernest Thomas/Desmond Williams	
DROP(in) 30		INSPECTING ENGINEER Gary L. Gleason	

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/ft	N-VALUE BL/ft	BLOWS BL/ft	
pprox. el. 7.4	Surficial ASPHALT									* New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown f.-c. SAND, trace silt and red brick (11-65)*		5	S1	SS	14	4 3 3		6	PID = 0 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal, silt, and red brick (11-65)		10	S2	SS	4	1 2 2		8	PID = 196 ppm, visible "Copper" brown petroleum like material Trace wood in wash
	Brown f.-c. SAND, trace silt, f.-m gravel, and wood (11-65)		15	S3	SS	13	8 5 3		8	PID = 290 ppm, visible petroleum like material Added mud D = 15'
	Inferred WOOD FIBERS and brown clayey SILT, trace f. sand (11-65)		20	S4	SS	0	6 2 2		4	PID = 25 ppm Sample S4 spoon tip material
	WOOD FIBERS, trace brown silt and f. sand (11-65)		25	S5	SS	9	21 29 38 41		67	PID = 52 ppm Very slow/hard drilling and wood fibers in wash D = 23' - 28'
	Green brown SILT, trace clay, wood fibers, and f.-m. sand (11-65)		30	S6	SS	16	8 10 11 12		21	PID = 9.6 ppm
	Brown/gray f.-m SAND, some silt and clay (7-65)		35	S7	SS	19	4 7 15 13		22	PID = 168 ppm, slightly visible petroleum like material
	Brown silty f. SAND (8-65)		40	S8	SS	14.5	10 13 10 10		23	PID = 20 ppm

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 7.4 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
	Gray/brown f.-m SAND (7-65)		45	S9	SS	13	9 12 15 21	27	PID = 410 ppm, petroleum like material very visible
	Gray/brown f.-m. SAND, trace silt (8-65)		50	S10	SS	15	12 15 18 20	33	PID = 188 ppm, visible petroleum like material
	Brown f.-m. SAND (7-65)		55	S11	SS	12	6 9 11 11	20	PID = 7.1 ppm, visible petroleum like material
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	16	11 14 16 18	30	PID = 330 ppm, very visible petroleum like material
	Red/gray f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		65	S13	SS	4	77 62 22 18	84	Rig chatter D = 62' Slow/hard drilling D = 62' - 63' PID = 25 ppm Minor rig chatter D = 63' to 68'
	Inferred Gray f.-c. GRAVEL, some red/brown silty clay and f.-c. sand (6-65)		70	S14	SS	0	21 28 22 26	50	Petroleum like material floating on the surface of wash tub PID = 19.8 ppm Sample S14 spoon tip material
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	12	33 27 19 19	46	PID = 3 ppm Rig chatter D = 77'
	Red brown f.-c. SAND, some clay, trace silt and f.-m. gravel (6-65)		80	S16	SS	9.5	14 12 14 12	26	PID = 5.1 ppm
	Boring terminated D = 80'								Borehole grouted upon completion
			85						
			90						

PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx. el. 9.0 [BBHDD]	
DRILLING EQUIPMENT CME 75 Truck Mounted Rig		DATE STARTED 10/19/98	DATE FINISHED 10/20/98
SIZE AND TYPE OF BIT 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 16	UNDIST. -----
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft) 14	WATER LEVEL (ft.) 10	COMPL. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		DRILLING FOREMAN Tommy Gregorev/Chris Mitchell	
SAMPLER HAMMER 140	WEIGHT(lbs)	DROP(in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el. 9.0	Surficial ASPHALT			NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/sin	N-VALUE BLOWS PER FT.		*New York City BC Classification numbers in parenthesis Added water D = 2'
	Brown f.-c. GRAVEL, trace f.-c. sand, silt, and red brick (11-65)*		5	S1	SS	4	4 4 5 5	9		PID = 0.1 ppm
	Brown/black f.-m. SAND, trace silt, coarse sand, and f. gravel/coal (11-65)		10	S2	SS	3.5	4 2 5 2	7		PID = 14 ppm
	Gray silty CLAY, trace roots and shell (11-65)		15	S3	SS	24	2 1 1 1	2		PID = 0.4 ppm
	Gray silty CLAY, some roots/wood (11-65)		20	S4	SS	24	WOH WOH 2 1	2		WOH: Weight of hammer Added mud D = 20' PID = 0.2 ppm
	Brown f.-m. SAND, trace silt and m. gravel (7-65)		25	S5	SS	13	9 14 16 18	32		PID = 17.2 ppm, visible petroleum like material sheen
	Brown f.-m. SAND (7-65)		30	S6	SS	24	19 29 36 30	67		PID = 250 ppm, visible petroleum like material
	Brown silty f. SAND (8-65)		35	S7	SS	17	10 16 13 14	29		PID = 40 ppm, visible petroleum like material
	Brown SILT, trace f. sand and clay (10-65)		40	S8	SS	15	20 17 17 18	34		PID = 32 ppm

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 9.0 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR RESIST BLU/in	N-VALUE BLOWS PER FT	
			45	S9	SS	17	7 6 12 14	18	PID = 8 ppm, visible petroleum like material Minor rig chatter
	Gray/brown f.-m. SAND, trace silt (7-65)		50	S10	SS	20	12 13 13 15	26	PID = 20 ppm, slightly visible petroleum like material
	Gray/brown f.-m. SAND (7-65)		55	S11	SS	20	9 7 8 10	15	PID = 10.8 ppm
	Gray/brown f.-m. SAND (7-65)		60	S12	SS	18	9 12 10 11	22	PID = 5.9 ppm
	Brown f.-m. SAND, some silt, trace clay (7-65)		65	S13	SS	15	31 16 19 27	35	Rig chatter D = 63.5' - 65' "Copper" brown petroleum like material floating on the surface of wash tub PID = 6.2 ppm
	Red brown f.-c. sandy SILT, some clay, trace f. gravel (10-65)		70	S14	SS	14	24 29 27 21	56	Major rig chatter D = 65' - 70' PID = 8.8 ppm
	Red brown f.-m. SAND, trace silt, clay, and m. gravel (7-65)		75	S15	SS	14	23 22 21 28	43	Minor rig chatter D = 70' - 75' PID = 43 ppm
	Red brown f.-m. SAND, trace silt, clay, and f. gravel (7-65)		80						Rig chatter D = 75' - 83'
	Red brown f.-m. SAND, trace silt, clay, and c. sand (7-65)		85	S16	SS		43 30 39 38	69	PID = 6 ppm
	Boring terminated D = 85'								Borehole grouted upon completion
			90						

PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx el. 10.1 [BBHDD]	
DRILLING EQUIPMENT Mobile B61 Truck Mounted Rig		DATE STARTED 10/19/98	DATE FINISHED 10/19/98
SIZE AND TYPE OF BIT 4 7/8" Tri-Cone Roller Bits w/water		NUMBER OF SAMPLES -----	COMPLETION DEPTH 1 ft.
CASING DIAMETER (in) -----	CASING DEPTH(ft) -----	WATER LEVEL (ft.) ▽ -----	UNDIST. -----
SAMPLER -----		DRILLING FOREMAN Ernest Thomas/Desmond Williams	
SAMPLER HAMMER -----	WEIGHT(lbs) -----	INSPECTING ENGINEER Gary L. Gleason	

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BLU/in	N-VALUE BLOWS PER FT		
approx el. 10.1	2.5" ASPHALT 6.5" Black f.-c. SAND and GRAVEL (11-65)* 3" COBBLE/BOULDER (6-65)									*New York City BC Classification numbers in parenthesis Added water D = 0.5' Hard/slow drilling D = 0.75' - 1' Drill equipment refusal D = 1'
	Boring terminated D = 1'									
			5							
			10							
			15							
			20							
			25							
			30							
			35							
			40							

PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx. el. 10.1 [BBHDD]	
DRILLING EQUIPMENT Mobile B61 Truck Mounted Rig		DATE STARTED 10/19/98	DATE FINISHED 10/19/98
SIZE AND TYPE OF BIT 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 13	DIST. 13
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft) 13	WATER LEVEL (ft.) 8	UNDIST. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		DRILLING FOREMAN Ernest Thomas/Desmond Williams	COMPLETION DEPTH 80 ft.
SAMPLER HAMMER 140	WEIGHT(lbs) 140	DROP(in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BLG/in	N-VALUE BLOWS PER FT	
Approx. el. 10.1	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Rig chatter D = 0' - 3'
	Black f.-c. SAND, trace silt, f. gravel, and red brick (11-65)*		5	S1	SS	13	10 5 8	15	PID = 5 ppm, petroleum like material odor
	Inferred miscellaneous FILL (11-65)		10		SS	0	2 1 1	2	Added mud D = 10'
	Gray/brown organic SILT/PEAT, trace f. gravel (11-65)		15	S2	SS	10	2 2 2 1	4	PID = 0.1 ppm, petroleum like material odor
	Gray silty CLAY, trace shell and organics/root (11-65)		20	S3	SS	21	WOH WOH WOH WOH	WOH	WOH: Weight of hammer PID = 0 ppm
	Gray silty CLAY, trace shell and organics (11-65)		25	S4	SS	15	2 2 2 2	4	PID = 0 ppm
	Brown silty f. SAND, trace clay (8-65)		30	S5	SS	15	3 4 7 8	11	PID = 0.5 ppm, slight petroleum like material odor
	Gray f.-m. SAND (7-65)		35	S6	SS	20	13 18 18 15	36	PID = 95 ppm, visible petroleum like material w/odor
	Brown/gray f. sandy SILT, trace clay (10-65)		40	S7	SS	15	9 12 9 16	21	PID = 8 ppm, petroleum like material odor

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 10.1 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
	Brown silty f. SAND, trace clay (8-65)		45	S8	SS	14	8 11 13 14	24	PID = 5.2 ppm, petroleum like material oder
	Brown silty f.-m. SAND, trace clay (7-65)		50	S9	SS	17	12 13 18 24	31	PID = 6.5 ppm, petroleum like material oder
	Brown/gray f.-c. SAND, trace f. gravel (7-65)		55	S10	SS	13	9 12 14 15	26	PID = 0.6 ppm, slight petroleum like material oder
	Gray/brown f.-c. SAND (7-65)		60	S11	SS	14	13 18 18 20	36	PID = 1.2 ppm, petroleum like material oder
	Gray/brown SILT, some clay, trace f. sand (10-65)		65	S12	SS	15	10 9 18 20	27	PID = 0.2 ppm
	Red brown f.-c. SAND, trace silt and f. gravel (6-65)		70	S13	SS	7	21 24 80 100/2"	104	PID = 0.7 ppm, petroleum like material oder Spoon refusal D = 69.5' Rig chatter D = 69.5' and 73'
	Red brown f.-c. SAND, some silt and clay, trace f. gravel (7-65)		75	S14	SS	7	28 21 15 18	36	PID = 0.1 ppm Minor rig chatter D = 73' - 78'
	Red brown clayey SILT, trace f. sand, trace m. gravel (10-65)		80	S15	SS	18	18 19 13	32	PID = 0.3 ppm, petroleum like material oder
	Boring terminated D = 80'								Borehole grouted upon completion
			85						
			90						

PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx. el. 10.4 [BBHDD]	
DRILLING EQUIPMENT CME 75 Truck Mounted Rig		DATE STARTED 10/16/98	DATE FINISHED 10/19/98
SIZE AND TYPE OF BIT 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 14	DIST. 14
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft) 10	WATER LEVEL (ft.) 14	UNDIST. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		COMPLETION DEPTH 73 ft.	
SAMPLER HAMMER 140		CORE 24 HR. 6.5	
DROP(in) 30		DRILLING FOREMAN Tommy Gregory/Chris Mitchell	
		INSPECTING ENGINEER Gary L. Gleason	

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/IN	N-VALUE BLOWS PER FT.		
prox. el. 10.4	Surficial ASPHALT									*New York City BC Classification numbers in parenthesis Black drill water w/ petroleum like material odor D = 1.5' - 5'
	Black/brown f.-c. SAND, some silt, trace f. gravel/coal, wood/organics, and red brick (11-65)*		5	S1	SS	5	2 8 8	14		PID = 0.2 ppm, petroleum like material odor
	Black and white f. GRAVEL/COAL, trace m.-c. sand (11-65)		10	S2	SS	TRACE	1 WOH WOH	1		WOH: Weight of hammer PID = 3 ppm, petroleum like material odor Over drove spoon to aid in Sample recovery
	Black and white f. GRAVEL/COAL, trace m.-c. sand and glass (11-65)		15	S3	SS	TRACE	1 2 1	3		PID = 4 ppm, petroleum like material odor Added mud D = 15'
	Gray silty CLAY, trace shell and f. gravel (11-65)		20	S4	SS	14	1 WOH WOH WOH	WOH		PID = 0.4 ppm, petroleum like material odor
	Gray silty CLAY, trace shell (11-65)		25	S5	SS	8	1 WOH WOH WOH	WOH		PID = 7.2 ppm, petroleum like material odor
	Gray SILT, trace clay, f.-m. sand, f.-m. gravel/coal, and shell (10-65)		30	S6	SS	22	9 12 12 9	24		PID = 8 ppm, slight petroleum like material odor
	Brown f.-m. SAND (7-65)		35	S7	SS	16	22 23 22 13	45		PID = 190 ppm, visible petroleum like material w/ odor
	Brown f.-m. SAND, trace silt and coal (7-65)		40	S8	SS	19	20 15 15 20	30		PID = 2.5 ppm, petroleum like material

PROJECT		PROJECT NO.								
Gowanus Development		1503701								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		Approx. el. 10.4 [BBHDD]								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS FEET		
	Brown f. SAND, trace silt (8-65)		45	S9	SS	15	16 14 18 16	32	PID = 5 ppm, petroleum like material odor Added mud D = 46'	
	Brown f. SAND, trace silt (8-65)		50	S10	SS	12	18 20 26 28	46	PID = 1.6 ppm, petroleum like material odor	
	Gray f.-m. SAND (7-65)		55	S11	SS	24	17 14 15 21	29	PID = 1 ppm, petroleum like material odor	
	Brown f.-c. SAND (7-65)		60	S12	SS	13	29 32 25 21	57	PID = 9 ppm, petroleum like material odor	
	Gray/brown f.-c. SAND, trace f.-m. gravel (6-65)		65	S13	SS	13	28 41 59 63	100	PID = 0.6 ppm, slight petroleum like material odor Rig chatter D = 66.5' - 68.5'	
	Red brown SILT, some f. sand, trace clay (10-65)			70	S14	SS	10	30 37 47 50	84	Rig chatter D = 70' - 73' PID = 0.9 ppm, slight petroleum like material odor Very hard/slow drilling D = 72' - 73' Drilling equipment refusal D = 73'
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)									
	Boring terminated D = 73'			75						Bore hole grouted upon completion
				80						
				85						
				90						

PROJECT Gowanus Development		PROJECT NO. 1503701	
LOCATION Brooklyn, NY		ELEVATION AND DATUM Approx. el. 10.6 [BBHDD]	
DRILLING EQUIPMENT Mobile B61 Truck Mounted Rig		DATE STARTED 10/15/98	DATE FINISHED 10/16/98
SIZE AND TYPE OF BIT 4 7/8" (0'-1') and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 16	COMPLETION DEPTH 79.5 ft.
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH (ft) 13	WATER LEVEL (ft.) 9	FIRST 9
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		DRILLING FOREMAN Ernest Thomas/Desmond Williams	
SAMPLER HAMMER 140	WEIGHT (lbs) 140	DROP (in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/6in	N-VALUE BLOWS/FEET		
prox. el. 10.6	Sufficial ASPHALT									*New York City BC Classification numbers in parenthesis Added water D = 0.5' Rig chatter D = 1' Petroleum like material/odor and color in drill water D = 1' to 3' PID = 6 ppm, petroleum like material odor
	Black/gray f.-c. SAND, some f.-c. gravel/coal, trace silt and red brick (11-65)*		5	S1	SS	10	13 14 4 3	18		Trace wood in wash WOH: Weight of hammer
	Inferred Black/gray f.-c. GRAVEL, trace f.-c. sand, silt, and metal (11-65)		10	S2	SS	0	2 1 1 1	1		PID = 3 ppm, petroleum like material odor Sample S2 spoon tip material
	Gray silty CLAY, some woody roots, trace shell (11-65)		15	S3	SS	17	2 2 2 2 2	4		PID = 1 ppm, petroleum like material odor
	Gray silty CLAY, trace organics/root (11-65)		20	S4	SS	14	WOR WOR WOR WOR	WOR		WOR: Weight of rods PID = 0.2 ppm, petroleum like material odor
	Brown f. SAND, trace silt and wood (8-65)		25	S5	SS	18	5 8 12 13	20		PID = 6.5 ppm, petroleum like material odor
	Brown/gray f.-c. SAND (7-65)		30	S6	SS	18	13 14 10 6	24		PID = 4 ppm, visible petroleum like material and odor
	Gray/brown f. SAND (8-65)		35	S7	SS	13	9 18 21 20	39		PID = 13 ppm, petroleum like material odor
	Brown/gray f.-m. SAND (7-65)		40	S8	SS	17	11 14 8 13	22		PID = 0.4 ppm, petroleum like material odor

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 10.6 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR RESIST BL/6in	N-VALUE BLOWS PER FT	
	Gray/brown f. SAND, trace silt (8-65)		45	S9	SS	18	13 13 14 15	27	PID = 3.9 ppm, petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		50	S10	SS	18	10 12 15 18	27	PID = 0.5 ppm, slight petroleum like material oder
	Brown SILT, trace f. sand and clay (10-65)		55	S11	SS	18	11 14 18 20	32	PID = 0.3 ppm, slight petroleum like material oder
	Brown f.-m. SAND, trace silt (7-65)		60	S12	SS	14	17 21 100/3"	121/9"	PID = 0.4 ppm, petroleum like material oder Spoon refusal D = 59' Major rig chatter D = 60'
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		65	S13	SS	14	35 51 62 24	113	Rig chatter D = 60' - 63' PID = 0.2 ppm, slight petroleum like material oder Rig chatter D = 63' - 68'
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (7-65)		70	S14	SS	14	41 40 66 100	106	Rig chatter D = 68' - 73' PID = 0.4 ppm, slight petroleum like material oder
	Red brown f.-c. SAND, trace silt, f.-m. gravel, and clay (6-65)		75	S15	SS	16	56 35 50 35	85	PID = 0.1 ppm Major rig chatter D = 76' - 77'
	Red brown f.-c. SAND, trace silt, f. gravel, and clay (6-65)		80	S16	SS	10	41 89 100/5"	89/11"	Spoon refusal D = 79.5' PID = 0 ppm, slight petroleum like material oder
	Boring terminated D = 79.5'								Borehole grouted upon completion
			85						
			90						

PROJECT Gowanus Development			PROJECT NO. 1503701		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. el. 10.6 [BBHDD]		
DRILLING EQUIPMENT CME 75 Truck Mounted Rig			DATE STARTED 10/15/98	DATE FINISHED 10/16/98	COMPLETION DEPTH 82 ft.
SIZE AND TYPE OF BIT 4 7/8" (0'-3') and 3 7/8" Tri-Cone Roller Bits			NUMBER OF SAMPLES 16	DIST. 16	UNDIST. -----
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft)		WATER LEVEL (ft.) -----	FIRST -----	COMPL. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)			DRILLING FOREMAN Robert Danielson/Tommy Gregory/Chris Mitchell		
SAMPLER HAMMER	WEIGHT(lbs) 140	DROP(in) 30	INSPECTING ENGINEER Gary L. Gleason		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
prox. el. 10.6	Surficial ASPHALT								*New York City BC Classification numbers in parenthesis Added water D = 3'
	Inferred miscellaneous FILL with coal (11-65)*		5	S1	SS	0	3 1 1	2	Sample S1 spoon tip material
									WOH: Weight of hammer
	Black/gray f.-m. GRAVEL/COAL, trace f.-c. sand and wood (11-65)		10	S2	SS	2	1 WOH WOH	1	PID = 40 ppm, petroleum light material odor
			15	S3	SS	24	1 WOH 1	1	PID = 0.1 ppm, petroleum like material odor
	Gray silty CLAY, some wood/root, trace shell (11-65)								
	Gray silty CLAY, trace root (11-65)		20	S4	SS	22	1 1 1	2	PID = 0 ppm
			25	S5	SS	20	16 20 19 18	39	PID = 0.2 ppm Added mud D = 27'
	Brown/gray f.-m. SAND, trace silt (7-65)								
	Gray/brown clayey SILT, trace f.-m. sand (10-65)		30	S6	SS	12	6 9 8 13	17	PID = 0.2 ppm
			35	S7	SS	12	20 22 18 19	40	PID = 0.1 ppm, slight petroleum like material odor
	Gray f.-m. SAND (7-65)								
	Gray f.-m. SAND (7-65)		40	S8	SS	14	11 13 12 12	25	PID = 0.5 ppm, petroleum like material odor

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PROJECT			PROJECT NO.						
Gowanus Development			1503701						
LOCATION			ELEVATION AND DATUM						
Brooklyn, NY			Approx. el. 10.6 [BBHDD]						
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
	Gray/brown f.-m. SAND, trace silt (7-65)		45	S9	SS	14	S13 12 8 7	20	PID = 0.2 ppm, slight petroleum like material odor
	Brown f. SAND (8-65)		50	S10	SS	15	12 15 25 27	40	PID = 0.4 ppm, petroleum like material odor
	Brown f.-m. SAND, trace silt (8-65)		55	S11	SS	18	18 30 34 41	64	PID = 0.2 ppm
	Brown SILT, trace f. sand and clay (10-65)		60	S12	SS	15	25 34 31 44	65	PID = 0.8 ppm, petroleum like material odor
	Red brown c.-f. SAND, some f.-c. gravel, trace silt and clay (6-65)		65	S13	SS	12	82 64 50 54	114	PID = 0.6 ppm Rig chatter D = 65' - 70'
	Red brown silty f.-m. SAND, trace f.-m. gravel and clay (6-65)		70	S14	SS	8	34 50 100/5"	50/11	PID = 0 ppm Spoon refusal D = 71.5' Rig chatter and slow drilling D = 70' - 75'
	Red brown f.-c. SAND and GRAVEL, trace silt and clay (6-65)		75	S15	SS	3	100/3"	R*	PID = 0.7 ppm Major rig chatter Slow drilling
	Red brown fine GRAVEL and f.-c. SAND, some silt, trace clay (6-65)		80	S16	SS	7	38 72 100	172	PID = 0.6 ppm, slight petroleum like material odor
	Boring terminated D = 82'								Borehole grouted upon completion
			85						
			90						

PROJECT	Gowanus Development		PROJECT NO.	1503701		
LOCATION	Brooklyn, NY		ELEVATION AND DATUM	Approx. el. 10.6 [BBHDD]		
DRILLING EQUIPMENT	Mobile B61 Truck Mounted Rig		DATE STARTED	10/15/98	DATE FINISHED	10/15/98
SIZE AND TYPE OF BIT	4 7/8" (0'-3") and 3 7/8" Tri-Cone Roller Bits		COMPLETION DEPTH	80 ft.		
CASING DIAMETER (in)	4 1/2" OD 4" ID	CASING DEPTH (ft)	13	NUMBER OF SAMPLES	17	DIST.
SAMPLER	2" OD 1 3/4" ID Split Spoon		DRILLING FOREMAN	Ernest Thomas/Desmond Williams		
SAMPLER HAMMER	WEIGHT (lbs)	DROP (in)	INSPECTING ENGINEER	Gary L. Gleason		
	140	30				

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST (lb/in)	N-VALUE (blows)	REMARKS	
prox. el. 10.6	Surficial ASPHALT									*New York City BC Classification numbers in parenthesis Added water D = 0'
	Brown/black f.-c. SAND, trace silt, m. gravel/coal, and red brick (11-65)*		5	S1	SS	5	3 3 2	6		PID = 0.1 ppm
	Gray/black f.-c. SAND, trace silt, f. gravel/coal, and glass (11-65)		10	S2	SS	5	4 3 2	5		PID = 0 ppm
	Brown/black PEAT (11-65)		15	S3	SS	0	4 1 1	2		PID = 0.9 ppm, organic odor Sample S3 from second recovery attempt
	Gray/brown/black f.-m. sandy PEAT, trace silt (11-65)		20	S4	SS	24	WOH 4 3 6	7		WOH: Weight of hammer PID = 0 ppm PID = 0 ppm
	Gray/brown f. SAND, trace silt (8-65)		20							Sample S5 6" Lense of Gray/brown SILT, trace clay and f. sand in top of sample
	Brown f.-m. SAND, trace silt (7-65)		25	S6	SS	18	12 18 18 17	34		PID = 0 ppm PID = 0 ppm
	Brown f.-m. SAND (7-65)		30	S7	SS	15	9 10 10 5	20		
	Gray f.-m. SAND, some clay, trace silt (7-65)		35	S8	SS	19	3 3 8 14	11		
	Brown/gray f.-m. SAND (7-65)		40	S9	SS	16	8 14 18 18	32		

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 10.6 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
	Gray f.-m. SAND (7-65)		45	S10	SS	16	12 14 19 16	33	Sample S11 12" Lense of Gray/brown silty CLAY, trace f, sand in bottom of sample
	Gray/brown f.-m. SAND, trace silt (7-65)		50	S11	SS	24	10 9 7 8	16	
	Brown/gray f.-m. SAND, trace silt (7-65)		55	S12	SS	16	17 21 27 30	48	
	Brown/gray f.-c. SAND, trace f.-m. gravel and silt (6-65)		60	S13	SS	15	27 40 31 33	71	
	Red brown silty f.-c. SAND, trace f.-m. gravel (6-65)		65	S14	SS	8	19 29 38 30	67	Rig chatter
	Red brown f.-c. SAND, trace f.-m. gravel, silt, and clay (6-65)		70	S15	SS	8	50 95 28 37	123	
	Red brown f.-c. SAND, trace silt, clay, and f.-c. gravel (6-65)		75	S16	SS	12	37 48 33 40	81	
	Red brown f.-c. SAND, trace f.-c. gravel, silt, and clay (6-65)		80	S17	SS	9	21 37 62 48	99	
	Boring terminated D = 80'								Borehole grouted upon completion
				85					
				90					

PROJECT Gowanus Development			PROJECT NO. 1503701		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. el. 10.9 [BBHDD]		
DRILLING EQUIPMENT CME 75 Truck Mounted Rig			DATE STARTED 10/14/98	DATE FINISHED 10/15/98	COMPLETION DEPTH 82 ft.
SIZE AND TYPE OF BIT 4 7/8" (0'-4") and 3 7/8" Tri-Cone Roller Bits			NUMBER OF SAMPLES 19	DIST. 19	UNDIST. -----
CASING DIAMETER (in) 4 1/2" OD 4" ID		CASING DEPTH (ft) 8	WATER LEVEL (ft.) 8	FIRST 8	COMPL. -----
SAMPLER 2" OD 1 3/4" ID Split Spoon			DRILLING FOREMAN Greg Marney/Robert Danielson/Tommy Gregory		
SAMPLER HAMMER 140		WEIGHT (lbs) 140	INSPECTING ENGINEER Gary L. Gleason		
DROP (in) 30					

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/ft	N-VALUE BLOWS PER FT	
prox. el. 10.9	2" ASPHALT								
	Black f.-c. SAND, some f.-m. gravel/coal and red brick, trace silt (11-65)*			S1	SS	6	25 28 39	65	*New York City BC Classification numbers in parenthesis PID = 21 ppm, petroleum like material odor
	Black f.-c. SAND, trace f.-m. gravel/coal, red brick, silt, and wood (11-65)			S2	SS	7	80 85 42 47	127	PID = 4.5 ppm, petroleum like material odor Added water/mud D = 4"
	Black/brown f.-m. GRAVEL/COAL, some f.-c. sand, trace silt and glass (11-65)		5	S3	SS	7	11 2 2	13	PID = 4.5 ppm, petroleum like material odor
	Black/brown f.-c. silty SAND, trace f. gravel/coal (11-65)			S4	SS	3.5	3 3 3	5	PID = 1.5 ppm, petroleum like material odor
	Black/gray f.-c. SAND, some silt and wood, trace f. gravel/coal (11-65)		10	S5	SS	3	3 3 3	6	PID = 0 ppm, petroleum like material odor
			15	S6	SS	2	6 3 3	6	PID = 2 ppm, petroleum like material odor
	WOOD, some black/gray f.-c. sand and f. gravel/coal, trace silt and glass (11-65)		20	S7	SS	18	2 3 6	9	PID = 0 ppm
	Gray/brown f. sandy SILT, trace roots, shell, and clay (11-65)		25	S8	SS	22	20 19 17 17	38	PID = 0 ppm
	Brown f.-m. SAND (7-65)		30	S9	SS	11	10 5 7 8	12	Sample S9 6" Lense brown clayey SILT, trace f. sand (10-65) in bottom of sample PID = 0.1 ppm
	Brown f.-m. SAND (7-65)		35	S10	SS	20	8 11 13 13	24	PID = 0.1 ppm
	Gray f.-m. SAND, trace silt and clay (7-65)		40	S11	SS	16	8 8 7 6	15	PID = 0.3 ppm
	Brown/gray f.-m. SAND (7-65)								

PROJECT			PROJECT NO.						
Gowanus Development			1503701						
LOCATION			ELEVATION AND DATUM						
Brooklyn, NY			Approx. el. 10.9 [BBHDD]						
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR RESIST BL/ft	N-VALUE BLOWS PER FT	
	Brown/gray silty f. SAND sand, trace clay (8-65)		45	S12	SS	19	6 7 8	15	PID = 0.2 ppm PID = 0.3 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)								
	Brown/gray clayey SILT, trace f.-m. sand (10-65)		50	S13	SS	19	3 3 4 5	7	PID = 0.1 ppm
	Inferred Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		55	S14	SS	0	40 39 38 35	78	Rig chatter D = 53' Sample S14 spoon tip material
	Red brown f.-c. SAND, some silt, trace f.-m. gravel and clay (6-65)								
	Red brown f.-c. SAND, some silt, trace f.-m. gravel and clay (6-65)		60	S15	SS	4	27 43 37 39	80	Rig chatter D = 55' - 60' PID = 0 ppm
	Red brown silty f.-c. SAND, some f.-c. gravel, trace clay (6-65)								
	Red brown silty f.-c. SAND, some f.-c. gravel, trace clay (6-65)		65	S16	SS	4	26 33 34 41	67	Rig chatter D = 60' - 65'
	Red brown f.-m. GRAVEL, some f.-c. sand, trace silt (6-65)								
	Red brown f.-m. GRAVEL, some f.-c. sand, trace silt (6-65)		70	S17	SS	3	29 65 54 76	119	
	Red brown f.-m. GRAVEL, trace f.-c. sand, silt, and clay (6-65)								
	Red brown f.-m. GRAVEL, trace f.-c. sand, silt, and clay (6-65)		75	S18	SS	2	29 58 52 73	110	
	Red brown f.-c. GRAVEL, some f.-c. sand, trace silt and clay (6-65)								
	Red brown f.-c. GRAVEL, some f.-c. sand, trace silt and clay (6-65)		80	S19	SS	3	31 32 47 38	79	
	Boring terminated D = 82'								
			85						Borehole grouted upon completion
			90						



PROJECT Gowanus Development			PROJECT NO. 1503701		
LOCATION Brooklyn, NY			ELEVATION AND DATUM Approx. el. 11.2 [BBHDD]		
DRILLING EQUIPMENT Mobile B61 Truck Mounted Rig			DATE STARTED 10/14/98	DATE FINISHED 10/15/98	COMPLETION DEPTH 82 ft.
SIZE AND TYPE OF BIT 4 7/8" (0'-4') and 3 7/8" Tri-Cone Roller Bits			NUMBER OF SAMPLES	DIST. 19	UNDIST. _____ CORE _____
CASING DIAMETER (in) 4 1/2" OD 4" ID		CASING DEPTH(ft) 14	WATER LEVEL (ft.) FIRST ∇ 6	COMPL. ∇ _____	24 HR. ∇ _____
SAMPLER 2" OD 1 3/4" ID Split Spoon			DRILLING FOREMAN Ernest Thomas/Desmond Williams		
SAMPLER HAMMER	WEIGHT(lbs) 140	DROP(in) 30	INSPECTING ENGINEER Gary L. Gleason		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (ft)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
prox. el. 11.2	3" ASPHALT								
	Black/brown f.-c. GRAVEL/COAL, some f.-c. sand, trace silt (11-65)*			S2	SS	7	28 21 100	121	*New York City BC Classification numbers in parenthesis Added water D = 0.5'
	Black/brown f.-c. SAND, trace f.-m. gravel/coal, silt, and metal (11-65)			S2	SS	10	7 8 30	10	PID = 11 ppm, petroleum like material odor
	Black/brown f.-m. GRAVEL/COAL and f.-c. SAND, trace silt (11-65)		5	S3	SS	6	3 2 4	6	PID = 0.2 ppm, petroleum like material odor
	Gray/brown f.-c. SAND, some silt, trace f.-m. gravel/coal, one seed (11-65)			S4	SS	0.5	3 3 4	6	PID = 0.3 ppm, petroleum like material odor
	Inferred miscellaneous FILL (11-65)			-	SS	0	2 2 2	4	PID = 0 ppm
			10						
			15						Very hard drilling Added mud D = 14' - 15'
	Brown f.-c. SAND, trace f. gravel and silt (11-65)			S6 S5	SS	14	5 4 3	7	PID = 0.1 ppm, petroleum like material odor
	Brown/black PEAT (11-65)								PID = 1 ppm, petroleum like material odor
			20						
	Brown-silty f. SAND, trace clay (8-65)			S7	SS	10	2 2 7	7	PID = 0 ppm, petroleum like material odor
			25						
	Brown f. SAND, trace silt (8-65)			S8	SS	20	13 14 15 17	29	PID = 0.1 ppm
			30						
	Gray/brown f. SAND, some silt (8-65)			S9	SS	21	5 2 3 4	5	PID = 0 ppm
			35						Sample S9 10" Lense Gray clayey SILT, trace f. sand (10-65) w/ PID = 0 ppm in bottom of sample
	Gray clayey f.-m. SAND, trace silt (7-65)			S10	SS	19	12 15 19 20	34	PID = 0 ppm
	Brown/gray f.-m. SAND (7-65)								PID = 0 ppm
			40						
	Brown/gray f.-m. SAND (7-65)			S11	SS	17	5 7 8 9	15	PID = 0 ppm

PROJECT		PROJECT NO.							
Gowanus Development		1503701							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		Approx. el. 11.2 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/6in	N-VALUE BLOWS PER FT	
	Brown/gray f.-m. sandy SILT (10-65)		45	S12	SS	11119	4 10 12	8	PID = 0 ppm
	Brown/gray SILT, trace clay and f.-m. sand (10-65)		50	S13	SS	24	2 1 2 3	3	PID = 0 ppm
			55	S14	SS	12	10 13 19 16	32	PID = 0 ppm PID = 0 ppm
	Red brown silty f.-c. SAND, trace clay and f. gravel (7-65)								Slow/hard drilling D = 59'
			60	S15	SS	16	17 25 26 28	51	PID = 0 ppm
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)								
	Red brown silty f.-c. SAND, some f.-m. gravel, trace clay (6-65)		65	S16	SS	16	21 49 67 100/5"	116	Spoon refusal D = 67'
	Red brown f.-c. SAND, some f.-m. gravel and silt, trace clay (6-65)		70	S17	SS	5	21 100/6"	100/6"	Spoon refusal 100/6" D = 71'
									Rig chatter
	Red brown f.-c. SAND, some f.-m. gravel, trace silt and clay (6-65)		75	S18	SS	14	40 53 58 38	111	
	Gray f.-c. GRAVEL and red brown f.-c. SAND, trace silt and clay (6-65)		80	S19	SS		66 83 100/5"	183/11	Spoon refusal D = 81.5'
	Boring terminated D = 82'								Borehole grouted upon completion
			85						
			90						

PROJECT Loews @ Gowanus		PROJECT NO. 1531601	
LOCATION Brooklyn, NY		ELEVATION AND DATUM approx. el 11 (BBHDD)	
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig		DATE STARTED 12/9/98	DATE FINISHED 12/11/98
SIZE AND TYPE OF BIT 4 7/8" and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 21	UNDIST. ---
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH (in) 18.5	WATER LEVEL (ft.) V	COMPL. ---
AMPLER Standard Split Spoon (SS) or Shelby Tube (ST)		DRILLING FOREMAN Tom Gregory/Kurt Conlon	
SAMPLER HAMMER 140	WEIGHT (lbs) 140	DROP (in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	REG. (in)	PENETR RESIST BLUES	N-VALUE	BLOWS FEET	
el 11	Inferred 4.5" CONCRETE									*New York City BC Classification numbers in parenthesis Hard slow drilling on concrete first 4.5" S1 SS Tip plugged with rocklike material (in S1 jar) PID = 580 ppm Added water D=0.25" Spoon refusal D=2" Rig chatter D=2" Petroleum like material floating in wash tub D=5" PID = 820 ppm
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (11-65)*			S1	SS	4.5	10 24 24 100/3"		48	
	Brown f.-m. SAND, trace c. sand (11-65)		5	S2	SS	8	10 11 7 8		18	
	Brown f.-m. SAND, trace c. sand (11-65)		10	S3	SS	11	2 3 3 2		6	Started casing D=10" PID = 320 ppm PID = 420 ppm
0.0	Brown f.-m. SAND, trace organics/root, f.-m. gravel, clay, silt, and c. sand (11-65)			S4	SS					Advanced casing D=10"-13.5"
	Gray silty CLAY, some organics/root (11-65)		15	S5	SS	16	2 1 1 3		2	PP = 0.3-0.6 tsf PID = 150 ppm
	Gray silty CLAY, trace organics/root (11-65)			T1	ST	30	PUSH PUSH PUSH PUSH			PP = 0.2-0.3 tsf TV = 0.23 tsf WOH : Weight of Hammer
	Gray silty CLAY, trace organics/root (11-65)		20	S6	SS	24	2 2 4		5	PP = 0.2-0.3 tsf PID = 480 ppm
	Brown SILT, trace f. sand and clay (10-65)		25	S7	SS	17	8 7 14 21		21	PID = 860 ppm
	Brown/gray CLAY and SILT, trace f. sand (10-65)		30	S8	SS	18	8 8 7 10		15	S8 4" Lense of Brown f. SAND, trace silt and clay (8-65) w/ PID = 580 ppm in top of SS PP = 1.2-2.1 tsf PID = 720 ppm S10 2" Gray f. SAND, trace clay and silt w/ PID = 850 ppm in bottom of SS Visible petroleum like material D=30"-32"
	Brown f. SAND, trace silt and clay (8-65)		35	S11	SS	15	14 23 22 18		42	PID = 380 ppm
	Brown f. SAND, trace silt and clay (8-65)		40	S12	SS	16	12 13 12 13		25	Brown f. sandy SILT, trace clay in SS tip PID = 330 ppm Trace visible petroleum like material

PROJECT		PROJECT NO.							
Loews @ Gowanus		1531601							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		approx. el 11 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (%)	PENETR. RESIST BL/30s	R-VALUE BLOWS FEET	
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	17	17 17 15 20	32	PID = 570 ppm
	Brown SILT, trace clay and f. sand (10-65)		50	S14	SS	15	14 15 22 26	37	PID = 540 ppm
	Brown f. SAND, trace silt (8-65)			S15	SS				PID = 650 ppm Trace visible petroleum like material
	Brown f. SAND, trace m. sand (7-65)			55	S16	SS	14.5	11 18 16 17	32
	Gray f. SAND, trace m.-c. sand (7-65)	60		S17	SS	13.5	15 22 20 23	42	Brown/gray SILT, trace f. sand and clay in SS tip PID = 530 ppm Trace visible petroleum like material near bottom of SS tip Minor on/off rig chatter D=60.5'-63'
	Brown f. sandy SILT, trace clay (10-65)	65		S18	SS	13	19 23 23 26	46	PID = 1240 ppm
	Red brown f. sandy SILT, some f. sand, trace clay (10-65)		70	S19	SS	15.5	20 20 28 28	57	PID = 950 ppm
	Inferred Red brown f.-c. SAND, trace f.-m. gravel (7-65)								On/off rig chatter D=73'-74.5'
	Inferred BOULDER (6-65)		75						Slow/hard drilling D=74.5'-75.5' w/ rig chatter
	Red brown f. SAND, trace silt, f. gravel, m.-c. sand, and clay (6-65)			S20	SS	13	51 58 100/5'	68/11'	PID = 900 ppm Spoon refusal D=77.5'
	Inferred BOULDER (6-65)							Slow/hard drilling D=77.5'-78.75'	
	Red brown and brown f.-m. SAND, trace f.-m. gravel, c. sand, silt, and clay		80	S21	SS	24	19 41 36 26	77	PID = 1200 ppm
	Boring terminated D=81'								
				85					
			90						



PROJECT Loews @ Gowanus				PROJECT NO. 1531601			
LOCATION Brooklyn, NY				ELEVATION AND DATUM approx. el 11 [BBHDD]			
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig				DATE STARTED 12/8/98		DATE FINISHED 12/9/98	
SIZE AND TYPE OF BIT 4 7/8" and 3 7/8" Tri-Cone Roller Bits				NUMBER OF SAMPLES 20		COMPLETION DEPTH 80 ft.	
CASING DIAMETER (in) 4 1/2" OD 4" ID		CASING DEPTH (ft) 13.5		WATER LEVEL (ft.) FIRST		CORE 24 HR.	
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)				DRILLING FOREMAN Tom Gregory/Kurt Conlon			
SAMPLER HAMMER 140		DROP (in) 30		INSPECTING ENGINEER Gary L. Gleason			

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (%)	PENET. RESIST BL/IN	W-VOLUME BLOWS FEET	GRAB	
approx. el 11	4" CONCRETE									
	Brown and black f. SAND, trace silt, f.-c. sand, f. gravel, and coal (11-65)*			S1	SS	13.5	32 38 24 24		52	*New York City BC Classification numbers in parenthesis Started drilling w/ water PID = 650 ppm On/off rig chatter D = 0.75'-5'
	Black and brown c. SAND and f. GRAVEL/COAL, trace f.-m. sand and silt (11-65)		5	S2	SS	13	10 7 9 7		16	PID = 102 ppm
0.0	Gray silty CLAY, some brown peat, trace f. sand (11-65)		10	S3	SS	8	2 1 4 8		5	PID = 9 ppm
	Brown/black f. SAND, some silt, trace clay (11-65)			S4	SS					PID = 10.2 ppm
	Brown f. sandy SILT, trace clay (11-65)		15	S5	SS	18	4 3 3 3		6	PID = 19.6 ppm
	Gray/brown PEAT, trace f. sand, silt, and clay (11-65)			S6	SS					PID = 400 ppm Added mud D = .15'
	Gray silty CLAY, trace organics/root (11-65)		20	S7	SS	24	5 5 3 1		8	PP = 0.6 - 1.25 tsf PID = 19.7 ppm
	Gray f. SAND, some clay, trace silt (8-65)			S8	SS					PID = 40 ppm
	Brown/gray f. SAND, some silt, trace clay (8-65)		25	S9	SS	15	4 4 7 5		8	PID = 9 ppm
	Brown f.-m. sandy SILT, trace clay (10-65)		30	S10	SS	19.5	11 10 9 7		18	PID = 330 ppm Visible petroleum like material
	Brown f. SAND, trace m. sand (7-65)		35	S11	SS	16	14 16 22 24		38	PID = 800 ppm
	Brown/gray f. SAND, trace m. sand, clay, and silt (8-65)		40	S12	SS	18	5 7 12 16		19	PID = 20 ppm

PROJECT		PROJECT NO.							
Loews @ Gowanus		1531601							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		approx. el 11 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR RESIST BL/60	N-VALUE BLOWS PER FT	
	Brown f. sandy SILT, trace clay (10-65)		45	S13	SS	18	8 10 11 12	21	PID = 500 ppm
	Brown f. sandy SILT, trace clay (10-65)		S14	SS	14	15 19 22 23	41	PID = 1020 ppm	
	Brown SILT, trace f. sand and clay (10-65)		S15	SS	17	19 24 24 25	48	PID = 830 ppm Gray/brown f. SAND, trace silt in S15 SS lip	
	Brown f. SAND, trace m. sand and silt (7-65)		60	S16	SS	18	11 17 17 17	34	PID = 50 ppm Slightly visible petroleum like material
	Brown f. SAND, trace m.-c. sand, f. gravel, and silt (7-65)		S17	SS	14	17 44 44 24	88	PID = 600 ppm Visible petroleum like material	
	Brown f.-m. SAND, trace c. sand, f. gravel, and silt (7-65)		S18	SS	5.5	14 13 16 22	29	PID = 880 ppm	
	Inferred boulder (6-65)								Rig chatter D = 72.5' - 75' Very slow/hard drilling D = 72.5' - 73.5'
	Red brown f. SAND, some m.-c. gravel, trace silt, m.-c. sand, f. gravel, and clay (6-65)		S19	SS	11	22 26 32 23	58	PID = 500 ppm	
	Red brown f. SAND, trace silt and clay (8-65)		S20	SS	6	32 32 25 29	57	PID > 2000 ppm	
	Boring terminated D = 80'		80						Borehole grouted upon completion
			85						
			90						

PROJECT Loews @ Gowanus		PROJECT NO. 1531601	
LOCATION Brooklyn, NY		ELEVATION AND DATUM approx. el 11 [BBHDD]	
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig		DATE STARTED 12/8/98	DATE FINISHED 12/9/98
SIZE AND TYPE OF BIT HW Rock Core and Tri-Cone Roller Bits		COMPLETION DEPTH 80.5 ft.	
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH (ft) 19.5	NUMBER OF SAMPLES 18	DIST. 18
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		UNDIST. ---	CORE ---
SAMPLER HAMMER 140		WATER LEVEL (ft.) ---	COMPL. ---
DROP (in) 30		DRILLING FOREMAN Gus Suri/Mike Chizmar	24 HR. 2.6
		INSPECTING ENGINEER Gary L. Gleason	

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (%)	PENETR. RESIST. BLU/in	N-VALUE BLOWS FEET	REMARKS	
approx. el 11	6" CONCRETE w/ wire mesh Inferred miscellaneous FILL (11-65) Black/gray f.-m. SAND, trace silt, c. sand, f. gravel, and coal (11-65)			S1	SS	8	25 33 44 33	77		*New York City BC Classification numbers in parentheses Started coring w/ water PID = 125 ppm Slightly visible petroleum like material Or/Off rig chatter D = 1' - 5'
	Brown f.-m. SAND, trace red brick and silt (11-65)		5	S2	SS	3	21 28 20 12	48		Petroleum like material floating in wash tub D = 5' PID = 84 ppm
	Brown c. SAND, some f. gravel, trace clay, silt, and f.-m. sand (11-65)		10	S3	SS	8	15 4 4 7	8		PID = 155 ppm Slightly visible petroleum like material
	Brown f.-c. SAND, some gravel, trace clay and silt (11-65)		15	S4	SS	4	5 2 3 4	5		Added mud D = 15' PID = 55 ppm Slightly visible petroleum like material
	Brown f.-c. SAND and f. GRAVEL, some clay, trace silt (11-65) Inferred CONCRETE		20	S5	SS	2.5	102/2.3	Refusa		Refusal D = 20' Hard drilling D = 20.25' - 20.75' PID = 340 ppm Visible petroleum like material Added mud D = 20'
	Brown SILT, trace clay, f. sand, and f. gravel (10-65)		25	S6	SS	7	6 10 8 13	18		PID = 220 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)		30	S7	SS	11	5 7 7 7	15		Hole too tight D = 23' to get rods down so removed existing casing and drilled to D = 30' w/ 4 7/8" bit, then spun/cored casing to D = 19.5' PID = 45 ppm Slightly visible petroleum like material
	Brown f. SAND, trace silt and clay (8-65)		35	S8	SS	10	3 4 4 12	8		PID = 480 ppm
	Brown f. sandy SILT, trace clay (10-65)		40	S9	SS	14	12 12 14	24		PID = 640 ppm

PROJECT		PROJECT NO.							
Loews @ Gowanus		1531601							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		approx. el 11 [BBHDD]							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	REC'D. (in)	PENETR. RESIST BL/IN	N-VALUE BLOWS FEET	
	Brown f. SAND, trace silt (8-65)		45	S11	SS	12	11 18 10	20	PID 25 ppm S11 4" Lense of brown SILT, trace clay and f. sand (10-65) w/ PID = 55 ppm in bottom of SS
	Brown f.-m. SAND (7-65)		50	S12	SS	14	10 11 12 17	23	PID = 90 ppm
	Brown f. SAND, trace m.-c. sand (7-65)		55	S13	SS	8.5	11 14 19 17	33	PID = 9.8 ppm
	Brown f. SAND, trace m.-c. sand and silt (7-65)		60	S14	SS	11.5	13 17 17 19	34	PID = 280 ppm PID = 210 ppm
	Brown/gray SILT, trace clay and f. sand (10-65)			65	S16	SS	5	23 100/3"	100/3"
	Red brown f. SAND, some silt, trace f. gravel, m.-c. sand, and clay (7-65)								
	Red brown f.-m. SAND, trace c. sand and f. gravel (7-65)	70		S17	SS	8	17 40 22 21	62	PID = 510 ppm PID = 800 ppm
	Red brown SILT, trace f. gravel, f.-c. sand, and clay (10-65)								
	Inferred BOULDER	75							
	Inferred Red brown f.-c. SAND, trace f. gravel, silt, and clay (7-65)		80		SS	0	58 53 100/3"	53/11	Spoon refusal D = 80.5' Borehole grouted upon completion
	Boring terminated D=80.5'								
			85						
			90						

PROJECT	Loews @ Gowanus			PROJECT NO.	1531601		
LOCATION	Brooklyn, NY			ELEVATION AND DATUM	approx. el 11 [BBHDD]		
DRILLING EQUIPMENT	Davey Kent DK50RA Track Rig			DATE STARTED	12/3/98	DATE FINISHED	12/7/98
SIZE AND TYPE OF BIT	HW and NQ Rock Cores and Tri-Cone Roller Bits			COMPLETION DEPTH	80 ft.		
CASING DIAMETER (in)	4 1/2" OD 4" ID	CASING DEPTH (ft)	24	NUMBER OF SAMPLES	16	DIST.	UNDIST.
				WATER LEVEL (ft)	FIRST	COMPL.	24 HR.
SAMPLER	Standard Split Spoon (SS) or Shelby Tube (ST)			DRILLING FOREMAN	Gus Suri/Mike Chizmar		
SAMPLER HAMMER	WEIGHT (lbs)	DROP (in)		INSPECTING ENGINEER	Gary L. Gleason		
	140	30					

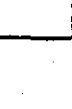
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (%)	PENETR. RESIST. (blows)	N-VALUE	BLOWS PER FT.	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5.5" CONCRETE w/ wire mesh									New York City BC Classification numbers in parenthesis Stained coring with water Spoon refusal D=2' PID = 400 ppm COBBLE fragment in D=1'-3" SS tip
0.0	Inferred miscellaneous FILL (11-65)*									
	Black/brown f.-c. SAND, trace silt, red brick, l.-c. gravel/coal (11-65)									
	Very c. CONCRETE									Lost majority of water D=2'-12'
	Inferred CONCRETE									Hard/slow drilling D=12'-13.5'
	Inferred WOOD (11-65)									Broke through concrete D=13.5'
	WOOD FIBERS, trace gray f. sand (11-65)									WOOD in wash D=13.5'-25' w/ slow drilling
	WOOD FIBERS (11-65)									One bend/dent in end of tube D=17'-19'
	WOOD FIBERS (11-65)									PID = 58 ppm Petroleum like material odor
	WOOD FIBERS (11-65)									Added mud D=20'
	Brown f. SAND, trace silt and clay (8-65)									PID = 7.2 ppm Petroleum like material odor
	Brown f. SAND, trace silt (8-65)									Petroleum like material odor D=25'-25.5'
	Brown f. SAND, trace silt (8-65)									PID = 5.4 ppm
	Brown f. SAND, trace silt (8-65)									PID = 148 ppm Visible petroleum like material Visible petroleum like material
	Brown f. SAND, trace m. sand, silt, and clay (7-65)									PID = 90 ppm Visible petroleum like material Visible petroleum like material
										PID = 9.2 ppm



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LOG OF BORING **LB4**

SHEET **2** OF **2**

PROJECT		PROJECT NO.								
Loews @ Gowanus		1531601								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		approx. el 11 [BBHDD]								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECON. (s)	PENETRH RESIST BL/ft	R-VALUE BLOWS FEET		
	Brown f. SAND, trace silt and clay (8-65)		45	S8	SS	16	12 17 18	29	PID = 1.8 ppm	
	Brown SILT, some f. sand, trace m. sand and clay (10-65)		50	S9	SS	15.5	13 15 21 21	36	PID = 368 ppm	
	Brown f. sandy SILT, trace m. sand (10-65)		55	S10	SS	11	13 18 18 18	36	PID = 7 ppm	
	Brown f. SAND, trace m. sand and silt (7-65)								PID = 13.5 ppm	
	Brown/gray f. SAND, trace m. sand and silt (7-65)		60	S12	SS	11	12 16 16 15	32	PID = 5.2 ppm Slightly visible petroleum like material	
	Red brown f.-m. SAND, trace f. gravel, c. sand, silt, and clay (7-65)		65	S13	SS	11	25 39 25 45	72	Rig chatter D=64.5'-65' PID = 780 ppm On/off rig chatter D=65'-70'	
	Red brown f.-m. SAND, trace f.-m. gravel, c. sand, and silt (7-65)		70	S14	SS	12	22 55 55 87	111	Added mud D = 70' PID = 1 ppm On/off rig chatter D=70'-75'	
	Red brown c. SAND, some f.-m. sand and f.-m. gravel, trace silt (6-65)		75	S15	SS	2.5	100/4.5	R*	*Spoon refusal D=75.5' PID = 4.6 ppm On/off rig chatter D=75'-78'	
	Red brown f.-m. gravelly f.-m. SAND, trace c. sand and silt (6-65)			S16	SS	14.5	40 52 87 102	140	C. GRAVEL in S16 SS tip PID = 0.4 ppm	
	Boring terminated D=80'		80						Borehole grouted upon completion	
			85							
			90							



ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. IN	PENETR. RESIST BLK/IN	N-VALUE BLOWS FOOT	ROCKET	
7x. el 11	4.5" CONCRETE									*New York City BC Classification numbers in parenthesis Began drilling with water *Spoon refusal D=1" 50/0.5" w/ bouncing PID = 49 ppm Sample S1 Gray f.-c. SAND and c. GRAVEL FRAGMENT, trace silt from SS tip Hard/slow drilling w/ on/off rig chatter D=1'-5" and Red wash water D=2.5'-5" *Spoon refusal D=6.5' 90/4" w/ bouncing PID = 20 + ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=5'-10'
0.0	5.5" DENSE GRADED AGGREGATE			S1	SS	0	50/0.5"		R*	
	3.5" CONCRETE									
	2.5" DENSE GRADED AGGREGATE									
	Red BRICK (11-65) Inferred Red BRICK		5	S2	SS	4	90/4"		R*	*Spoon refusal D=10' 100/3" w/ bouncing PID = 21 ppm Hard/slow drilling w/ on/off rig chatter and red wash water D=10'-27.5'
	(Red f.-c. SAND, trace silt and clay) Inferred red BRICK (11-65)									
	(Red f.-c. SAND, trace f. gravel and silt) Inferred red BRICK (11-65)		10	S3	SS	3	100/3"		R*	
	Inferred red BRICK (11-65)		15							
	Inferred red BRICK (11-65)		20							Petroleum like material in wash water D=27.5' Hard drilling D=28'-28.5' PID = 20 ppm Visible petroleum like material Gray f. sandy SILT, trace clay and m. sand in S4 SS tip Added mud D=30' PP = 1.2-1.5 tsf PID = 9.8 ppm PID = 180 ppm
	Inferred red BRICK (11-65)		25							
	Gray f.-m. SAND, trace c. sand (11-65)		30	S4	SS	17	99/3"		12	
	Gray silty CLAY, trace f. sand (11-65)		35	S5	SS	19	4 5 23 24		28	
	Gray/brown f. SAND, trace m. sand and silt (7-65)		40	S7	SS	13	11 11 13 17		24	PID = 1.1 ppm

PROJECT		PROJECT NO.							
Loews @ Gowanus		1531601							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		approx. el 11 (BBHDD)							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	S8	SS	12.5	11 15 13 24	34	PP = No reading PID = 400 ppm
	Gray/brown f. SAND, some silt, trace m. sand (7-65)		50	S9	SS	15	13 19 22 23	41	PID = 1.2 ppm
	Gray/brown f.-m. SAND, trace silt (7-65)		55	S10	SS	8	16 13 22	35	PID = 2.2 ppm Hard drilling D=58'-60'
	Brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		60	S11	SS	9	12 17 27 28	44	PID = 0.4 ppm On/off rig chatter D=60'-65'
	Red brown f. SAND, some silt, trace m.-c. sand and f. gravel (7-65)		65	S12	SS	15	18 20 25 26	45	PID = 8.2 ppm On/off rig chatter D=65'-70'
	Red brown f.-m. SAND, some f.-m. gravel, trace c. sand and silt (6-65)		70	S13	SS	6	52 35 47 31	102	PID = 3.3 ppm On/off rig chatter D = 70'-75'
	Red brown f.-c. SAND, trace f.-m. gravel and silt (6-65)		75	S14	SS	7	22 49 25 13	74	PID = 0.4 ppm On/off rig chatter D=75'-78'
	Red brown f.-m. SAND, trace silt, c. sand, and f. gravel (7-65)		80	S15	SS	8	26 24 23 15	52	PID = 340 ppm
	Boring terminated D=80'								Borehole grouted upon completion
			85						
			90						

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LOG OF BORING LB6SHEET 1 OF 2

PROJECT Loews @ Gowanus			PROJECT NO. 1531601		
LOCATION Brooklyn, NY			ELEVATION AND DATUM approx. el 11 [BBHDD]		
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig			DATE STARTED 11/24/98	DATE FINISHED 11/25/98	COMPLETION DEPTH 77 ft.
SIZE AND TYPE OF BIT HW Rock Core and Tri-Cone Roller Bits			NUMBER OF SAMPLES 16	DIST. 16	UNDIST. ----
CASING DIAMETER (in) 4 1/2" OD 4" ID			CASING DEPTH (ft) 13.5	WATER LEVEL (ft.) 17	COMPL. ----
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)			DRILLING FOREMAN Gus Suri/Mike Chizmar		
SAMPLER HAMMER 140			INSPECTING ENGINEER Gary L. Gleason		
WEIGHT (lbs) 140			DROP (in) 30		

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. BL/ft	W-VALUE BLOWS /ft	REMARKS	
approx. el 11	5" CONCRETE w/ wire mesh									
	Inferred Miscellaneous FILL (11-65)*									
	Black/brown f.-c. SAND, trace f.-c. gravel/coal and silt (11-65)			S1	SS	14	24 21 14 12	35		*New York City BC Classification numbers in parenthesis Started coring w/ water PID = 16.4 ppm
	Brown f.-c. SAND, trace f.-m. gravel/coal and silt (11-65)		5	S2	SS	4	7 7 5 5	12		Trace wood and red brick in wash D=6.25'-10' PID = 5.5 ppm
	Brown/black f.-c. SAND, trace silt, c. gravel/coal, and organics/wood fibers (11-65)		10	S3	SS	11.5	12 4 5 20	9		Rig chatter D=7.25'-8.25' Lost some water D=7.25'-10' Added mud D=10' PID = 11.8 ppm
	Brown f.-c. SAND, some silt and clay, trace f.-m. gravel (11-65)		15	SS S4	SS	16	1 2 2 3	4		PID = 4.2 ppm
	Brown, gray, and black PEAT, trace silt and clay (11-65)									PID = 18.3 ppm
	Brown f. SAND, some silt, trace clay (8-65)		20	S6	SS	17	2 1 2 3	3		PID = 5 ppm
	Gray/brown f. SAND, trace silt (8-65)		25	S7	SS	13	11 12 16 15	28		PID = 20 ppm
	Brown and gray f.-m. SAND, some silt, trace clay (7-65)		30	S8	SS	14.5	7 8 8 7	18		PID = 30 ppm
	Gray/brown f.-m. SAND (7-65)		35	S9	SS	17	4 6 17 20	23		PP = 0.9-1.4 Isl PID = 11.2 ppm
	Gray CLAY, trace f. sand and silt (9-65)									
	Brown f. SAND, trace silt (8-65)		40	S10	SS	16.5	10 17 15 16	32		0.5" of Gray CLAY, trace f. sand and silt (9-65) in top of S10 SS sample PID = 550 ppm

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LOG OF BORING

LB6

SHEET

2

OF

2

PROJECT			PROJECT NO.						
Loews @ Gowanus			1531601						
LOCATION			ELEVATION AND DATUM						
Brooklyn, NY			approx. el 11 [BBHDD]						
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	REC'D. (in)	PENETR. RESIST. BLU (in)	N-VALUE BLOWS FEET	
	Brown SILT, some f. sand, trace clay (10-65)		45	S11	SS	14	18 19 13 14	32	PID = 1.4 ppm
	Gray/black f.-m. SAND, trace silt (7-65)		50	S12	SS	18	20 24 25 22	49	PID = 1.2 ppm
	Inferred COBBLE (6-65)		55	-	SS	0	162/4"	R*	Rig chatter D=53.75'-55' *Spoon refusal D=55' Rig chatter D=55'-55.25'
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		60	S13	SS	111	150 58 51 55	109	Minor rig chatter D=58.75' PID = 400 ppm
	Red brown f. SAND, some f.-c. gravel, trace m.-c. sand and silt (6-65)		65	S14	SS	6	96 39 26 26	65	Slow/hard drilling D=62.25'-62.5' On/off rig chatter D=60'-65' PID = 155 ppm
	Red brown f. SAND, some f.-m. gravel, trace m.-c. sand and silt (6-65)		70	S15	SS	13	62 100 93 32	193	On/off rig chatter D=65'-70' PID = 410 ppm
	Red brown f.-c. GRAVEL and f.-c. SAND, trace silt (6-65)		75	S16	SS	14	100 88 77 56	165	Minor on/off rig chatter D=70'-75' PID = 380 ppm
	Boring terminated D=77'								Borehole grouted upon completion
			80						
			85						
			90						

PROJECT Loews @ Gowanus		PROJECT NO. 1531601	
LOCATION Brooklyn, NY		ELEVATION AND DATUM approx. el 11 (BBHDD)	
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig		DATE STARTED 11/19/98	DATE FINISHED 11/24/98
SIZE AND TYPE OF BIT HW and NQ Rock Cores and Tri-Cone Roller Bit		COMPLETION DEPTH 77 ft.	
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH(ft) 7	NUMBER OF SAMPLES 18	DIST. 1
		UNDIST. 1	CORE ---
		WATER LEVEL (ft.) ---	FIRST ---
		COMPL. ---	24 HR. 6.5
SAMPLER Standard Split Spoon (SS) or Shelby Tube (ST)		DRILLING FOREMAN Gus Suri/Mike Chlzman	
SAMPLER HAMMER 140	WEIGHT(lbs) 140	DROP(in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (in)	PENETR. RESIST BL/ft	N-VALUE BLOWS FEET	
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis Started coring w/ water Lost some water D = 1.5' PID = 400 ppm Petroleum like material odor On/off rig chatter D = 1.5' - 4.5' Petroleum like material in wash D = 4.75' Spoon refusal 50/1" w/ bouncing D = 6' PID = 480 ppm A 16" x 4" x 1/4" piece of vertical steel on a 1/2" thick base plate D = 7' w/ 2" wide horizontal pieces of steel, which were cut, at the top inside and bottom outside D = 6' - 7' Lost some water D = 8' - 9.25' Added mud D = 9.25' Drilled through WOOD and lost circulation D = 9.75' WOR: Weight of rods WOR went from D = 10' - 15' WOH: Weight of hammer Sample S4 SS tip material PID = 590 ppm WOH went from D = 15' - 17.5' Visible petroleum like material w/ odor Pushing became more difficult D = 19.25' Added mud D = 20' PID = 920 ppm PID = 700 ppm Trace wood fibers in wash D = 27' - 30.5' Tight fit for bit D = 27' - 30.5' 1" of WOOD FIBERS, trace f.-m. sand w/ PID = 170 ppm in top of SS PID = 750 ppm Brown SILT, trace clay and f. sand in SS tip D = 32.5' PP = 0.1 - 0.3 tsf PID = 640 ppm PP = 0.6 - 0.9 tsf PID = 320 ppm PP = 0.4 - 0.65 tsf PID > 2000 ppm
	5" CONCRETE			S1	SS	7	28 47 54 29	101	
	Inferred miscellaneous FILL (11-65)*								
	Gray/black f.-c. SAND, some silt (11-65)								
	Black SILT/PETROLEUM LIKE MATERIAL, some c. sand, and white cement fragments, trace f.-m. sand and clay (11-65)		5	S2	SS	3	4 2 1 50/1"	3	
0.0	Piece of STEEL			S3	SS				
0.0	Inferred miscellaneous FILL (11-65)								
0.0	0.5" STEEL			S4	SS	0	WOH WOH WOH WOH	WOH	
	CONCRETE			T1	ST	24	PUSH PUSH PUSH PUSH	PUSH	
	Petroleum like material treated WOOD (11-65)		10	S5	SS	19	33 43 40	6	
	Inferred WOOD (11-65)								
	Inferred Brown PEAT, some silt (11-65)								
	Inferred Brown PEAT, some silt (11-65)		15	S6	SS	11	34 42 33 40	75	
	Brown PEAT, some silt (11-65)								
	Brown/gray f. SAND, some silt (8-65)		20	S7	SS	7	18 19 11 12	30	
	Brown f. SAND, some silt (8-65)								
	Brown f. SAND, trace silt and clay (8-65)		25	S8	SS	18	44 44 44 44	5	
	Brown f.-m. SAND, trace silt (7-65)		30	S9	SS	17	WOH 2 2 2	4	
	Brown SILT, trace clay and f. sand (10-65)		35	S10	SS				
	Gray CLAY, some silt (9-65)								
	Gray/brown CLAY, some silt, trace f. sand (9-65)		40	S11	SS				

PROJECT		PROJECT NO.								
Loews @ Gowanus		1531601								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		approx. el 11 (BBHDD)								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (%)	PENETR. RESIST BLDR	N-VALUE BLOWS PER FT		
	Brown CLAY, some silt, trace f. sand (9-65)		45	S12	SS	13	4 4 4	8	PP = 0.5 - 0.65 1st PID = 170 ppm	
	Brown f. SAND, trace silt (8-65)		50	S13	SS	14	13 31 23 19	56	PID = 550 ppm Rig chatter D = 52.25' - 53'	
	Brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		55	S14	SS	10.5	20 20 24 24	44	PID = 710 ppm	
	Red brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		60	S15	SS	8	10 36 31 22	67	Added mud D = 57' - 58' Rig chatter D = 57.5 - 58' PID = 40 ppm	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		65	S16	SS	8	28 42 22 13	64	On/off rig chatter D = 60' - 65' PID = 540 ppm	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		70	S17	SS	7.5	45 26 22 24	46	On/off rig chatter D = 65' - 70' PID = 20 ppm	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		75	S18	SS	8	58 28 22 25	50	On/off rig chatter D = 70' - 75' PID = 540 ppm	
	Boring terminated D = 77'								Borehole grouted upon completion	
			80							
			85							
			90							

PROJECT Loews @ Gowanus		PROJECT NO. 1531601	
LOCATION Brooklyn, NY		ELEVATION AND DATUM approx. el 11 [BBHDD]	
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig		DATE STARTED 11/18/98	DATE FINISHED 11/19/98
SIZE AND TYPE OF BIT HW and NQ Rock Cores and Tri-Cone Roller Bits		COMPLETION DEPTH 55 ft.	
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH (ft) 19.5	NUMBER OF SAMPLES 14	DIST. 14
		UNDIST. ---	CORE ---
		WATER LEVEL (ft.) ---	FIRST ---
		COMPL. ---	24 HR. 3.6
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		DRILLING FOREMAN Gus Surl/Mike Chizmar	
SAMPLER HAMMER 140	WEIGHT (lbs) 140	DROP (in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	NUMBER	TYPE	RECOV. (in)	PENETR. RESIST. (lb/in ²)	N-VALUE (blows/ft)	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	5" CONCRETE w/ wire mesh								*New York City BC Classification numbers in parenthesis Started coring w/ water Lost some water D = 2' PID = 82 ppm
0.0	CONCRETE DEBRIS and inferred miscellaneous FILL (11-65)*								
0.0	Red BRICK, some gray c. sand, trace f. gravel, concrete, tan brick, gray f.-m. sand, and white tile (11-65)								Lost water D = 2' - 6.5' *Spoon refusal 28/5" w/ bouncing D = 4.5' Hard/slow drilling w/ rig chatter D = 4.5' - 5' PID = 135 ppm
	Red BRICK, some c. sand, trace f.-m. sand and gravel (11-65)								
	CONCRETE								PID = 15 ppm
	Inferred reinforced CONCRETE								
	Gray c. SAND, trace coal, concrete, red brick, gray f.-m. sand, f.-m. gravel, and glass (11-65)								PID = 260 ppm
	Gray c. SAND, trace coal, red brick, gray f.-m. sand, silt, and f. gravel (11-65)								
	Gray c. SAND, some coal, trace red brick, gray f.-m. sand, silt, and f. gravel (11-65)								PID = 52 ppm
	Brown PEAT (11-65)								
									Added mud D = 20"
	Brown f. sandy SILT, trace clay (10-65)								PID = 30 ppm
									PID = 11 ppm
	Brown f.-m. SAND, trace silt (7-65)								
									WOH: Weight of hammer Over drilled to D = 30'-5" resulting in WOH blow count PID = 36 ppm
	Gray/brown SILT, some f. sand, trace m. sand and clay (10-65)								
									PP - No reading PID = 420 ppm PP = 0.4 tsi PID = 340 ppm
	Brown/gray SILT, some clay, trace f. sand (10-65)								
	Brown/gray silty CLAY, trace f. sand (9-65)								PP = 0.3 - 0.4 tsi PID = 108 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)								

**Langan**

Engineering and Environmental Services

LOG OF BORING

LB8

SHEET

2

OF

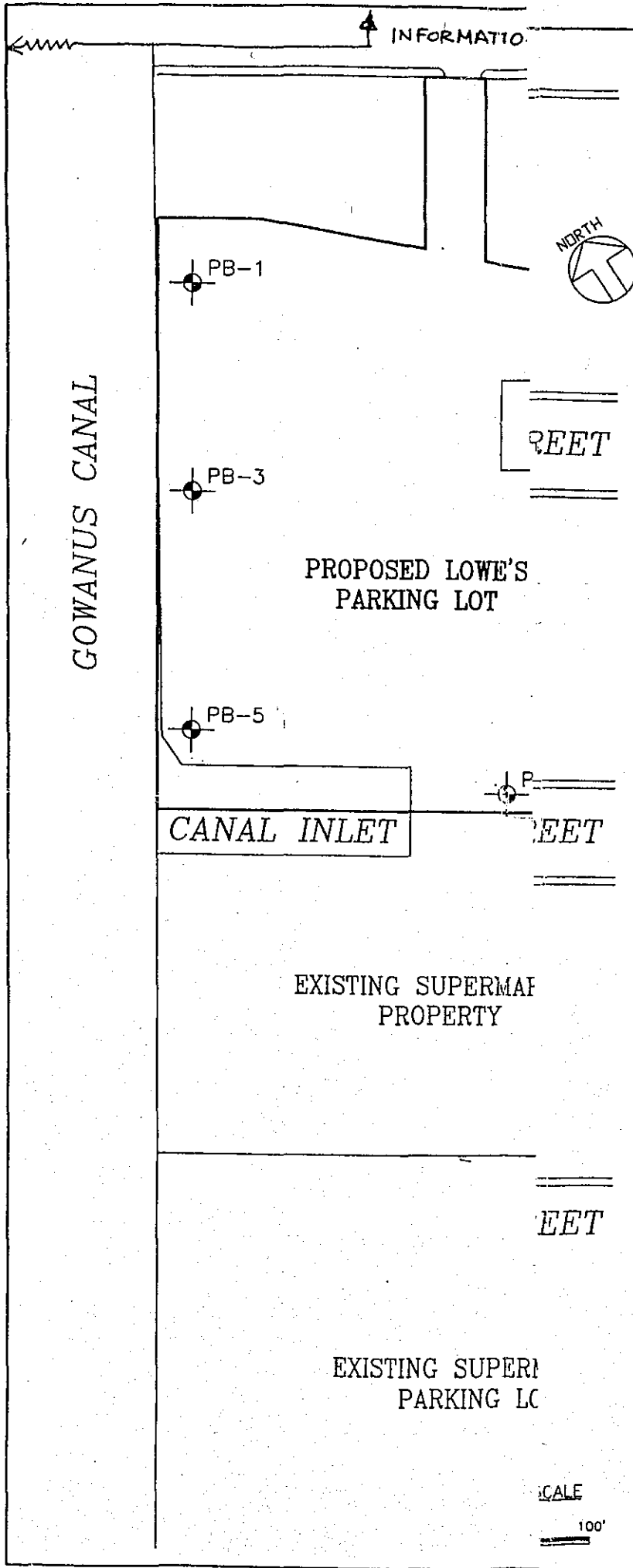
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PROJECT		PROJECT NO.								
Loews @ Gowanus		1531601								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		approx. el 11 [BBHDD]								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. FOI	PENETR RESIST BL/ft	WCH FOI	WCH FOI	
	Brown/gray silty CLAY, trace f. sand (9-65)		45	S12	SS	19	2 1 2	1		PP = No reading - 0.2 tsf PID = 810 ppm
	Brown/gray silty CLAY, trace f. sand (9-65)		50	S13	SS	17	WCH 9 17	9		PP = 0.2 - 0.7 tsf PID = 400 ppm
	Brown f.-m. SAND, trace gray silt and clay (7-65)		55	S14	SS	11	14 14 13 16	27		PID = 520 ppm
	Boring terminated D = 55'									Borehole grouted upon completion
			60							
			65							
			70							
			75							
			80							
			85							
			90							

PROJECT Loews @ Gowanus		PROJECT NO. 1531601	
LOCATION Brooklyn, NY		ELEVATION AND DATUM approx. el 11 [BBHDD]	
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig		DATE STARTED 11/16/98	DATE FINISHED 11/18/98
SIZE AND TYPE OF BIT 4 7/8" (0' - 5') and 3 7/8" Tri-Cone Roller Bits		NUMBER OF SAMPLES 14	COMPLETION DEPTH 57 ft.
CASING DIAMETER (in) 4 1/2" OD 4" ID	CASING DEPTH (ft) 13.5	WATER LEVEL (ft.) FIRST	UNDIST. ---
SAMPLER 2" OD 1 3/4" ID Split Spoon (SS)		DRILLING FOREMAN Gus Suri/Mike Chizmar	CORE 24 HR. 4.6
SAMPLER HAMMER 140	WEIGHT (lbs) 140	DROP (in) 30	INSPECTING ENGINEER Gary L. Gleason

ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA	REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
approx. el 11	4" CONCRETE				
	Inferred DENSE GRADED AGGREGATE CONCRETE				
0.0	Inferred miscellaneous FILL (11-65)*		5	S1 SS 0 7 12	*New York City BC Classification numbers in parentheses Started drilling w/ water Lost some water D=2.5' D=0'-4.5' : Slow/hard drilling and wash water Gray cement/concrete color NX Rock Core Barrel used D=4'-4.5' : 6" Concrete core recovered Lost some water D=4.5' Attempted a 2nd SS to acquire some form a sample: Only gray sand wash was recovered, Sample S1 PID = 2 ppm Overdove SS 7'-10' to aid in recovery Sample S2 SS to material
	Inferred Gray c. SAND/COAL, trace silt, f.-m. sand, clay, f. gravel, and organics (11-65)		10	S2 SS 0 4 4	Overdove SS D=10'-13' to aid in recovery PID = 3.3 ppm
	Gray c. SAND/COAL, trace f.-m. sand, silt, and f. gravel (11-65)		15	S3 SS 4 4 5	
	Gray silty, organic/rooty CLAY (11-65)		15	S4 SS 16.5 4 4	Added mud D=15' PID = 0 ppm PID = 0 ppm
	Brown/gray PEAT (11-65)		20	S5 SS 10.5 19 10	
	Brown SILT, trace clay and f. sand (10-65)		25	S6 SS 0 27 59	PID = 38 ppm
	Inferred Brown/gray f.-m. SAND, trace silt (7-65)		30	S7 SS 17 26 65	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)		30	S8 SS 7 11 20	PID = 0 ppm
	Brown f.-m. SAND, trace silt and clay		35	S9 SS 17.5 10 10	PID = 0.2 ppm
	Gray/brown silty CLAY, trace f.-m. sand (9-65)		40	S10 SS 10.5 14 20	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)				

PROJECT		PROJECT NO.							
Loews @ Gowanus		1531601							
LOCATION		ELEVATION AND DATUM							
Brooklyn, NY		approx. e 11 (B8HDD)							
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA					REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	REC'DY. ft	PENETR. RESIST BLANK	W. VALUE BLOWS PER FT.	
	Brown/gray SILT, some f. sand, trace clay (10-65)		45	S11	SS	19		12	PID = 0 ppm
	Brown/gray f. sandy SILT, trace f. gravel (10-65)		50	S12	SS	15	15 18 15 17	31	PID = 0 ppm
	Brown/gray f.-m. SAND, trace silt (7-65)			S13	SS	15			PID = 0 ppm
	Brown f.-m. SAND, trace silt (7-65)		55	S14	SS	15	17 19 23 22	42	PID = 0 ppm
	Boring terminated D=57'								Borehole grouted upon completion
			60						
			65						
			70						
			75						
			80						
			85						
			90						



BORINGS B-5 & B-10 NOT COMPLETED.
Jc

LEGEND

- B-1 - PROPOSED BUILDING BORING, 82 FEET DEEP
- B-2 - PROPOSED BUILDING BORING, 102 FEET DEEP
- PB-1 - PROPOSED PARKING LOT BORING, 82 FEET DEEP
- B-1P - 30 FOOT DEEP OBSERVATION WELL TO BE INSTALLED IN BORING
- LB-1 - EXISTING BORING
- RB-1 - EXISTING BORING

PRELIMINARY

LOWE'S HOME CENTER		
BROOKLYN	NEW YORK	
AKRF ENGINEERING, P.C.		
NEW YORK	NEW YORK	
MUESER RUTLEDGE CONSULTING ENGINEERS		
708 THIRD AVENUE, NEW YORK, N.Y. 10017		
SCALE	MADE BY J.C.	DATE 10-28-00
GRAPHIC	CHECKED BY	DATE
PROPOSED BORING LOCATION PLAN		FILE NO. 9446
		DRAWING NO. PB-1

FIELD LOG

SHEET 1 OF 2FILE NO. 9854PROJECT LOWE'S HOME CENTERBORING NO. T1SURFACE ELEV. 10.2 ±PROJECT LOCATION BROOKLYN, NYRES. ENGR. A. MODICA

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
FRIDAY 5 NOV 02 PARTLY CLOUDY ~55°F 1200	1D	0'-	8-11	BROWN C-F SAND, SM GVL, TR BRICK, SILT (FILL) (SP-SM)	F		3" 4"	
	2D	2'-	10-7	BROWN C-F SAND, SM GVL, TR BRICK, WOOD, CONCRETE, SILT (FILL) (SP-SM)				
	3D	4'-	17-17	BROWN C-F SAND, CONCRETE, SM GVL, TR BRICK, SILT (FILL) (SP-SM)		5		
	4D	6'-	18-21	GRAY C-F SAND, SM GVL, TR BRICK, SILT (FILL) (SP-SM)				
	5D	8'-	9-7	GRAY C-F SAND, SM GVL, CONCRETE, TR BRICK (FILL) (SM)		10		
	6D	10'-	10-16	GRAY C-F SAND, SM CONCRETE, GVL, TR BRICK, GLASS (FILL) (SM)				
	7D	12'-	11-9	CONCRETE, GVL, SM C-F SAND, TR BRICK (FILL) (SM)				POOR RECOVERY
	8D	14'-	11-14	GRAY C-F SAND, SM GVL, TR BRICK, (FILL) (SM)		15		POOR RECOVERY
	9D	16'-	6-8	GRAY C-F SAND, SM GVL, TR BRICK (FILL) (SM)				PETROLEUM ODOR PRESENCE
	10D	18'-	6-100/4'	SPUN CASING THRU CONCRETE, CONCRETE IN BAG		18.5 19.5		CONCRETE @ ~18.5' CONCRETE ENDED @ ~19'
	11NR	20'-	2-2	NO RECOVERY	S	22		REC ~7" CONC. " 2" BRICK 22'-28' PETROLEUM
	12D	22'-	6-5	GRAY SILTY F-SAND (SM)				
	13D	24'-	11-10	" DO 12D" (SM)		25		
	14D	26'-	11-11	" DO 12D" (SM)		28		EOBC @ 28'
		28'	16-10					

1530

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NY
 BORING LOCATION _____

BORING NO. T1
 SHEET 2 OF 2
 FILE NO. 9854
 SURFACE ELEV. 10.2 ±
 DATUM BROOKLYN HWY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>X</u>	MECHANICAL _____	DIA., IN. <u>3</u>	DEPTH, FT. FROM <u>0</u> TO <u>20</u>
SKID _____	HYDRAULIC _____	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>4</u>
BARGE _____	OTHER _____	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
OTHER _____			

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. S.S.
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 2 7/8, 3 7/8
 TYPE OF DRILLING MUD _____

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NO OBSERVATIONS MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>28</u>	NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: <u>SPUR CASING THRU 12" CONCRETE</u>

BORING CONTRACTOR ADT, INC
 DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
 REMARKS _____

RESIDENT ENGINEER A. MODICA DATE 15 NOV 02

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T1

FIELD LOG

SHEET 1 OF 2

FILE NO. 9854

PROJECT LOWE'S HOME CENTER

BORING NO. T2

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. A MODICA

SURFACE ELEV. 10.0 ±

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
ON DAY NOV 02 AIN ~65°F 300 300 ES DAY 12 NOV 02 9IN ~50°F 815							4"	
					F			
					STEEL	5		
	1D	3'-	5-4	BROWN C-F SAND, SM GUL, TR				
		5'	2-2	BRICK (FILL) (SM)				
	2NR	5'-	50/0"	NO RECOVERY, SPUN CASING THRU 18"	CONC	6.5 ±		1 1/2" STEEL PLATE
		7'		CONCRETE REC ≈ 11" IN BAG	WOOD	7 ±		18" CONCRETE
	3NR	8'-		FOUND VOID 8' TO 10'	VOID	10		
		10'						
	4D	10'-	1-1	BLACK PG, TR WOOD, VEGETATION	O			PETROLEUM ODOR
		12'	2-2	(PG)				
	5D	12'-	WH/24"	BLACK PG (PG)				
		14'						
	6D	14'-	WR/24"	TOP 24" = "DO 5D" (PG)		15		
		16'		TIP OF S.S. = GRV SILTY F-SAND, TR VEG (SM)		15.8'		
	7D	16'-	WH/24'	GRAY SILTY F-SAND, TR VEG (SM)				
		18'		BRN				
	8D	18'-	3-4	GRAY SILTY F-SAND, TR MICA (SM)	S			
		20'	4-3	BRN		20		
	9D	20'-	WH/12"	"DO 8D" (SM)				
		22'	2-4					
	10D	22'-	4-8	GRAY F-SAND, SM SILT, TR MICA				
		24'	11-11	(SM)		24		EOB @ 24'

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION _____

BORING NO. T2
SHEET 2 OF 2
FILE NO. 9851
SURFACE ELEV. 10.0 ±
DATUM BROOKLYN HWY.

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED _____ CASING USED ☒ YES ☐ NO
TRUCK K MECHANICAL _____ DIA., IN. 4" DEPTH, FT. FROM 0 TO 12
SKID _____ HYDRAULIC _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
OTHER _____

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER _____
S-SAMPLER _____
CORE BARREL _____
CORE BIT _____
DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 3 7/8", 4 7/8"
TYPE OF DRILLING MUD _____

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>NONE MADE</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 24 NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK LIN. FT. _____ OTHER: SPUN CASING TUBE 18" CONCRETE

BORING CONTRACTOR A.D.T., INC
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
REMARKS _____

RESIDENT ENGINEER A. MONICA DATE 13 NOV 02

NOTES:

1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T2

FIELD LOG

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. A. Malica

FORM NO. B-1

BORING NO. T3

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NY
 BORING LOCATION _____

BORING NO. T3
 SHEET 2 OF 2
 FILE NO. 9854
 SURFACE ELEV. 10.5 ±
 DATUM BROOKLYN HWY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES ☐ NO
TRUCK <u>6</u>	MECHANICAL _____	DIA., IN. <u>3</u>	DEPTH, FT. FROM <u>0</u> TO <u>13</u>
SKID _____	HYDRAULIC _____	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u> TO <u>4</u>
BARGE _____	OTHER _____	DIA., IN. _____	DEPTH, FT. FROM _____ TO _____
OTHER _____			

TYPE AND SIZE OF:	DRILLING MUD USED ☒ YES ☐ NO
D-SAMPLER <u>2" O.D. S.S.</u>	DIAMETER OF ROTARY BIT, IN. <u>3 7/8, 2 7/8</u>
U-SAMPLER _____	TYPE OF DRILLING MUD <u>QUIK GEL</u>
S-SAMPLER _____	
CORE BARREL _____	AUGER USED ☐ YES ☒ NO
CORE BIT _____	TYPE AND DIAMETER, IN. _____
DRILL RODS _____	

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>24</u>	NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: <u>SPUN CASING THRU 12" CONCRETE</u>

BORING CONTRACTOR ADT, INC
 DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
 REMARKS _____

RESIDENT ENGINEER A. MORA DATE 15 NOV 02

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T3

FIELD LOG

SHEET 1 OF 2

FILE NO. 9854

BORING NO. T4

SURFACE ELEV. 10.5 ±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. A. MODER

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
125. JUN 02 UNNY 450°F 200	1D	0'-	10-14	BROWN C-F SAND, SM GVL, CONCRETE,	F		3" 4"	
		2'	27-26	TR BRK GLASS (FILL) (SM)				
	2D	2'-	10-29	CONCRETE, BROWN C-F SAND, SM				
		4'	19-15	GVL, BRICK, TR SILT, GLASS (FILL) (SP-SM)				
	3D	4'-	4-7	CONCRETE	F2	5		POOR RECOVERY,
		6'	10-100 1/2"			5.5		RECOVERED 2" OF
	4C	6'-		SPUN 3" CASING THRU 12" CONCRETE,		6.5		CONCRETE IN TIP OF
		8'		IN BAG		7.5		S.S.
	4D	8'-	2-2	BROWN C-F SAND, SM GVL, SILT	F2			- STARTED CORING
		10'	3-2	(SM)		10		@ 5.5' STOPPED @ 6.5'
130	5D	10'-	10-7	BROWN C-F SAND, SM GVL, TR SILT				REL - 8" CONCRETE
		12'	4-8	(SP-SM)				- @ VOID RIG LOST
	6D	12'-	10-14	BROWN M-F SAND, SM SILT, TR GVL	O			ALOT OF WATER
		14'	10-7	(SM)		15		
	7D	14'-	9-10	BROWN M-F SAND, SM SILT, TR GVL				
		16'	5-4	(SM)				
	8D	16'-	4-12	SOFT GRAY CLAY, SM VEGETATION		18		EOB @ 18'
		18'	6-7	(OH)				

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NY
 BORING LOCATION _____

BORING NO. T4
 SHEET 2 OF 2
 FILE NO. 9854
 SURFACE ELEV. 10.5 ±
 DATUM BROOKLYN HWY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☒ YES	☐ NO
TRUCK <u>X</u>	MECHANICAL	DIA., IN. <u>3</u>	DEPTH, FT. FROM <u>0</u>	TO <u>8</u>
SKID	HYDRAULIC	DIA., IN. <u>4</u>	DEPTH, FT. FROM <u>0</u>	TO <u>4</u>
BARGE	OTHER	DIA., IN. _____	DEPTH, FT. FROM _____	TO _____
OTHER				

TYPE AND SIZE OF:
 D-SAMPLER 2" OD S.S.
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 3 7/8" 2 7/8"
 TYPE OF DRILLING MUD QUICK GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24"
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>18</u>	NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: <u>SPUN CASING THRU 12" CONCRETE</u>

BORING CONTRACTOR ADT, INC
 DRILLER DAVID CARTER HELPERS LIONEL EDWARDS

REMARKS _____
 RESIDENT ENGINEER A. M. Jones DATE 14 NOV 02

NOTES:

- Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
- All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T4

FIELD LOG

FILE NO. 9854

BORING NO. T5

SURFACE ELEV. 11.0 ±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR.

Modica

FORM NO. B-1

BORING NO. T5

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NY
 BORING LOCATION _____

BORING NO. T5
 SHEET 2 OF 2
 FILE NO. 9854
 SURFACE ELEV. 11.0 ±
 DATUM BROOKLYN HWY

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
 TRUCK X MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO _____
 SKID _____ HYDRAULIC _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
 OTHER _____

TYPE AND SIZE OF:
 D-SAMPLER 2" OD. SS.
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 2 7/8", 3 7/8"
 TYPE OF DRILLING MUD QUICK GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
 SAMPLER HAMMER, LBS. 140 AVERAGE FALL, IN. 30
 *AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					NONE MADE

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
 STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
 INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
 FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 32 NO. OF 3" SHELBY TUBE SAMPLES _____
 3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
 CORE DRILLING IN ROCK LIN. FT. _____ OTHER: SPUN CASING THRU 24" CONCRETE

BORING CONTRACTOR ADT, INC
 DRILLER DAVID CARTER HELPERS LIONEL EDWARDS
 REMARKS _____

RESIDENT ENGINEER A. M. M. M. DATE _____

NOTES:

1. Make a separate log of each boring and each unsuccessful boring attempt. Keep a copy of all logs in the field.
2. In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
3. All samples shall be numbered in consecutive order regardless of type; dry samples D, wash samples W, shelly tube samples S, fixed piston samples U. Assign NR to lost samples and record blows. Make another sample attempt immediately below the lost sample.
4. Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
5. Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
6. List changes of material in strata column and list generalized strata descriptions.
7. List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash-water including amount and any unusual occurrences.
8. For rock core, the recovery and the RQD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
9. Include sample description by Unified Soil Classification System.
10. Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T5

FIELD LOG

FILE NO. 9854

BORING NO. TO-1

SURFACE ELEV. 10.2 ±

PROJECT LOWE'S HOME CENTER

PROJECT LOCATION BROOKLYN, NY

RES. ENGR. A. ModicaFORM NO. B-1

BORING NO. T-1

MUESER RUTLEDGE CONSULTING ENGINEERS

BORING NO. TO-1
 SHEET 2 OF 2
 FILE NO. 9854
 SURFACE ELEV. 10.21
 DATUM BROOKLYN HWY

PROJECT LOWE'S HOME CENTER
 LOCATION BROOKLYN, NY
 BORING LOCATION _____

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG	TYPE OF FEED DURING CORING	CASING USED	☐ YES	☒ NO
TRUCK <u>X</u>	MECHANICAL	DIA., IN. _____	DEPTH, FT. FROM _____	TO _____
SKID	HYDRAULIC	DIA., IN. _____	DEPTH, FT. FROM _____	TO _____
BARGE	OTHER	DIA., IN. _____	DEPTH, FT. FROM _____	TO _____
OTHER _____				

TYPE AND SIZE OF:
 D-SAMPLER 2" O.D. S.S.
 U-SAMPLER _____
 S-SAMPLER _____
 CORE BARREL _____
 CORE BIT _____
 DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
 DIAMETER OF ROTARY BIT, IN. 2 7/8" 3 7/8"
 TYPE OF DRILLING MUD QUICK GEL

AUGER USED ☐ YES ☒ NO
 TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. _____ AVERAGE FALL, IN. _____
 SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>NONE MADE</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____

STANDPIPE: TYPE _____	ID, IN. _____	LENGTH, FT. _____	TOP ELEV. _____
INTAKE ELEMENT: TYPE _____	OD, IN. _____	LENGTH, FT. _____	TIP ELEV. _____
FILTER: MATERIAL _____	OD, IN. _____	LENGTH, FT. _____	BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING	LIN. FT. <u>16</u>	NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING	LIN. FT. _____	NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK	LIN. FT. _____	OTHER: _____

BORING CONTRACTOR A.D.T. INC
 DRILLER DAVID CARTER HELPERS LIONEL EDWARDS

REMARKS _____
 RESIDENT ENGINEER A. Modica DATE 13 NOV 02

NOTES:

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- For rock core, the recovery and the ROD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
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- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. TO-1

FIELD LOG

SHEET 1 OF 2FILE NO. 9854PROJECT LOWE'S HOME CENTERBORING NO. TO-2SURFACE ELEV. 10.7±PROJECT LOCATION BROOKLYN, NYRES. ENGR. A. Modica

DAILY PROGRESS	SAMPLE			SAMPLE DESCRIPTION	STRATA	DEPTH	CASING BLOWS	REMARKS
	NO.	DEPTH	BLOWS/6"					
WEDAY NOV 02 CLOUDY/SHOWERS ~65°F 1930	1D	0'-	8-26	BROWN M-C SAND, SM GUL, BRICK,	F		4"	
		2'	27-29	TR GLASS, PORCELAIN (FILL) (SM)				
	2D	2'-	17-13	BLK M-C SAND, SM GUL, TR BRICK				
		4'	13-10	(FILL) (SM)				
	3D	4'-	7-17	GRY-BLK C-M SAND, SM GUL, TR		5		PETROLEUM ODOR
		6'	15-9	CONCRETE, BRICK, SILT (FILL) (SPSM)		6		
	4D	6'-	6-10	BROWN C-M SAND, SM GUL				PETROLEUM ODOR
		8'	6-3	(SM)				
	5D	8'-	4-3	BROWN M-F SILTY SAND, TR				
		10'	2-4	C-SAND (SM)		10		
	6D	10'-	3-2	BROWN M-F SAND UVD/W BLACK				
		12'	3/12"	F-SANDS POCKETS (SM)				
1230	7D	12'-	WH	GRY SILTY F-SAND, TR GUL (SM)	S ₂			
		14'						
	8D	14'-	WR	BLK PE, TR GUL, GRY F-SAND, SILT		15		POOR RECOVERY
		16'	1-1	(PE)		16		
	9D	16'-	WR-1	BLK-BROWN PEAT (PE)				
		18'	1-2			18		
	10D	18'-	WH/12"	GRY SILTY F-SAND (SM)				
		20'	2-2			20		
	11D	20'-	2-3	"DO 10D" (SM)				
		22'	4-6					
	12D	22'-	5-5	"DO 10D" (SM)				
		24'	6-12			24		EOB @ 24'

BORING NO. TO-2

MUESER RUTLEDGE CONSULTING ENGINEERS

PROJECT LOWE'S HOME CENTER
LOCATION BROOKLYN, NY
BORING LOCATION _____

BORING NO. T0-2
SHEET 2 OF 2
FILE NO. 9854
SURFACE ELEV. 10.7 ±
DATUM BROOKLYN HWY.

BORING EQUIPMENT AND METHODS OF STABILIZING BOREHOLE

TYPE OF BORING RIG _____ TYPE OF FEED DURING CORING _____ CASING USED ☒ YES ☐ NO
TRUCK ☒ MECHANICAL _____ DIA., IN. 4 DEPTH, FT. FROM 0 TO 8
SKID _____ HYDRAULIC _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
BARGE _____ OTHER _____ DIA., IN. _____ DEPTH, FT. FROM _____ TO _____
OTHER _____

TYPE AND SIZE OF:
D-SAMPLER 2" O.D. S.S.
U-SAMPLER _____
S-SAMPLER _____
CORE BARREL _____
CORE BIT _____
DRILL RODS _____

DRILLING MUD USED ☒ YES ☐ NO
DIAMETER OF ROTARY BIT, IN. 3 7/8"
TYPE OF DRILLING MUD WICK GEL

AUGER USED ☐ YES ☒ NO
TYPE AND DIAMETER, IN. _____

CASING HAMMER, LBS. 300 AVERAGE FALL, IN. 24
SAMPLER HAMMER, LBS. _____ AVERAGE FALL, IN. _____

* AUTOMATIC HAMMER

WATER LEVEL OBSERVATIONS IN BOREHOLE

DATE	TIME	DEPTH OF HOLE (FEET)	DEPTH OF CASING (FEET)	DEPTH TO WATER (FEET)	CONDITIONS OF OBSERVATION
					<u>NOVE MADE</u>

PIEZOMETER INSTALLED ☐ YES ☒ NO SKETCH SHOWN ON _____
STANDPIPE: TYPE _____ ID, IN. _____ LENGTH, FT. _____ TOP ELEV. _____
INTAKE ELEMENT: TYPE _____ OD, IN. _____ LENGTH, FT. _____ TIP ELEV. _____
FILTER: MATERIAL _____ OD, IN. _____ LENGTH, FT. _____ BOT. ELEV. _____

PAY QUANTITIES

3.5" DIA. DRY SAMPLE BORING LIN. FT. 24' NO. OF 3" SHELBY TUBE SAMPLES _____
3.5" DIA. U-SAMPLE BORING LIN. FT. _____ NO. OF 3" UNDISTURBED SAMPLES _____
CORE DRILLING IN ROCK LIN. FT. _____ OTHER: _____

BORING CONTRACTOR AQUIFER DRILLING & TESTING, INC.
DRILLER DAVID CARTER HELPERS LIONEL EDWARDS

REMARKS _____
RESIDENT ENGINEER A. Modica DATE 11 NOV 02

NOTES:

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- In daily progress column indicate depth at beginning and end of work day, calendar date, day of week, time at beginning and end of work day and weather conditions.
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- Mark each U-sample with job number, boring number, sample number, depth, penetration and recovery. Indicate method by which penetration of tube sampler was obtained.
- Record blows on spoon sampler per six inches of penetration. Note all blows and penetrations when taken at less than six-inch interval.
- List changes of material in strata column and list generalized strata descriptions.
- List under remarks the manner by which changes in material were detected, all obstructions, any loss or gain of wash water including amount and any unusual occurrences.
- For rock core, the recovery and the ROD (Rock Quality Designation) should be shown in both inches and percent of run length in the blows per six inches column. All core runs shall be numbered in consecutive order. A run number is given even if recovery is zero.
- Include sample description by Unified Soil Classification System.
- Obtain water level at the beginning of each day and at all other times when stable water conditions exist.

BORING NO. T0-2

Roux Associates Logs – 2002



ROUX ASSOCIATES, INC.
Environmental Consulting
& Management

1377 Motor Parkway
Islandia, NY
Telephone: 631-232-2600
Fax: 631-232-9898

Page 1 of 1

SOIL BORING LOG

WELL NO. AN-3	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY T. Mills	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 6-inches	DRILLING EQUIPMENT/METHOD / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 1/21/02-1/21/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PTD Values (ppm)	REMARKS
		Brown fine to medium SAND, trace Gravel, trace Wood, trace Brick; dry (fill)	23		
			36		
			30		
			28		
		Brown to gray fine to medium Sand and Gravel, trace Brick, trace Concrete; dry (fill)	16	19.8	
			17		
			21		
			13		
		Brown to black stained fine to medium SAND, trace Silt; dry (fill)	10		
5			15	67.1	
			10		Slight odor.
			9	101	
		Brown to black stained fine to medium SAND, trace Silt, trace Gravel; dry (fill)	8		
			8	58.2	
			5		
		Brown to reddish brown Silt and fine Sand; (fill)	12	40.2	
		Black stained fine to medium Sand and Silt; (fill)	5		
			6	30.1	
			5		Free product.
10			9	80.2	
		Dark brown to reddish brown fine to medium Sand and Silt, trace Clay, (fill)	2		
			2	59.1	
			2		Sheen.
		Dark brown to black stained fine to medium Sand and Silt; (fill)	2	24.9	
			1		
			1	58.5	
			1		Sheen.
			1	55.9	
		Dark gray to black stained fine to medium Sand and Gravel; (fill)	2		
15			1	55.9	Free product.
		PEAT	3		
			3		

Bottom of boring 16 feet
below land surface.



ROUX ASSOCIATES, INC.
Environmental Consulting
& Management

1377 Motor Parkway
Islandia, NY
Telephone: 631-232-2600
Fax: 631-232-9898

Page 1 of 1

SOIL BORING LOG

WELL NO. AN-4	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/7/02-2/7/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown to tan medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15		
			19		
			18		
			31		
		Dark brown to tan medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15	7.9	
			15		
			30		
			27		
		Black stained fine SAND, little Silt, trace Gravel, trace Coal Fragments; moist (fill)	6		
5			7		5
			6	55.2	
			10		
		Black stained fine SAND, some Coal Fragments, little Gravel, trace Silt; wet (fill)	12		
			10		
			2	52.3	Trace free product.
			2		
		Gray fine SAND, little Coal Fragments, little Silt, trace Gravel; wet (fill)			
				12.8	Trace free product.
10					10
		Dark gray to black stained fine to coarse SAND, some Gravel, little Silt, trace Glass; wet (fill)			
				3.1	Odor.
		No recovery			
		Black stained medium to coarse SAND, little Silt, little Gravel; wet (fill)			Slight odor.
15					15
		PEAT		6.9	

Bottom of boring 16 feet
below land surface

BORINGWELL ENDPO-1.GPJ ROUX.GDT 4/17/02



ROUX ASSOCIATES, INC.
Environmental Consulting
& Management

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Islandia, NY
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SOIL BORING LOG

WELL NO. AN-6	NORTHING	EASTING
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site	LOCATION 124-136 2nd Avenue	
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin	GEOGRAPHIC AREA Area A	
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	SAMPLING METHOD 2" Split Spoon
		START-FINISH DATE 2/19/02-2/19/02
		BACKFILL Cuttings/Bentonite Pellets

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to coarse SAND, trace Silt, trace Brick, trace Concrete; dry (fill)	9		
			17		
			14		
			21		
			7	4.1	
			14		
			21		
			27		
		Brown fine to coarse SAND, little Silt, trace Gravel; moist to wet (fill)	9		
5			9		5
			10	4.3	
			6		
		Brown to black stained fine to medium SAND, little Silt, trace Gravel, trace coarse Sand; wet (fill)	6		
			5		
			10	18.1	Odor and trace free product.
			10		
		Black stained medium SAND, little Silt, trace Gravel trace, Asphalt-like material; wet (fill)	9		
			9		
			16	89.1	Odor and trace free product.
10			17		10
		Black stained medium to coarse SAND, some Gravel, trace Silt, trace Asphalt-like material; wet (fill)	17		
			22		
			25	57.2	Odor and free product.
		CONCRETE	50/1		
		Black stained fine to medium SAND, little Silt, trace Gravel; wet (fill)			
				78.7	
15		No recovery			15
		Peat and Clay; wet			
20					20

Bottom of boring 20 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. AN-9	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / D. Pepe		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/12/02-3/13/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Tan to brown fine to coarse SAND, trace Gravel, trace Brick, trace Concrete, trace Wood; dry (fill)	18		
			20		
			23		
			20		
		Tan to brown fine to coarse SAND, trace Gravel, trace Brick, trace Concrete, trace Wood; wet at 4 ft. (fill)	23		
			18		
			30		
		Brown to red Sand and Gravel, little Concrete, trace Silt; wet (fill)	46		
			10		
5			50/5		
		CONCRETE			
		Black fine SAND, some Silt, trace coarse Sand, trace Gravel; wet (fill)			
					Odor and Free product.
		Brown to black stained fine SAND, some Silt; wet (fill)	5		
			3		
			1		Slight odor.
10			1		
		Brown to green fine Sand and Silt; wet (fill)			
		Light brown fine SAND, some Silt, trace Gravel; wet (fill)	1		
			1		
			1		
			1		
		Light brown fine SAND and Silt, trace Clay, trace Gravel; wet (fill)	2		
			1		
15			1		
		Brown PEAT, and green to gray Clay	1		
			1		

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX GDT 4/17/02



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SOIL BORING LOG

WELL NO. AN-9N	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/13/02-3/13/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown medium to coarse SAND, trace Gravel, trace brick, trace Concrete; moist (fill)	11		
			14		
			19		
			17		
		Dark brown medium to coarse SAND, trace Gravel, trace brick, trace Concrete; wet at 4 (fill)	14	8.9	
			12		
			12		
			8		
		Green to brown fine SAND, some Silt, trace Gravel; wet (fill)	6		
5			50/3	7.9	
		CONCRETE			
		Black stained fine SAND, some Silt, trace Gravel; wet (fill)	6		
			6		
			3		
			7/12	180	Strong odor.
		Red to brown fine SAND, little Silt, trace coarse Sand; wet (fill)	8		
			7		
			6	4.9	
10			3		
		Red to black stained SILT, some fine to medium Sand; wet (fill)	1		
			1		
			1	5.2	
			1		
		Red to brown medium SAND, some Silt, trace Gravel; wet (fill)	1		
			1		
			1	4.7	
			1		
			1		
15		PEAT; wet	1		
			1		
			1/12		

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. ANE-1	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin				
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 1/21/02-1/21/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	11		
			9		
			18	6.3	
			18		
		Gray fine to medium SAND, trace Gravel, trace Ash; moist (fill)	4		
			5		
		Black stained fine SAND, trace Gravel, trace Roots; moist (fill)	8	1735	Strong odor.
			20		
5		CONCRETE			Slight odor.
		Black stained fine to coarse SAND, little Silt, trace Gravel; wet (fill)	2		
			1		
			2	81.3	Slight odor.
		No recovery	1		
		Black stained fine to coarse SAND, some Gravel, trace Silt, trace Shells, trace, Glass; wet (fill)	1		
			1		
			1	21.8	Slight odor.
10		Black Coal Fragments, trace Silt; wet (fill)	1		
			2		
			2		
			1	7.8	Slight odor.
			1		
			1		
		PEAT	1	14.4	
			2		
			3		

Bottom of boring 14 feet
below land surface.

BORING/WELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. ANW-1 (SB-3)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Geographic Area Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/2/02-1/2/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, trace Silt, trace Gravel, trace Coal, trace Brick; dry (fill)		0.0	
				0.0	
5		Light brown to black stained fine to medium SAND, trace Silt, trace Gravel; dry (fill)		49.5	Slight odor.
		Black stained fine to coarse SAND, some Silt, trace Gravel, trace Coal; wet (fill)		91.5	
		Black stained fine to coarse Sand and Silt, trace Gravel; wet (fill)		7.2	Slight odor and sheen on water.
10					
		Black stained SILT, little fine to coarse Sand, trace Gravel; (fill)		35.2	Slight odor.
15					
		Black stained Silt and fine Sand; wet		0.0	
		PEAT, little green to gray Silt, trace Sand; wet (fill)			Sheen on water.
20					

Bottom of boring 20 feet below land surface.

BORINGWELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. AS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/8/02-1/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
				0.0	
		Black stained fine to medium SAND, trace Gravel; dry to wet (fill)		6.7	
5				4.9	
				56.8	Trace free product.
		Black stained fine to coarse SAND, little Gravel, trace Silt; wet (fill)			
10				22.3	
		No recovery			
15					

Bottom of boring 16 feet
below land surface.

BORING WELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. ASW-1 (SB-2)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/2/02-1/2/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Fine to medium SAND, trace Silt, trace Gravel, trace Glass, trace Brick; dry (fill)		0.0	
				225	
5		Black stained fine to coarse SAND, trace Brick; dry (fill)		71.2	Strong odor.
				58.4	
		Black stained SILT, trace fine to medium Sand, trace brick; wet (fill)		201	
				221	Free product.
		Black stained coarse to fine Sand and Silt, trace Gravel, trace Brick; wet (fill)			
10		Brown coarse to fine Sand and Silt, trace Gravel; wet (fill)			
		Dark brown SILT, some fine to medium Sand, trace Gravel; wet			
15		PEAT			

Bottom of boring 16 feet
below land surface.

BORING WELL ENDPOINT-1.CPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. ASW-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/8/02-1/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to medium SAND, trace Gravel, trace Brick trace Coal Fragments; dry (fill)		3.5	
				3.5	Strong odor.
5		Brown to black stained SAND, some Silt, trace Gravel, trace Coal Fragments; dry to wet (fill)		148	
				237	Strong odor and free product.
10		Gray to green Silt and fine Sand; wet (fill)		32.9	
		No recovery			
15					

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDP01-1.GPJ ROUX.GDT 4/17/02



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SOIL BORING LOG

WELL NO. AN-11	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY C. Battista	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/19/02-3/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Light brown medium to coarse SAND, trace Gravel, trace fine Sand, trace Coal Fragments; dry to moist (fill)	7		
			8	3.1	
			7		
			10	0.8	
		Dark brown fine to coarse SAND, trace Silt, trace Gravel, trace Coal Fragments, trace wood; moist (fill)	7		
			6	0.0	
			7		
			6	3.2	
		Light brown to dark brown fine to coarse SAND, little Silt, little Gravel; moist to wet (fill)	10		
5			2	0.0	
			3		
			5	0.0	
		Dark brown fine to coarse SAND, some Wood, some Organic Material, trace Gravel; wet (fill)		2.4	
				4.7	
		Brown to dark brown fine to coarse Sand and Silt, little Organic Material, little Coal Fragments, trace Ash; wet (fill)	3		
			2		
			1	2.6	
10			1		
		Dark brown to black stained SAND, some Gravel, some Silt; wet (fill)	3		
			2		
			4		
			6		
		Brown to black stained fine to coarse Sand and Cinders, and Ash, some Coal Fragments; wet (fill)		2.6	Organic odor.
15					
		Brown PEAT; moist			Organic odor.

Bottom of boring 16 feet below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/17/02



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SOIL BORING LOG

WELL NO. AN-12	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY C. Battista	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA Area A		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/19/02-3/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)	11		
			9		
			8	0.0	
			12		
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist (fill)	10		
			6		
			5	0.0	
			7		
		Dark brown fine to coarse Sand and Gravel, trace Silt, trace Brick, trace Coal Fragments; moist (fill)	3		
5			6	0.0	
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist to wet (fill)	9		
			4	0.0	
		Light brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; wet (fill)		0.0	
		Light brown to dark gray fine to coarse SAND, little Silt, trace Gravel; wet (fill)			
		Dark gray to brown and green Silt and fine Sand, some Organic Material; wet (fill)		2.4	
10					Odor.
		Brown to black stained fine to coarse SAND, little Silt, little Organic Material, trace Gravel, trace Coal Fragments; wet (fill)			
				3.6	Odor.
		Black stained fine to coarse SAND, trace Gravel, trace Silt, trace Coal Fragments; wet (fill)		4.0	
					Odor.

Bottom of boring 14 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/17/02



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SOIL BORING LOG

WELL NO. BNE-E-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / C. Battista		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/11/02-1/11/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown fine to coarse SAND, trace Silt, trace Gravel, trace Brick; dry (fill)		2.1	
5		Brown to black stained fine to coarse SAND, some Brick, some Concrete; moist (fill)		7.0	
		Black stained fine to coarse SAND, trace Silt, trace Coal Fragments, trace Ash; moist to wet (fill)		96.3	
				26.7	
		Black stained fine SAND; little Silt, trace Gravel; wet (fill)		5.5	
10		Green to gray Peat and Clay, trace Silt; wet			Trace free product.
		Green to gray Peat and Clay, trace Sand, trace Silt; wet			
15					

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. BNW-2 (BOW-2)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/10/02-1/10/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Dark brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
				3.2	
					Free product.
5		Gray to brown fine to medium SAND, some Silt, trace Gravel, trace Coal Fragments, trace Ash, trace Brick; moist to wet (fill)		61.4	
				126	
		Black stained fine to coarse SAND, some Silt, trace Gravel, trace Ash; wet (fill)			
10				665	Free product.
		Black stained fine to medium Sand and Silt, trace Gravel; wet (fill)		175	Odor and free product.
					Refusal at 13 feet below land surface.

BORING WELL ENDPOINT: GP1 ROUX GDT 4/22/02



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SOIL BORING LOG

WELL NO. BS-1 (SB-9)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA Area B		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/4/02-1/4/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)		1.8	
5		Black stained coarse Sand and Gravel, trace Silt, trace Brick; dry (fill)	253		
		Black stained fine to medium Sand, and Silt, trace Gravel; wet (fill)	125		Strong odor.
		Gray Silt and Peat; wet	12.1		
		Gray SILT, little Sand, Little Clay; wet	11.8		
		Brown Peat and gray Silt, some Sand; wet	12.7		
10			6.1		
			13.2		
		Gray to brown SILT, little Clay, trace Sand; wet	234		Free product.
		Brown SILT, little Sand, trace Gravel; wet	12.1		
		Black stained Sand and Silt; wet	59.5		
15		Brown to black stained Sand and Silt; wet	28.7		
			37.2		

Bottom of boring 16 feet
below land surface.

BORING WELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. BS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak				
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/10/02-1/10/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
1		Orange to brown fine to coarse SAND, trace Silt, trace Gravel, trace Concrete, trace Brick; dry (fill)		3.4	
2					
3					
4					
5		Green to grey Peat and Clay, some Sand, some Silt;		7.6	
6					
7					
8					

Bottom of boring 8 feet below
land surface.



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SOIL BORING LOG

WELL NO. CB-1	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. /		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 1/17/02-1/17/02
LAND SURFACE ELEVATION (F.T.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
1.		Brown fine to coarse SAND, trace Gravel, trace Concrete, trace Brick; dry (fill)			
2.			13	62.4	
3.			26		
4.			38		
5.		Green to black stained fine to medium SAND, some Silt, trace Gravel, trace Brick trace Coal; moist (fill)	34		
6.			8		
7.			8		
8.		Brick and Gravel, trace Sand; moist to wet (fill)	8	650	Strong odor.
			16		
			31		
			46	960	Strong odor and free product.
			29		
					Refusal at 8 feet below land surface.

BORING WELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. CN-10N	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/28/02-2/28/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to medium SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	17		
			32		
			35		
			42		
		Brown to tan fine to medium SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	48	1.4	
			45		
			39		
			47		
		Brown and green to black stained SILT, trace Sand, trace Gravel; wet (fill)	6		
5			2		5
			2	0.0	
		No recovery	2		
			3		
			1		
		Gray SILT, trace fine Sand, trace Gravel; wet (fill)	1		
			4		
			3		
			1	0.0	
10		Gray fine Sand and Silt, trace Gravel; wet (fill)	1		10
				0.0	
		No recovery	3		
			2		
			1/12		
		Peat and Clay; wet			
15					15

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX GDT 4/22/02



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SOIL BORING LOG

WELL NO. CN-12	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/1/02-3/1/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	12		
			15		
			25		
			31		
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; dry (fill)	24	4.5	
			30		
			36		
			42		
5		Green and brown to black stained fine Sand and Silt, trace coarse Sand, trace Gravel, trace Wood; wet (fill)	1		
			1		
			1	55.1	Slight odor.
			1		
		Brown to green fine to coarse SAND, little Silt, trace Gravel; wet (fill)	2		
			1		
			1	17.6	Slight odor.
			1		
		Dark brown to black stained fine to medium SAND, little Silt, trace Gravel; wet (fill)		37.8	
10		No recovery			
		No recovery			
		Brown fine to medium SAND, some Gravel; wet (fill)			
15				2.8	
		Green and gray Clay and Silt, little Peat; wet			

Bottom of boring 16 feet
below land surface.

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SOIL BORING LOG

WELL NO. CN-5	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin				
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/20/02-2/20/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Tan to fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; dry (fill).	8		
			21		
			23		
			31		
		Tan to black stained fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; dry (fill)	15		
			17	5.2	
			22		Slight odor.
			37		
		Brown to black stained fine to medium SAND, some Silt, trace Gravel; wet (fill)	2	33.0	
5			2		
			1	4.0	Slight odor.
			1		
		Black stained medium to coarse SAND, little Gravel, trace Silt, trace fine Sand; wet (fill)		5.7	Slight odor.
		Brown to green SILT, little Clay, trace fine to coarse Sand, trace Gravel; wet (fill)		2.3	
10					
		Black stained medium to coarse SAND, little Gravel, trace Silt, trace Brick; wet (fill)		4.7	
		No recovery			
		Dark brown to black stained coarse Sand and Gravel, trace fine Sand, trace Silt; wet (fill)		3.8	
15					
		Peat and Clay; wet			

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOJ-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. CN-6	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Simmons				
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/6/00-2/6/00
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		Black stained fine to medium SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; moist (fill)	20		
			38		
			25	9.7	Slight odor.
			15		
		Dark brown to black stained fine to medium SAND, some Silt; moist (fill)	12		
			7		
		Dark brown to black stained fine SAND, some Silt; moist (fill)	2		
5			2	1.5	
		Black stained coarse SAND, little Ash, trace Silt, trace Gravel; wet (fill)	3		
			1	2.1	
		No recovery	2		
			1		
			1		
		No recovery	1		
			1		
			1		
10			1		
		Gray to black stained fine to coarse Sand and Gravel, trace Silt, trace Wood, trace Coal; wet (fill)			
				0.0	
		Black stained coarse Sand and Coal Fragments, trace Glass; wet (fill)	6		
			3		
			3	0.0	
			1		
		Black stained coarse SAND, some Coal Fragments, trace Silt, trace Glass; wet (fill)		2.7	
15					
		PEAT			

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/18/02



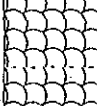
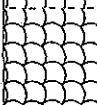
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SOIL BORING LOG

WELL NO. CN-7	NORTHING	EASTING
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site	LOCATION 124-136 2nd Avenue	
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin	GEOGRAPHIC AREA	
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	SAMPLING METHOD 2" Split Spoon
		START-FINISH DATE 2/20/02-2/20/02
		BACKFILL Grout

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		CONCRETE			
		GRAVEL			
		Dark brown medium SAND, trace Silt, trace Gravel, trace Brick; moist (fill)			
		Black stained to tan medium SAND, little green Silt, trace Brick; moist (fill)			
		Black stained medium to coarse SAND, little Silt, trace Gravel; wet (fill)	7	2.6	
5		Gray to black stained coarse Sand and Gravel, some Coal Fragments, trace Silt; wet (fill)	2	1.9	5
		Gray coarse Sand and Gravel, trace Silt, trace Coal Fragments, trace Shell Fragments; wet (fill)	2	0.8	
		Gray coarse Sand and Gravel, little Silt, trace Coal Fragments, trace Ash; wet (fill)	4	2.9	10
10		Gray Gravel, little Sand, trace Shell Fragments, trace Ceramic Fragments; wet (fill)	2	2.1	
		Peat and Clay; wet	1	5.3	15

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. CN-8	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / J. Philbin				
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 2/8/02-2/8/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Gray to brown medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	8		
			16		
			17		
			26		
		Gray to brown medium to coarse SAND, trace Gravel, trace Brick, trace Concrete; moist (fill)	15		
			22		
			18		
			27		
5		Grey coarse SAND, some Gravel, trace Silt; wet (fill)			
		Grey coarse SAND, some Gravel, some Silt, little Coal Fragments; wet (fill)			
		Grey coarse SAND, some Gravel, some Silt, little Coal Fragments; wet (fill)	1		
			1		
			1		
10		No recovery	1		
		Grey medium to coarse Coal Fragments, little Silt; wet (fill)			
		Grey coarse Sand and Gravel, some Peat, little Clay; wet			
15					

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUXGDT 4/17/02



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SOIL BORING LOG

WELL NO. CNE-3	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/22/02-1/22/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; moist (fill)		2.1	
5		Brown to black stained fine to coarse SAND, little Silt, trace Gravel; moist (fill)	65.0		Slight odor.
		Black stained fine to coarse SAND, little Brick, little Concrete, trace Silt; moist (fill)	183		Trace free product.
		Black stained fine SAND, little Silt, trace Brick; wet (fill)	171		
10			320		Odor and trace free product.
		Black stained fine to coarse SAND, trace Silt, trace Gravel; wet (fill)	57.4		
		Red to black stained GRAVEL, little Sand, little Silt, trace Wood; wet (fill)	72.4		
15		No recovery	121		Free product.
20					Bottom of boring 20 feet below land surface.

BORINGWELL ENDPO-1.GPJ ROUX.GDT 4/18/02



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SOIL BORING LOG

WELL NO. CW-1 (SB-14)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/7/02-1/7/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to medium SAND, trace Gravel, trace Brick; dry (fill)			
				8.1	
		Light brown fine to medium SAND, dry (fill)			
5					5
		Black stained fine to medium SAND, trace Gravel, trace Silt; wet (fill)		272	
				63.2	Free product.
		Black stained Sand and Gravel, trace Silt; wet (fill)			
10				37.1	Free product.
		Brown to green SILT, little Sand, trace Gravel; wet		75.2	
15					15
		PEAT			

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/17/02



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SOIL BORING LOG

WELL NO. SB-15-SW	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli				
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/23/02-1/23/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to tan fine to coarse SAND, trace Gravel, trace Brick; moist (fill)		1.8	
5		Brown to black stained fine to medium SAND, trace Gravel, trace Silt, trace Brick; moist (fill)		44.7	
		Green to black stained fine SAND, trace Silt, trace Gravel, trace Brick; moist (fill)		134	Odor and trace free product.
		Black stained to green Silt and fine Sand; wet (fill)		108	Odor and trace free product.
10		Black stained to brown fine SAND, trace Silt, trace Gravel; wet (fill)		73.2	
		Brown to black stained fine Sand and Silt, trace Gravel; wet (fill)		127	
				138	Odor and free product.
15		Red to black stained fine SAND, some Gravel, trace Silt; wet		58.0	
		Black stained fine Sand and Silt, trace Gravel; wet (fill)		139	Odor and free product.
				102	
					Free product.
20				180	
					Bottom of boring 20 feet below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. DN-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/23/02-1/23/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to black stained fine to coarse SAND, trace Gravel, trace Brick; dry (fill)		23.4	
		Grey fine SAND, trace Silt; dry (fill)			
		Tan to black stained fine SAND, trace Ash; moist (fill)			
5			348		5
		Black stained fine SAND; wet (fill)			
		Black stained SILT, some fine Sand, trace Gravel; wet (fill)	291		Free product.
		Black stained fine SAND, trace Silt, trace Gravel; wet (fill)	452		
10		Dark green to tan fine Silt and fine Sand, trace Clay, trace Gravel; wet (fill)	88.2		Strong odor and free product.
			37.8		Free product.
		Green to black stained fine SAND, some Silt, trace Gravel; wet (fill)	21.2		
			78.8		Slight odor and free product.
15		Green to tan fine SAND, little Silt; wet (fill)	27.2		15
		Black stained fine SAND, some Silt; wet (fill)	237		
			522		Slight odor.
		Green to black stained Sand, and Silt; wet	25.8		
20		Black stained fine SAND, trace Silt; wet	179		Trace free product.
					Bottom of boring 20 feet below land surface.

BORINGWELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. DS-2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / Kari Carli		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/22/02-1/22/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to gray medium to coarse SAND, trace Gravel, trace Ash; moist (fill)			
				12.7	
5		Brown to black stained fine SAND, some black fine to medium Sand, little Silt; moist (fill)			Strong odor.
				12.7	
		Brown SILT, little Sand, trace Gravel; wet (fill)			
				38.7	Trace free product.
		Brown to dark green SILT, little fine Sand; wet (fill)			
10				6.1	Sheen.
		Dark brown to black stained fine SAND, little Silt, trace Gravel; wet (fill)			
				31.7	
15		Dark brown fine SAND, little Silt; wet (fill)			
					Trace free product.
20					
					Bottom of boring 20 feet below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. GH-21 (SB-8)	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Zebra Environmental Inc / L. Davis		GEOGRAPHIC AREA		
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/4/02-1/4/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Brow Counts per 6"	PID Values (ppm)	REMARKS
		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick; dry (fill)		0.4	
5		Black stained fine stained to coarse Sand and Silt, trace Gravel, trace Roots; moist (fill)		13.3	
				32.2	
				20.1	Strong odor.
				59.9	
		Brown fine to medium Sand and Silt, trace Gravel, trace Brick; wet (fill)		19.4	
				38.3	
10		Black stained fine to medium Sand and Silt, trace Gravel, trace Coal Fragments, trace Brick; wet (fill)		10.2	Free product.
				55.8	
		Black stained fine to medium Sand and Silt, trace Gravel, trace Coal, trace Brick; wet (fill)		26.5	
				62.5	
				29.9	
15				49.4	
		PEAT			

Bottom of boring 16 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. SB7-N2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak				
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/9/02-1/9/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
1.		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)		1.9	
2.					
3.		Black stained fine SAND, some Silt; moist (fill)			
4.		Black stained fine to coarse SAND, some Silt, little Gravel, trace Wood; moist (fill)		19.5	Slight odor.
5.					Slight odor.
					Refusal at 5 feet below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. SB7-S2	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Roux Associates Inc / P. Barczak				
DRILL BIT DIAMETER/TYPE 2-in. / Drive Sampler	BOREHOLE DIAMETER 2-inches	DRILLING EQUIPMENT/METHOD / Geoprobe	SAMPLING METHOD 2" Macro-Core	START-FINISH DATE 1/9/02-1/9/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Cuttings/Bentonite Pellets		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Gravel, trace Brick; dry (fill)			
		Black stained fine SAND, some Silt; moist (fill)		9.4	
5		Black stained fine to medium SAND, trace Silt, trace Gravel, trace Brick; dry (fill)		140	Strong odor.
		Brown fine Sand and Silt, trace Gravel; wet (fill)		56.8	
10		Gravel and Brick, some gray Silt, some Sand; wet (fill)			
		Brown to green Peat and Clay; wet			
15					

Bottom of boring 18 feet
below land surface.

BORING-WELL ENDPOINT-1.GPJ ROUX.GDT 4/22/02



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SOIL BORING LOG

WELL NO. GH-1A	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY R. Kovacs	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / D. Pepe		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/15/02-3/20/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown to dark brown fine to coarse SAND, little Brick; dry (fill)		13.1	
		Brown to dark brown fine to medium SAND, some Brick; dry (fill)		27.7	
		Brown to dark brown fine to medium Sand; dry (fill)		9.8	Odor.
5		Light brown to dark brown fine to medium Sand, some Brick, little Ash; dry (fill)		11.7	
		Brown to reddish brown fine to medium SAND, some Brick, trace Gravel; dry (fill)		12.1	
10		Brown medium SAND, some Brick; dry (fill)		7.3	
		Brown medium SAND, trace Cobbles; dry (fill)		9.2	
		Brown fine to medium SAND, trace Brick; dry (fill)		9.1	
15		Brown fine to medium SAND, some Gravel, some Brick; dry (fill)		10.3	
		CONCRETE			
		Grey fine Sand and Silt, trace Gravel, trace Concrete; wet			
20		Black stained fine SAND, trace Gravel, trace Concrete; wet		179	
		Black stained fine SAND, some Concrete; wet			Free product.

Bottom of holder at 24 feet
below land surface.

BORING/WELL ENDPOINT-1.GPJ ROUX.GDT 4/19/02



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SOIL BORING LOG

WELL NO. GH-1B	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY C. Battista	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 4.25-in. / Auger	BOREHOLE DIAMETER 8-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/18/02-3/18/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, some Gravel, little Brick, little Concrete; dry (fill)			
		Brown fine to coarse SAND, some Gravel, little Brick, little Concrete; dry (fill)			
		Brown fine to coarse SAND, some Gravel, trace Brick, trace Concrete; dry (fill)		6.5	
5		Brown fine to coarse SAND, little Brick, trace Coal Fragments, trace Concrete, trace Gravel; dry (fill)		2.9	
		Brown fine to coarse SAND, little Brick, little Gavel, trace Coal Fragments; dry (fill)		5.2	
10		Brown fine to coarse SAND, little Brick, little Gravel, trace Concrete, trace Coal Fragments; dry (fill)		8.7	
		Brown fine to coarse SAND, some Gravel, little Brick, trace Coal Fragments; dry (fill)		12.3	
15		Brown fine to coarse SAND, some Gravel, little Brick, trace Coal Fragments; dry (fill)			
					Bottom of boring 15 feet below land surface.



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SOIL BORING LOG

WELL NO. GH-1C	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Gas Holder 1		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-45 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/18/02-3/18/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)			
		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)			
5		Brown fine to coarse SAND, trace Brick, trace Gravel, trace Concrete; moist (fill)		2.3	
		Brown medium to coarse SAND, trace Gravel, trace Brick, trace Silt; moist (fill)		0.0	
		Brown medium to coarse SAND, trace Gravel, trace Brick; moist (fill)		0.0	
10		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; wet (fill)		0.0	
		Brown medium to coarse SAND, trace Silt, trace Gravel, trace Brick, trace Coal Fragments; wet (fill)		15.2	
15		Brown to tan fine to coarse SAND, trace Gravel, trace Brick, trace Concrete; wet (fill)		3.7	
		Tan to black stained fine to coarse SAND, trace Gravel, trace Concrete, trace Brick; wet (fill)		43.1	Odor.

Bottom of soil boring 17.5 feet
below land surface.

BORINGWELL ENDPOI-1.GPJ ROUX.GDT 4/22/02



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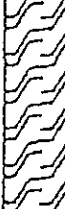
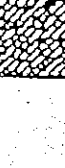
SOIL BORING LOG

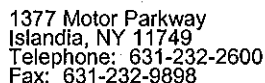
WELL NO. GH-3B	NORTHING	EASTING		
PROJECT NO./NAME 92401Y02 / FCRC 2nd Avenue MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY S. Glash	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Gas Holder 3		
DRILL BIT DIAMETER/TYPE 3 7/8 inch / Tri-Cone	BOREHOLE DIAMETER 4-inches	DRILLING EQUIPMENT/METHOD CME-75 / Drive and Wash	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/15/02-3/19/02
LAND SURFACE ELEVATION (FT.)	DEPTH TO WATER (Feet BLS)	BACKFILL Grout		

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
1.		Brown coarse to fine SAND, trace Silt, trace Gravel, trace Brick; dry to wet (fill)			Lithology from 0 to 5 feet interpreted from previous Site investigation.
2.					
3.					
4.					
5.		Black stained fine to coarse SAND, some Gravel, little Silt; wet (fill)	4		Odor and free product.
6.		Concrete and 1.5 inches of steel	4		
7.		Wood and Concrete fragments; wet	50/1		Odor and trace free product.
8.			80		
			38		
			25		
9.		Peat	21		Free product in groundwater around sample in split spoon; no product observed within the sample.
10.					
11.					Bottom of boring 11 feet below land surface.

BORING/WELL ENDPOINT: 1.GPJ ROUX.GDT 4/22/02

PROJECT Loews @ Gowanus				PROJECT NO. 1531601							
LOCATION Brooklyn, NY				ELEVATION AND DATUM approx. el 11 [88HDO]							
DRILLING EQUIPMENT Davey Kent DK50RA Track Rig				DATE STARTED 11/19/98		DATE FINISHED 11/24/98		COMPLETION DEPTH 77 ft.			
SIZE AND TYPE OF BIT HW and NO Rock Cores and Tri-Cone Roller Bit				NUMBER OF SAMPLES 18		DIST. 1		CORE			
CASING DIAMETER (in) 4 1/2" OD 4" ID		CASING DEPTH(in) 7		WATER LEVEL (ft.) FIRST		COMPL. 24 HR.		6.5			
SAMPLER Standard Solist Spoon (SS) or Shelby Tube (ST)				DRILLING FOREMAN Gus Suri/Mika Chizmar							
SAMPLER HAMMER WEIGHT (lbs) 140		DROP(in) 30		INSPECTING ENGINEER Gary L. Gleason							
ELEV. (ft)	SAMPLE DESCRIPTION			SYMBOL LOG	DEPTH SCALE	SAMPLE DATA				REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)	
x. el 11	5" CONCRETE w/ wire mesh 5" CONCRETE Inferred miscellaneous FILL (11-65) Gray/black f.-c. SAND, some silt (11-65)					NUMBER S1	TYPE SS	RECOVER 7	PENETRA RESIST BL/5in 23 47 54 20	W-VALUE BLOWS 101	*New York City BC Classification numbers in parenthesis Started coring w/ water Lost some water O = 1.5' PID = 400 ppm Petroleum like material odor Or/Off rig chatter O = 1.5' - 4.5' Petroleum like material in wash O = 4.75'
	Black SILT/PETROLEUM LIKE MATERIAL, some c. sand, and white cement fragments, trace f.-m. sand and clay (11-65)				5	S2	SS	2	2 2 1 10/1	3	
0.0	Piece of STEEL Inferred miscellaneous FILL (11-65)					S3					Spoon refusal 50/1" w/ bouncing O = 6" PID = 480 ppm A 16" x 4" x 1/4" piece of vertical steel on a 1/2" thick base plate O = 7" w/ 2" wide horizontal pieces of steel, which were cut, at the top inside and bottom outside O = 6' - 7' Lost some water O = 8' - 9.25' Added mud O = 9.25' Drilled through WOOD and lost circulation O = 9.75' WOR: Weight of rods WOR went from O = 10' - 15'
0.0	0.5" STEEL CONCRETE										
	Petroleum like material treated WOOD (11-65) Inferred WOOD (11-65) Inferred Brown PEAT, some silt (11-65)				10		SS	0	WOH WOH WOH WOH	WOH	
	Inferred Brown PEAT, some silt (11-65)				15	S4	SS	0	WOH WOH WOH WOH	WOH	WOH: Weight of hammer Sample S4 SS tip material PID = 590 ppm WOH went from O = 15' - 17.5'
	Brown PEAT, some silt (11-65)					T1	ST	24	PUSH PUSH PUSH PUSH	PUSH	Visible petroleum like material w/ odor Pushing became more difficult O = 19.25' Added mud O = 20' PID = 920 ppm
	Brown/gray f. SAND, some silt (8-65) Brown f. SAND, some silt (8-65)				20	S5	SS	19	3 3 3 3	8	
	Brown f. SAND, trace silt and clay (8-65)				25	S6	SS	11	34 42 33 40	75	PID = 700 ppm Trace wood fibers in wash O = 27' - 30.5' Tight fit for bit O = 27' - 30.5'
	Brown f.-m. SAND, trace silt (7-65)				30	S7	SS	7	18 19 11 12	30	1" of WOOD FIBERS, trace f.-m. sand w/ PID = 170 ppm in top of SS PID = 750 ppm Brown SILT, trace clay and f. sand in SS tip O = 32.5'
	Brown SILT, trace clay and f. sand (10-65) Gray CLAY, some silt (9-65)				35	S9	SS	18	3 3 3 3	5	PP = 0.1 - 0.3 tsf PID = 640 ppm PP = 0.6 - 0.9 tsf PID = 320 ppm
	Gray/brown CLAY, some silt, trace f. sand (9-65)				40	S11	SS	17	WOH 2 2 4	4	PP = 0.4 - 0.85 tsf PID > 2000 ppm

PROJECT		PROJECT NO.								
Loews @ Gowanus		1531601								
LOCATION		ELEVATION AND DATUM								
Brooklyn, NY		approx. el 11 (88HDD)								
ELEV. (ft)	SAMPLE DESCRIPTION	SYMBOL LOG	DEPTH SCALE	SAMPLE DATA						REMARKS (DRILLING FLUID, DEPTH OF CASING, FLUID LOSS, DRILLING RESISTANCE, ETC.)
				NUMBER	TYPE	RECOV. (%)	PENETRI. RESIST BLM	PIV VALUE	BLOWS FOOT	
	Brown CLAY, some silt, trace f. sand (9-65)		45	S12	SS	13	4	8	PP = 0.5 - 0.65 lbf PIO = 170 ppm	
	Brown f. SAND, trace silt (8-65)		50	S13	SS	14	13	56	PIO = 530 ppm Rig chatter D = 52.25' - 53'	
	Brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		55	S14	SS	10.5	24	44	PIO = 710 ppm	
	Red brown f.-c. SAND, trace silt and f.-m. gravel (6-65)		60	S15	SS	8	19	67	Added mud D = 57' - 58' Rig chatter D = 57.5 - 58'	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		65	S16	SS	8	28	64	PIO = 40 ppm On/off rig chatter D = 60' - 65'	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		70	S17	SS	7.5	43	46	PIO = 640 ppm On/off rig chatter D = 85' - 70'	
	Red brown f.-c. SAND, some f.-m. gravel, trace silt (6-65)		75	S18	SS	8	38	50	PIO = 20 ppm On/off rig chatter D = 70' - 75'	
	Boring terminated D = 77'								PIO = 540 ppm Borehole grouted upon completion	
			80							
			85							
			90							



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WELL NO.		NORTHING		EASTING	
PROJECT NO./NAME				LOCATION	
APPROVED BY				LOGGED BY	
DRILLING CONTRACTOR/DRILLER				GEOGRAPHIC AREA	
CASING MAT./DIA.				SCREEN:	
ELEVATION OF:				MAT.	
(FT.)				TOTAL LENGTH	
GROUND SURFACE				TOP OF WELL CASING	
TOP OF WELL CASING				TOP & BOTTOM SCREEN	
GW SURFACE				GRAVEL PACK	
GRAVEL PACK				#2	
RW-1		NORTHING		EASTING	
PROJECT NO./NAME				LOCATION	
92401Y03 / FC Gowanus former MGP Site				124-136 2nd Avenue	
APPROVED BY				LOGGED BY	
G. Tyers				C. Battista	
DRILLING CONTRACTOR/DRILLER				GEOGRAPHIC AREA	
Aquifer Drilling & Testing, Inc. / S. Miller				On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE		BOREHOLE DIAMETER		DRILLING EQUIPMENT/METHOD	
6.25-in. / Auger		10-inches		Mobile Drill B-61 / HSA	
CASING MAT./DIA.		SCREEN:		SAMPLING METHOD	
SCH 40 PVC / 4-inch		TYPE Slotted		2" Split Spoon	
ELEVATION OF:		MAT.		TOTAL LENGTH	
(FT.)		SCH 40 PVC		25.0	
GROUND SURFACE		TOP OF WELL CASING		TOP & BOTTOM SCREEN	
TOP OF WELL CASING		TOP & BOTTOM SCREEN		GW SURFACE	
GRAVEL PACK		GRAVEL PACK		#2	
GRAVEL PACK		#2			
Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS	
0	Brown fine to coarse SAND, some Gravel, trace Brick; dry to wet (fill)				
5	Brown fine to coarse SAND, some Silt, little Gravel, trace Brick; dry to wet (fill)		21.8	Strong odor	
10	No recovery			Sheen and strong odor	
15	Brown to dark brown fine to coarse Sand, and Gravel, little Silt, little Wood; wet (fill)		29.3	Sheen and strong odor	
20	Brown to red fine to coarse SAND, some Silt, little Gravel, trace Brick, trace Concrete; wet (fill)		13.7	Thickness of peat interval interpreted from previous Site investigation	
25	Green to grey PEAT; moist				
30	Dark gray Silt and fine Sand; wet		4.5	Strong odor	
35	Dark gray Silt and fine Sand; wet		5.8		
40	Dark gray Silt and fine Sand, trace Gravel; wet		10.4		
45	Brown Silt and fine Sand; wet			Sheen and strong odor	
50	Brown Silt and fine Sand; wet		79.4	Sheen and strong odor	
55	Brown Silt and fine Sand; wet			Trace free product	
60	Brown Silt and fine Sand; wet		30.1	Bottom of well 47.5 feet below land surface	



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WELL CONSTRUCTION LOG

WELL NO. RW-2		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY C. Battista		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		GEOGRAPHIC AREA On Site Along Pathmark Wall			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/29/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC TOTAL LENGTH 25.0		DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown fine to coarse SAND, little Gravel, trace Silt, trace Brick, trace Coal Fragments; dry to wet (fill)			
10				Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		0.3	
15				Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.3	
20				Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)		0.6	
25				Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
30				Brown fine to medium SAND, trace Silt, trace Gravel, trace Wood; wet (fill)		0.1	
35				Brown Silt and fine Sand, little coarse Gravel; wet		126	Strong odor
40				Brown Silt and fine Sand, little Gravel; wet		303	Strong odor
45				Brown Silt and fine Sand, little Gravel; wet		493	Trace free product
50				Brown Silt and fine Sand, little Gravel; wet		274	
55				Brown Silt and fine Sand, little Gravel; wet		311	Free product
60				Brown Silt and fine Sand, little Gravel; wet		893	Free product
65				Dark gray to brown fine SAND, little Silt; wet		>2000	Free product
70							Bottom of well 47.5 feet below land surface

BORING/WELL RECOVER-T.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-3		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/28/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 35.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Cement/Bentonite Grout	Brown fine to coarse SAND, trace Gravel, trace Brick; wet at 5 (fill)			
10	Bentonite Chips	Brown fine to coarse SAND, little Gravel, little Brick, trace Silt; wet (fill)	0.0		
15	4-inch PVC Well Casing	Brown fine to coarse SAND, trace Gravel, trace Silt; wet (fill)	1.4		
20		Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)	5.7		Strong odor and trace free product
25	20-Slot PVC Well Screen	Brown fine to medium SAND, trace Silt, trace Gravel; wet (fill)	1.4		Trace free product
30	#2 Sand	Brown fine to coarse SAND, little Silt; wet	27.4		Odor
35		Brown fine to coarse SAND, little Silt, trace Gravel; wet	15.1		Odor
40		Brown fine to coarse SAND, little Silt, trace Gravel; wet	152		Free product
45		Brown SILT, some fine Sand, trace coarse Sand; wet	98.1		Odor and free product
50	5-foot PVC Sump	Brown fine SAND, little Silt, trace Gravel; wet	237		Odor and free product
	Push on PVC Well Cap	Brown fine SAND, little Silt, trace Gravel; wet	1681		Free product
					Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-4		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along Pathmark Wall			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/28/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 35.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	6-Inch Locking Steel Protective Stand Pipe				
5	4-inch Locking Test Well Plug	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet at 5 (fill)			
5	CEMENT				
5	Cement/Bentonite Grout				
5	Bentonite Chips				
10	4-inch PVC Well Casing	Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)	0.1		
10		Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)	1.6	Odor	
15		Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)	1.6	Odor	
15		Brown fine to coarse SAND, trace Brick, trace Silt, trace Gravel; wet (fill)	0.9	Slight odor	
20		Brown fine to medium SAND, trace Gravel, trace Silt; wet	1.9		
20		Brown fine to medium SAND, trace Gravel; wet (fill)	4.7	Black staining and strong Odor	
25	20-Slot PVC Well Screen	Gray fine SAND, little Wood; wet (fill)	26.8		
25		Brown fine to coarse SAND, little Silt, trace Gravel; wet			
25		Brown fine to coarse SAND, some Silt, trace Gravel; wet	7.2	Odor and trace free product	
30	#2 Sand	Brown fine to coarse SAND, some Silt, trace Gravel; wet	5.6	Odor and trace free product	
35		Brown fine to coarse SAND, some Silt, trace Gravel; wet	14.9	Odor and trace free product	
40		Brown fine to coarse SAND, some Silt, trace Gravel; wet	35.1	Free product	
45		Brown fine to coarse SAND, some Silt, trace Gravel; wet	87.4	Free product	
50	5-foot PVC Sump				
50	Push on PVC Well Cap				
					Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GOT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-5		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY C. Battista		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller				On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/27/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)		GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
					GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Cement	Brown coarse to fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10	Cement/Bentonite Grout 4-inch PVC Well Casing	Brown fine SAND, trace Silt, trace Gravel; wet (fill)	0.0		
15	Bentonite Chips	Brown fine SAND, trace Silt, trace Gravel; wet (fill)	3.3		
		Brown fine SAND, little Silt, trace Gravel; wet (fill)	9.5		Black staining
		No recovery			
20		Green to gray Peat and Clay, trace Sand; wet	14.6		Thickness of peat interval interpreted from previous Site investigation Strong odor
		Brown fine to coarse SAND, little Silt, little Gravel; wet	2.6		
25		Brown fine to coarse SAND, some Silt; wet	1.7		Strong odor
30	20-Slot PVC Well Screen	Brown fine to coarse SAND, some Silt, trace Gravel; wet			Strong odor
35	#2 Sand	Brown fine to coarse SAND, some Silt, trace Gravel; wet	106		Trace free product
40		Brown fine to coarse SAND, some Silt; wet	134		Free product
45		Brown Silt and fine Sand; wet	281		Odor and free product
50	5-foot PVC Sump Push on PVC Well Cap		375		

Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/1/02



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WELL CONSTRUCTION LOG

WELL NO. RW-6		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along Pathmark Wall			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/25/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)		GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
					GRAVEL PACK #2

Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10				Brown fine SAND, little Silt, trace Brick; wet (fill)	1.6		Odor and Black Staining
15				Green to gray Peat and Clay, trace brown Sand; moist	7.3		Thickness of peat interval interpreted from previous Site investigation
20				Fine SAND, trace Gravel, trace Silt; wet	5.9		Black staining Odor
25				Gray fine SAND, little Silt, trace Gravel; wet	1.9		Black staining Odor
30				Gray fine SAND, little Silt, trace Gravel; wet	4.7		Slight Odor
35				Grey SILT, Some fine Sand; wet	156		Odor
40				Brown to green fine SAND, some Silt; wet	350		Odor
45				Brown to green fine SAND, some Silt; wet	1254		Odor
50				Brown to green fine SAND, some Silt; wet	1824		Odor

Bottom of well 50 feet below land surface

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WELL CONSTRUCTION LOG

WELL NO. RW-7		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY C. Battista		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller				On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-Inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/21/02-3/25/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)		GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
					#2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10		No recovery			
15		Fine SAND, some Gravel, trace Silt; wet (fill)	0.7		Black staining
		Brown fine SAND, little Silt; wet (fill)	1.4		Black staining
		Brown fine SAND, little Silt; wet (fill)	1.9		Odor and black staining
		Green to gray Peat and Clay; wet	7.3		Odor
					Thickness of peat interval interpreted from previous Site Investigation
20		Brown fine to coarse SAND, some Silt, trace Gravel; wet	10.2		Odor
25		Brown fine to coarse SAND, some Silt, trace Gravel; wet	11.7		Odor
30		No recovery			
35		Dark Gray fine to medium SAND, some Silt; wet	27.1		
40		Dark Gray fine to medium SAND, some Silt, little Gravel; wet	21.0		Odor
45		Dark gray Silt and fine Sand; wet	30.6		Sheen and odor
50					

Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-8		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY C. Battista		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / S. Miller		On Site Along 12th Street			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD Mobile Drill B-61 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/22/02-4/2/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	6-inch Locking Steel Protective Stand Pipe 4-inch Locking Test Well Plug CEMENT	Brown fine to coarse fine SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)			
10	Cement/Bentonite Grout 4-inch PVC Well Casing	Brown fine to coarse SAND, trace silt, trace concrete; wet (fill) Brown fine to medium SAND, trace Silt; wet (fill) Brown PEAT; wet			Black staining and trace free product Thickness of peat interval interpreted from previous Site investigation
15	Bentonite Chips	Brown fine to coarse SAND, little Silt, trace Gravel; wet		38.5	
20		Brown fine to coarse SAND, little Silt; wet		17.1	Strong odor and trace free product Slight odor and Sheen
25		Brown fine to coarse SAND, little Silt, trace Gravel; wet		0.0	Slight odor and Sheen
30	20-Slot PVC Well Screen	Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		333	Odor
35	#2 Sand	Brown to dark gray fine to medium SAND, some Silt, little Clay; wet		235	Odor
40		Dark gray to brown fine SAND, little Silt; wet		427	Odor
45		Dark gray to brown fine SAND, little Silt; wet		236	Odor
50	5-foot PVC Sump Push on PVC Well Cap				Bottom of well 49.5 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/1/02



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WELL CONSTRUCTION LOG

WELL NO. RW-9	NORTHING	EASTING
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site	LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers	LOGGED BY D. Moss	Brooklyn, New York
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams	GEOGRAPHIC AREA On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	SAMPLING METHOD 2" Split Spoon
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING
		TOP & BOTTOM SCREEN
		GW SURFACE
		SLOT SIZE 20-Slot
		GRAVEL PACK #2
8-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log
Depth, feet	Visual Description	Blow Counts per 6"
		PID Values (ppm)
		REMARKS
5	Brown fine to coarse SAND, trace Gravel, trace Brick, trace Silt; dry to wet (fill)	
10	Brown WOOD; wet (fill)	120
15	Green to tan fine to medium SAND, little Silt; wet (fill)	180
20	Green to brown fine SAND, some Silt, trace Peat; wet (fill)	109
25	Black fine to coarse SAND, little Gravel; wet	57.6
30	Black to gray SILT, little fine Sand; wet	84.9
35	Brown Silt and fine Sand, trace coarse Sand; wet	28.5
40	Brown Silt and fine Sand, trace coarse Sand; wet	66.8
45	Brown Silt and fine Sand, trace coarse Sand; wet	28.2
50	Brown Silt and fine Sand, trace coarse Sand; wet	19.7
		27.1
		Bottom of well 49.5 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/1/02



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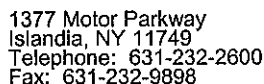
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WELL CONSTRUCTION LOG

WELL NO. RW-10		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY R. Kovacs		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/22/02-4/1/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK
(FT.)			1		#2

Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to wet (fill)			
10				Green to brown fine SAND, little Silt, trace Gravel; wet (fill)	8.2	Black staining	
15				Green to brown fine SAND, little Silt; wet (fill)	8.1	Black staining	
20				Green to brown fine SAND, little Silt; wet (fill)	6.0	Black staining	
25				Green to brown fine to coarse SAND, little Silt, little Peat at 18; wet (fill)	8.7	Black staining	
30				Brown PEAT; moist	54.0	Thickness of peat interval interpreted from previous Site investigation	
35				Brown to light brown fine SAND, some Silt; wet	59.0	Odor and sheen	
40				Brown to reddish brown fine to medium SAND, some Silt; wet	96.5	Free product	
45				Brown to light brown fine to medium SAND, some Silt; wet	219	Odor and free product	
50				Brown fine to medium SAND, some Silt; wet	110	Odor and free product	
				Brown SILT, some medium Sand; wet	172	Odor and free product	
				Brown SILT, some fine to medium Sand; wet	162	Odor and free product	
							Bottom of well 50 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0		CEMENT		Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet at 6 (fill)			
5							
10		Cement/ Bentonite Grout		Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		50.0	Black staining
15		4-inch PVC Well Casing		Brown fine to coarse SAND, little Gravel, trace Brick, trace Silt; wet (fill)		71.9	Black staining
15		Bentonite Chips		Brown fine to medium SAND, little Gravel, little Silt; wet (fill)		43.9	
20				Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; wet (fill)		31.2	
20				Brown PEAT; moist		138	Thickness of peat interval interpreted from previous Site investigation
25				Brown fine to coarse SAND, little Silt, trace Gravel; wet		7.2	
25				Brown fine to coarse SAND, some Silt; wet		7.2	Odor and trace free product
30		20-Slot PVC Well Screen		Brown fine to coarse SAND, some Silt; wet		23.2	Trace free product
35		#2 Sand		Brown fine to coarse SAND, some Silt; wet		17.6	Trace free product
40				Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		1124	Trace free product
45				Brown Silt and fine Sand, trace coarse Sand, trace Gravel; wet		280	
50		5-foot PVC Sump					
50		Push on PVC Well Cap					Bottom of well 50 feet below land surface



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WELL CONSTRUCTION LOG

WELL NO. RW-12		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along 12th Street			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/22/02-3/27/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; dry to moist (fill)			
5		BRICK; dry (fill)			
10		Brown fine to coarse SAND, some Gravel, trace Brick, trace Silt; wet at 7 (fill)			
10		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)			Sheen and odor
15		Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)	55.3	55.3	Slight odor
15		Brown fine to coarse SAND, little Silt, little Gravel; wet (fill)	72.2	72.2	Slight odor
15		Brown fine to coarse SAND, some Gravel, little Silt; wet (fill)	74.9	74.9	
20		Brown PEAT; moist	1.7	1.7	Thickness of peat interval interpreted from previous Site Investigation
20		Brown fine to coarse SAND, some Silt, trace Gravel; wet	11.7	11.7	
25		Brown fine to coarse SAND, some Silt, trace Gravel; wet	19.3	19.3	
30	Brown fine to coarse SAND, some Silt, trace Gravel; wet	4.1	4.1		
35	Brown fine to coarse SAND, some Silt, trace Gravel; wet	35.1	35.1	Odor	
40	Brown fine to coarse SAND, some Silt, trace Gravel; wet	174	174	Odor and trace free product	
45	Brown fine to coarse SAND, some Silt, trace Gravel; wet	294	294	Odor and trace free product	
50					Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



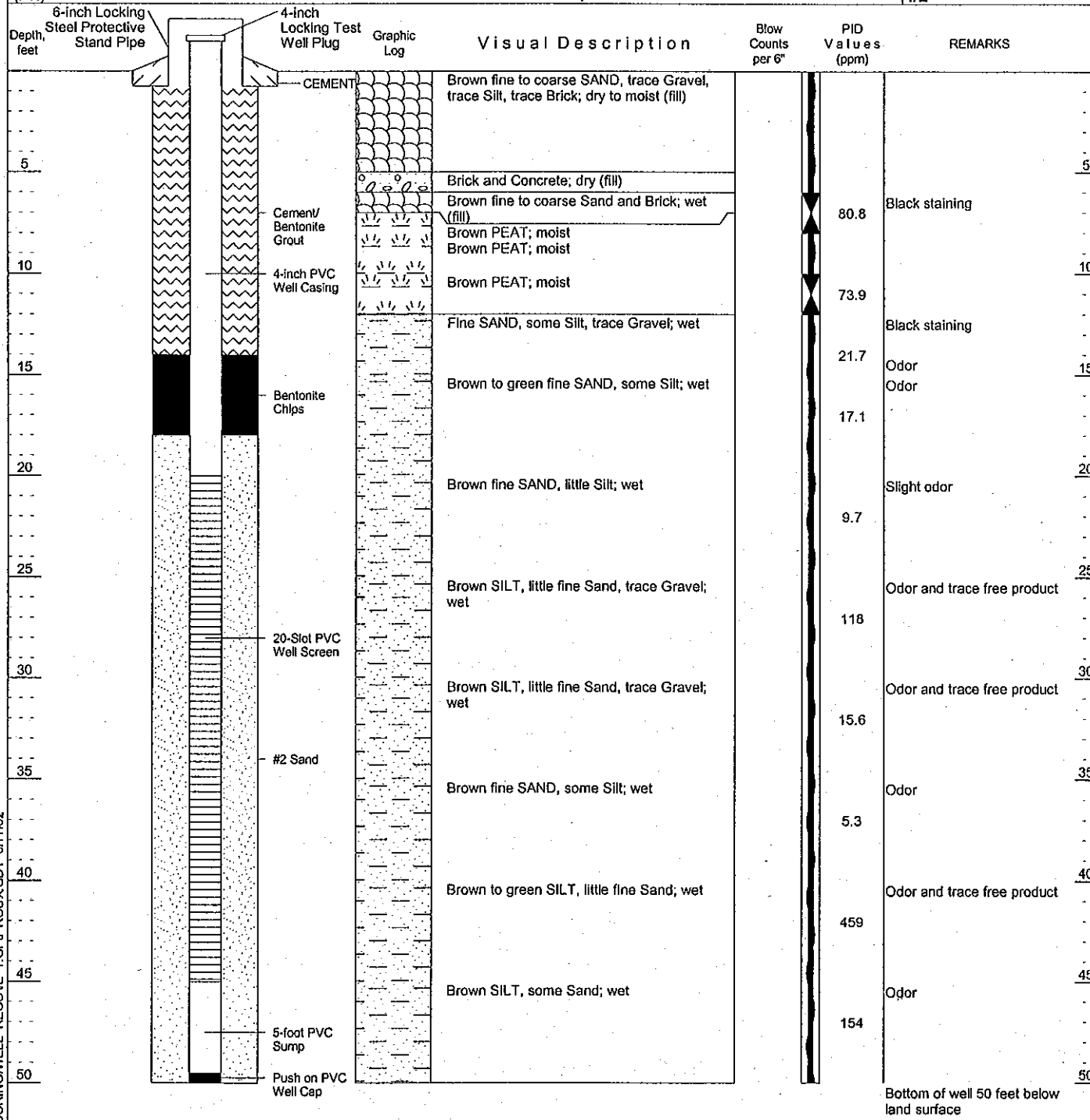
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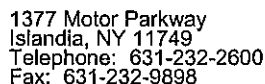
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WELL CONSTRUCTION LOG

WELL NO. RW-13	NORTHING	EASTING		
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers	LOGGED BY D. Moss	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA On Site Along 12th Street		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 3/22/02-3/26/02
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
				GRAVEL PACK #2



BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL NO.		NORTHING		EASTING			
PROJECT NO./NAME				LOCATION			
APPROVED BY				LOGGED BY			
G. Tyers				C. Battista			
DRILLING CONTRACTOR/DRILLER				GEOGRAPHIC AREA			
Aquifer Drilling & Testing, Inc. / S. Miller				On Site Along 12th Street			
DRILL BIT DIAMETER/TYPE		BOREHOLE DIAMETER		DRILLING EQUIPMENT/METHOD			
6.25-in. / Auger		10-inches		Mobile Drill B-61 / HSA			
CASING MAT./DIA.		SCREEN:		SAMPLING METHOD			
SCH 40 PVC / 4-inch		TYPE Slotted		2" Split Spoon			
ELEVATION OF:		MAT. SCH 40 PVC		TOTAL LENGTH 25.0			
GROUND SURFACE		TOP OF WELL CASING		TOP & BOTTOM SCREEN			
(FT.)		/		GW SURFACE			
				GRAVEL PACK #2			
Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown fine to coarse SAND, little Gravel, trace Silt; dry (fill)			
10				Brown fine to coarse SAND, little Gravel, trace Silt; dry to moist (fill)		49.5	
15				Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)		45.9	
20				Brown PEAT; moist			
25				Brown PEAT; moist to wet		1.3	
30				Dark brown SAND, some Silt, trace Peat; wet		2.7	
35				Dark brown PEAT; moist to wet		125	
40				Dark brown fine SAND, little Silt; wet		147	Odor and trace free product
45				Dark brown fine SAND, little Silt; wet		413	Sheen
50				Dark brown fine SAND, little Silt; wet		475	Trace free product
55				Dark brown fine SAND, little Silt; wet		>2000	Sheen
60				Dark brown fine SAND, little Silt; wet		524	
65							
70							
75							
80							
85							
90							
95							
100							
105							
110							
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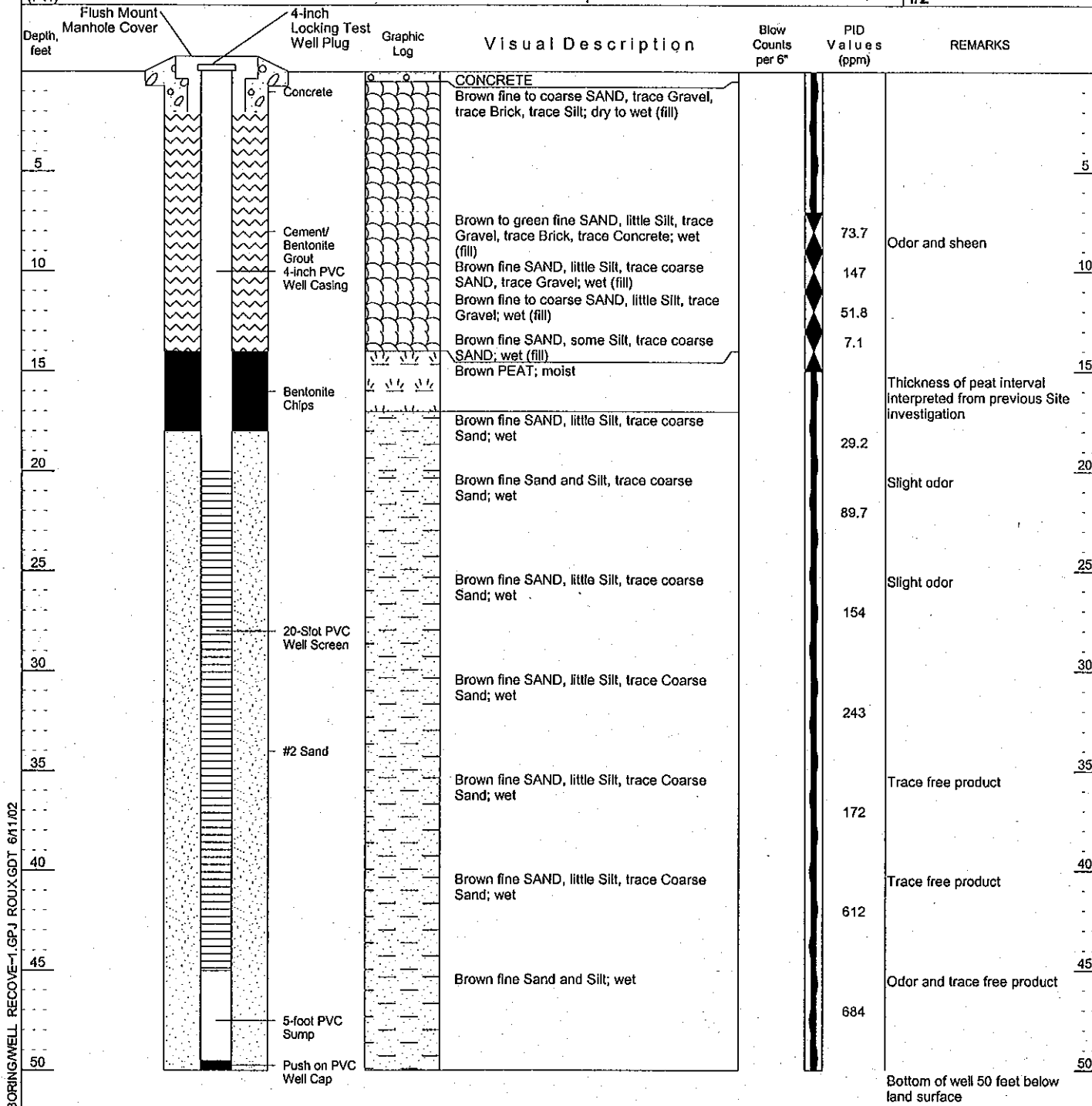
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WELL CONSTRUCTION LOG

WELL NO. RW-15	NORTHING	EASTING		
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/4/02-4/4/02
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
				GRAVEL PACK #2



BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-16		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY C. Battista		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/5/02-4/5/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	Concrete			
5	#2 Sand		7.9	Slight odor
10	4-inch PVC Well Casing		5.8	
15			4.1	
15			26.4	
20	Brown Silt and fine Sand, little Gravel; wet			Thickness of peat interval interpreted from previous Site investigation
25	Brown Silt and fine Sand, little Gravel; wet		11.5	odor
30	Brown Silt and fine Sand, little Gravel; wet		6.1	odor
35	Brown Silt and fine Sand, little Gravel; wet		10.0	odor
40	Dark gray fine SAND, some Silt, little Clay; wet		62.3	
45	Dark gray fine SAND, some Silt, little Clay, little Gravel; wet		4.4	Trace free product
50	Bottom of well 49 feet below land surface			

BORINGWELL RECOVER-1 GPJ ROUX GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-17		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site			LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers		LOGGED BY R. Kovacs		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams			GEOGRAPHIC AREA Off Site 12th Street Sidewalk		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		TOP OF WELL CASING	
				TOP & BOTTOM SCREEN	
				GW SURFACE	
				GRAVEL PACK #2	
Flush Mount Manhole Cover 4-inch Locking Test Well Plug Concrete Cement/Bentonite Grout 4-inch PVC Well Casing Bentonite Chips 20-Slot PVC Well Screen #2 Sand 5-foot PVC Sump Push on PVC Well Cap Graphic Log Visual Description Blow Counts per 6" PID Values (ppm) REMARKS					
CONCRETE Brown to dark brown fine to coarse SAND, some Silt; wet (fill) 13.0 Slight odor					
5 Brown to dark brown fine to medium SAND, some Silt; wet (fill) 14.0 Slight odor					
10 Brown to dark brown fine Sand and Silt; wet (fill) 22.3 Slight odor					
Brown fine to medium SAND; wet (fill) 12.7 Slight odor					
Brown fine Sand and Silt; wet (fill) 12.3 Slight odor					
15 Brown to reddish brown fine to medium SAND; wet (fill) 10.7 Slight odor					
Brown PEAT; moist 7.4 Thickness of peat interval Interpreted from previous Site Investigation Slight odor					
20 Brown fine to medium SAND; wet 10.7 Slight odor					
25 Brown to dark brown fine SAND; wet 11.9 Slight odor					
30 Brown to dark brown fine SAND; wet 14.9 Slight odor					
35 Brown fine to medium SAND; wet 9.7 Slight odor					
40 Brown fine to medium SAND; wet 47.3 Odor and trace free product					
45 Brown fine to medium SAND; wet 59.9 Odor and trace free product					
50 Bottom of well 50 feet below land surface					



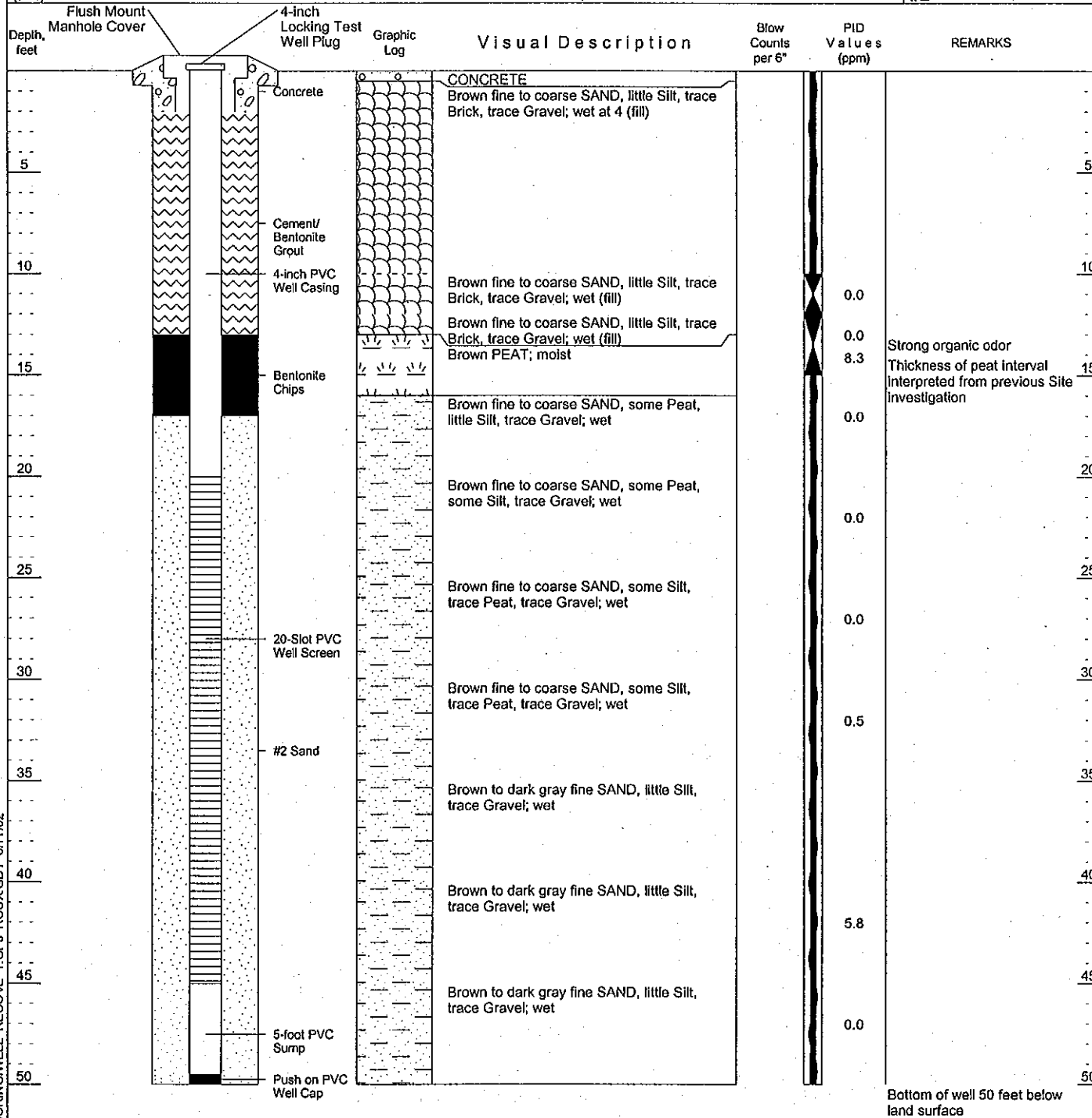
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WELL CONSTRUCTION LOG

WELL NO. RW-18		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY C. Battista		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 4/19/02-4/19/02	
		TOP OF WELL CASING		TOTAL LENGTH 25.0	
		TOP & BOTTOM SCREEN		DIA. 4-inch	
				SLOT SIZE 20-Slot	
				GRAVEL PACK #2	



BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-19		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 4/18/02-4/18/02	
		TOP OF WELL CASING			
		TOP & BOTTOM SCREEN			
		MAT. SCH 40 PVC		TOTAL LENGTH 25.0	
		DIA. 4-inch		SLOT SIZE 20-Slot	
				GRAVEL PACK #2	

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	Concrete			
5	Brown fine to coarse SAND, little Silt, trace Brick, trace Gravel; wet at 4 (fill)			
10	Brown fine SAND, trace Silt, trace coarse Sand, trace Gravel; moist (fill)	0.9		
15	Brown fine SAND, trace Silt; wet (fill)	0.7		
20	Peat and green-grey CLAY; moist	1.8		Thickness of peat interval interpreted from previous Site investigation
25	Brown fine SAND, little Silt; wet	0.0		
30	Brown fine SAND, little Silt; wet	0.0		Odor
35	Brown fine SAND, little Silt, trace coarse Sand; wet	0.7		Odor
40	Brown fine SAND, little Silt, trace coarse Sand; wet	0.0		Odor
45	Brown fine SAND, little Silt; wet	0.0		Odor
50	Brown fine SAND, little Silt; wet	0.0		Odor

Bottom of well 50 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



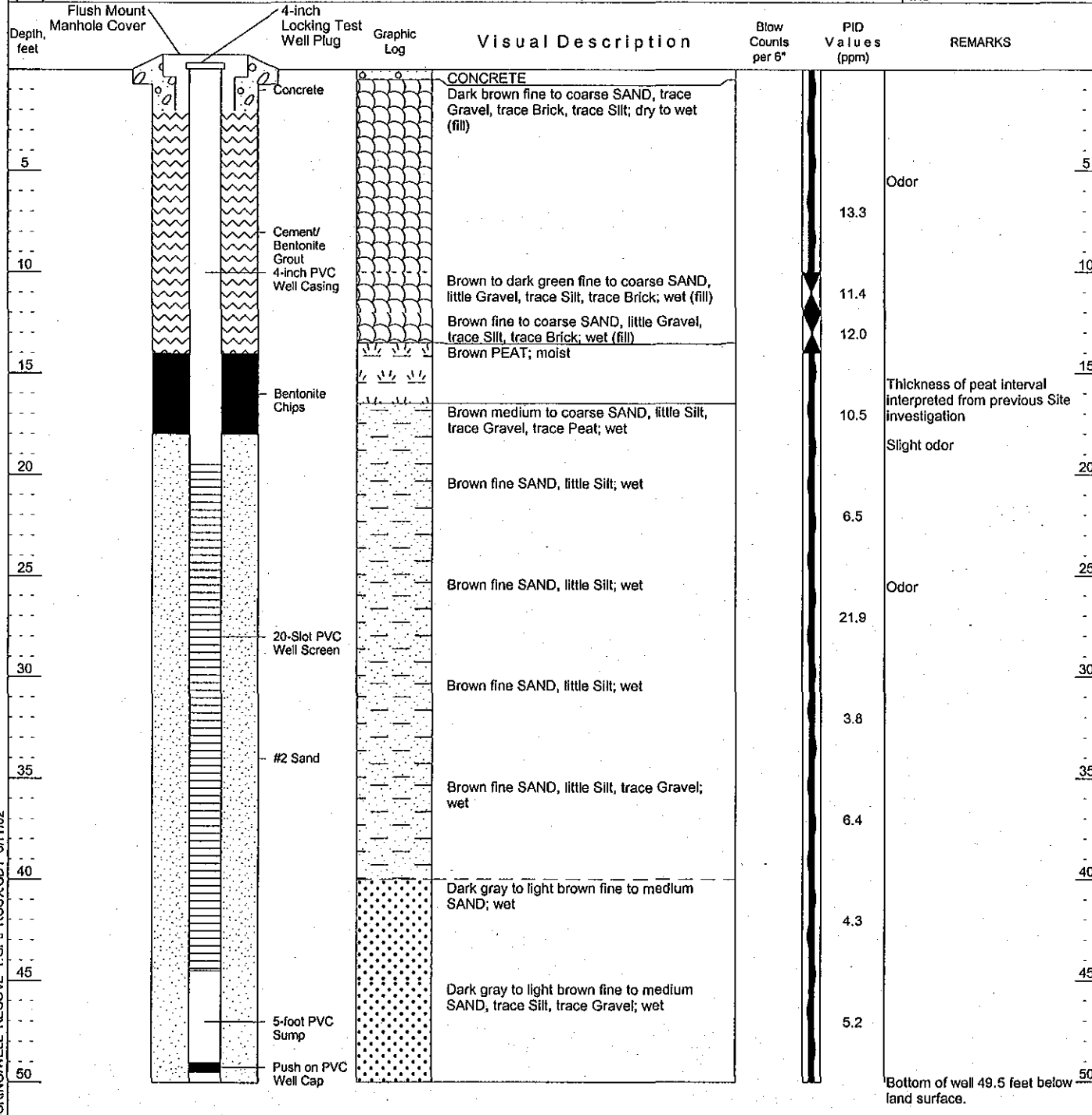
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WELL CONSTRUCTION LOG

WELL NO. RW-20	NORTHING	EASTING		
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers	LOGGED BY C. Battista	Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/17/02-4/17/02
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
				GRAVEL PACK #2



BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



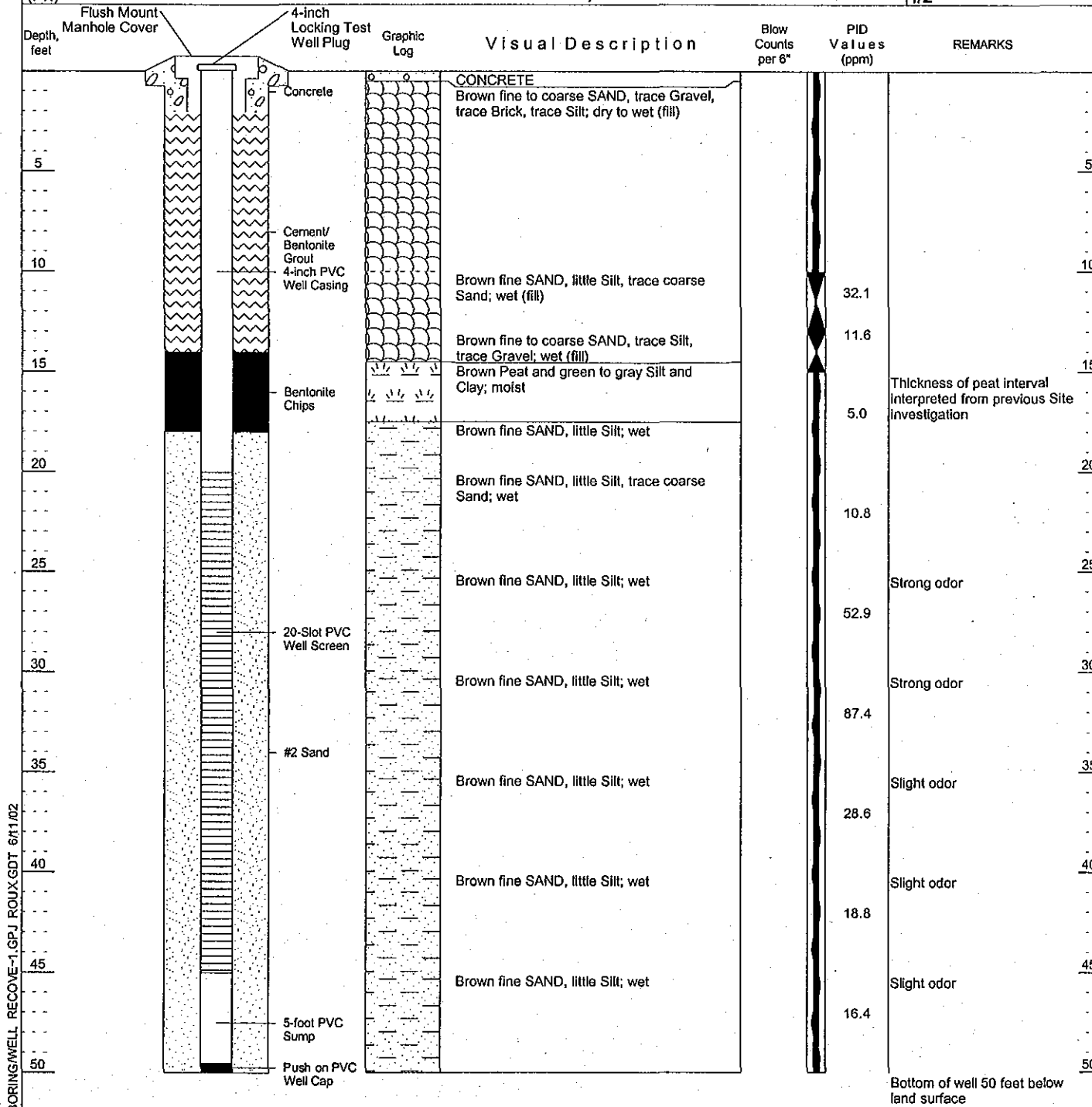
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WELL CONSTRUCTION LOG

WELL NO. RW-21		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		TOP OF WELL CASING	
		TOP & BOTTOM SCREEN		GW SURFACE	
				GRAVEL PACK #2	
		MAT. SCH 40 PVC		TOTAL LENGTH 25.0	
		DIA. 4-inch		SLOT SIZE 20-Slot	





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WELL CONSTRUCTION LOG

WELL NO. RW-22		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/15/02-4/15/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-Inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Concrete			
10	Brown fine to coarse SAND, trace silt, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
15	Brown fine SAND, trace Silt; wet (fill)	699		
20	Brown fine to coarse SAND, trace Silt; wet (fill)	>2000		Odor and black staining
25	Brown fine to coarse SAND, little silt; wet (fill)	5.7		
30	Brown fine SAND, little Silt; wet (fill)	3.7		
35	PEAT, Green-Gray Clay and fine Sand	27.8		Thickness of peat interval interpreted from previous Site investigation
40	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet	0.0		
45	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet	11.9		
50	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet	0.0		
55	Brown to gray fine SAND, little Silt, trace coarse Sand, trace Gravel; wet	0.0		
60	Brown fine SAND, little silt; wet	2.1		
65	Brown fine SAND, little silt; wet	0.0		

Bottom of well 50 feet below land surface

BORING/WELL RECOVERIES: LCPJ ROUX/GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-23		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/10/02-4/10/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: GROUND SURFACE		TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK
(FT.)		#2			

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Concrete			
10	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
15	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)			
20	Brown fine Sand and Silt, trace coarse Sand; wet (fill)			
25	Brown fine SAND, little Silt, trace Gravel; wet (fill)			
30	PEAT and Green-Gray CLAY, trace Shells; moist			
35	Brown fine to coarse SAND, little Silt, trace Gravel; wet			
40	Brown fine to coarse SAND, little Silt, trace Gravel; wet			
45	Brown fine to coarse SAND, little Silt, trace Gravel; wet			
50	Brown fine to coarse SAND, little Silt; wet			
55	Brown fine to coarse SAND, little Silt; wet			
60	Brown fine to coarse SAND, little Silt; wet			
65	Brown fine to coarse SAND, little Silt; wet			
70	Brown fine to coarse SAND, little Silt; wet			
75	Brown fine to coarse SAND, little Silt; wet			
80	Brown fine to coarse SAND, little Silt; wet			
85	Brown fine to coarse SAND, little Silt; wet			
90	Brown fine to coarse SAND, little Silt; wet			
95	Brown fine to coarse SAND, little Silt; wet			
100	Brown fine to coarse SAND, little Silt; wet			
105	Brown fine to coarse SAND, little Silt; wet			
110	Brown fine to coarse SAND, little Silt; wet			
115	Brown fine to coarse SAND, little Silt; wet			
120	Brown fine to coarse SAND, little Silt; wet			
125	Brown fine to coarse SAND, little Silt; wet			
130	Brown fine to coarse SAND, little Silt; wet			
135	Brown fine to coarse SAND, little Silt; wet			
140	Brown fine to coarse SAND, little Silt; wet			
145	Brown fine to coarse SAND, little Silt; wet			
150	Brown fine to coarse SAND, little Silt; wet			
155	Brown fine to coarse SAND, little Silt; wet			
160	Brown fine to coarse SAND, little Silt; wet			
165	Brown fine to coarse SAND, little Silt; wet			
170	Brown fine to coarse SAND, little Silt; wet			
175	Brown fine to coarse SAND, little Silt; wet			
180	Brown fine to coarse SAND, little Silt; wet			
185	Brown fine to coarse SAND, little Silt; wet			
190	Brown fine to coarse SAND, little Silt; wet			
195	Brown fine to coarse SAND, little Silt; wet			
200	Brown fine to coarse SAND, little Silt; wet			
205	Brown fine to coarse SAND, little Silt; wet			
210	Brown fine to coarse SAND, little Silt; wet			
215	Brown fine to coarse SAND, little Silt; wet			
220	Brown fine to coarse SAND, little Silt; wet			
225	Brown fine to coarse SAND, little Silt; wet			
230	Brown fine to coarse SAND, little Silt; wet			
235	Brown fine to coarse SAND, little Silt; wet			
240	Brown fine to coarse SAND, little Silt; wet			
245	Brown fine to coarse SAND, little Silt; wet			
250	Brown fine to coarse SAND, little Silt; wet			
255	Brown fine to coarse SAND, little Silt; wet			
260	Brown fine to coarse SAND, little Silt; wet			
265	Brown fine to coarse SAND, little Silt; wet			
270	Brown fine to coarse SAND, little Silt; wet			
275	Brown fine to coarse SAND, little Silt; wet			
280	Brown fine to coarse SAND, little Silt; wet			
285	Brown fine to coarse SAND, little Silt; wet			
290	Brown fine to coarse SAND, little Silt; wet			
295	Brown fine to coarse SAND, little Silt; wet			
300	Brown fine to coarse SAND, little Silt; wet			
305	Brown fine to coarse SAND, little Silt; wet			
310	Brown fine to coarse SAND, little Silt; wet			
315	Brown fine to coarse SAND, little Silt; wet			
320	Brown fine to coarse SAND, little Silt; wet			
325	Brown fine to coarse SAND, little Silt; wet			
330	Brown fine to coarse SAND, little Silt; wet			
335	Brown fine to coarse SAND, little Silt; wet			
340	Brown fine to coarse SAND, little Silt; wet			
345	Brown fine to coarse SAND, little Silt; wet			
350	Brown fine to coarse SAND, little Silt; wet			
355	Brown fine to coarse SAND, little Silt; wet			
360	Brown fine to coarse SAND, little Silt; wet			
365	Brown fine to coarse SAND, little Silt; wet			
370	Brown fine to coarse SAND, little Silt; wet			
375	Brown fine to coarse SAND, little Silt; wet			
380	Brown fine to coarse SAND, little Silt; wet			
385	Brown fine to coarse SAND, little Silt; wet			
390	Brown fine to coarse SAND, little Silt; wet			
395	Brown fine to coarse SAND, little Silt; wet			
400	Brown fine to coarse SAND, little Silt; wet			
405	Brown fine to coarse SAND, little Silt; wet			
410	Brown fine to coarse SAND, little Silt; wet			
415	Brown fine to coarse SAND, little Silt; wet			
420	Brown fine to coarse SAND, little Silt; wet			
425	Brown fine to coarse SAND, little Silt; wet			
430	Brown fine to coarse SAND, little Silt; wet			
435	Brown fine to coarse SAND, little Silt; wet			
440	Brown fine to coarse SAND, little Silt; wet			
445	Brown fine to coarse SAND, little Silt; wet			
450	Brown fine to coarse SAND, little Silt; wet			
455	Brown fine to coarse SAND, little Silt; wet			
460	Brown fine to coarse SAND, little Silt; wet			
465	Brown fine to coarse SAND, little Silt; wet			
470	Brown fine to coarse SAND, little Silt; wet			
475	Brown fine to coarse SAND, little Silt; wet			
480	Brown fine to coarse SAND, little Silt; wet			
485	Brown fine to coarse SAND, little Silt; wet			
490	Brown fine to coarse SAND, little Silt; wet			
495	Brown fine to coarse SAND, little Silt; wet			
500	Brown fine to coarse SAND, little Silt; wet			
505	Brown fine to coarse SAND, little Silt; wet			
510	Brown fine to coarse SAND, little Silt; wet			
515	Brown fine to coarse SAND, little Silt; wet			
520	Brown fine to coarse SAND, little Silt; wet			
525	Brown fine to coarse SAND, little Silt; wet			
530	Brown fine to coarse SAND, little Silt; wet			
535	Brown fine to coarse SAND, little Silt; wet			
540	Brown fine to coarse SAND, little Silt; wet			
545	Brown fine to coarse SAND, little Silt; wet			
550	Brown fine to coarse SAND, little Silt; wet			
555	Brown fine to coarse SAND, little Silt; wet			
560	Brown fine to coarse SAND, little Silt; wet			
565	Brown fine to coarse SAND, little Silt; wet			
570	Brown fine to coarse SAND, little Silt; wet			
575	Brown fine to coarse SAND, little Silt; wet			
580	Brown fine to coarse SAND, little Silt; wet			
585	Brown fine to coarse SAND, little Silt; wet			
590	Brown fine to coarse SAND, little Silt; wet			
595	Brown fine to coarse SAND, little Silt; wet			
600	Brown fine to coarse SAND, little Silt; wet			
605	Brown fine to coarse SAND, little Silt; wet			
610	Brown fine to coarse SAND, little Silt; wet			
615	Brown fine to coarse SAND, little Silt; wet			
620	Brown fine to coarse SAND, little Silt; wet			
625	Brown fine to coarse SAND, little Silt; wet			
630	Brown fine to coarse SAND, little Silt; wet			
635	Brown fine to coarse SAND, little Silt; wet			
640	Brown fine to coarse SAND, little Silt; wet			
645	Brown fine to coarse SAND, little Silt; wet			
650	Brown fine to coarse SAND, little Silt; wet			
655	Brown fine to coarse SAND, little Silt; wet			
660	Brown fine to coarse SAND, little Silt; wet			
665	Brown fine to coarse SAND, little Silt; wet			
670	Brown fine to coarse SAND, little Silt; wet			
675	Brown fine to coarse SAND, little Silt; wet			
680	Brown fine to coarse SAND, little Silt; wet			
685	Brown fine to coarse SAND, little Silt; wet			
690	Brown fine to coarse SAND, little Silt; wet			
695	Brown fine to coarse SAND, little Silt; wet			
700	Brown fine to coarse SAND, little Silt; wet			
705	Brown fine to coarse SAND, little Silt; wet			
710	Brown fine to coarse SAND, little Silt; wet			
715	Brown fine to coarse SAND, little Silt; wet			
720	Brown fine to coarse SAND, little Silt; wet			
725	Brown fine to coarse SAND, little Silt; wet			
730	Brown fine to coarse SAND, little Silt; wet			
735	Brown fine to coarse SAND, little Silt; wet			
740	Brown fine to coarse SAND, little Silt; wet			
745	Brown fine to coarse SAND, little Silt; wet			
750	Brown fine to coarse SAND, little Silt; wet			
755	Brown fine to coarse SAND, little Silt; wet			
760	Brown fine to coarse SAND, little Silt; wet			
765	Brown fine to coarse SAND, little Silt; wet			
770	Brown fine to coarse SAND, little Silt; wet			
775	Brown fine to coarse SAND, little Silt; wet			
780	Brown fine to coarse SAND, little Silt; wet			
785	Brown fine to coarse SAND, little Silt; wet			
790	Brown fine to coarse SAND, little Silt; wet			
795	Brown fine to coarse SAND, little Silt; wet			
800	Brown fine to coarse SAND, little Silt; wet			
805	Brown fine to coarse SAND, little Silt; wet			
810	Brown fine to coarse SAND, little Silt; wet			
815	Brown fine to coarse SAND, little Silt; wet			
820	Brown fine to coarse SAND, little Silt; wet			
825	Brown fine to coarse SAND, little Silt; wet			
830	Brown fine to coarse SAND, little Silt; wet			
835	Brown fine to coarse SAND, little Silt; wet			
840	Brown fine to coarse SAND, little Silt; wet			
845	Brown fine to coarse SAND, little Silt; wet			
850	Brown fine to coarse SAND, little Silt; wet			
855	Brown fine to coarse SAND, little Silt; wet			
860	Brown fine to coarse SAND, little Silt; wet			
865	Brown fine to coarse SAND, little Silt; wet			
870	Brown fine to coarse SAND, little Silt; wet			
875	Brown fine to coarse SAND, little Silt; wet			
880	Brown fine to coarse SAND, little Silt; wet			
885	Brown fine to coarse SAND, little Silt; wet			
890	Brown fine to coarse SAND, little Silt; wet			
895	Brown fine to coarse SAND, little Silt; wet			
900	Brown fine to coarse SAND, little Silt; wet			
905	Brown fine to coarse SAND, little Silt; wet			
910	Brown fine to coarse SAND, little Silt; wet			
915	Brown fine to coarse SAND, little Silt; wet			
920	Brown fine to coarse SAND, little Silt; wet			
925	Brown fine to coarse SAND, little Silt; wet			
930	Brown fine to coarse SAND, little Silt; wet			
935	Brown fine to coarse SAND, little Silt; wet			
940	Brown fine to coarse SAND, little Silt; wet			
945	Brown fine to coarse SAND, little Silt; wet			
950	Brown fine to coarse SAND, little Silt; wet			
955	Brown fine to coarse SAND, little Silt; wet			
960	Brown fine to coarse SAND, little Silt; wet			
965	Brown fine to coarse SAND, little Silt; wet			
970	Brown fine to coarse SAND, little Silt; wet			
975	Brown fine to coarse SAND, little Silt; wet			
980	Brown fine to coarse SAND, little Silt; wet			
985	Brown fine to coarse SAND, little Silt; wet			
990	Brown fine to coarse SAND, little Silt; wet			
995	Brown fine to coarse SAND, little Silt; wet			
1000	Brown fine to coarse SAND, little Silt; wet			

BORING/WELL RECOVER-1 GPJ ROUX GDT 6/11/02

Bottom of well 50 feet below land surface



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WELL CONSTRUCTION LOG

WELL NO. RW-25		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		Off Site 12th Street Sidewalk			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/11/02-4/11/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	Concrete			
5	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
10	Brown fine SAND, little Silt, trace Gravel; wet (fill)	8.1		
15	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)	198	Odor	
20	Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)	478	Odor	
25	PEAT and Green-Gray CLAY; moist			Odor
30	Brown fine to coarse SAND, little Silt, trace Gravel; wet	518		Thickness of peat interval interpreted from previous Site investigation
35	Brown fine to coarse SAND, little Silt, trace Gravel; wet	610		Odor
40	Brown fine to coarse SAND, little Silt; wet	31.4		
45	Brown fine to coarse SAND, little Silt; wet	231	Odor	
50	Brown fine SAND, little Silt, trace coarse Sand; wet	315	Odor	
55	Brown fine SAND, some Silt, trace coarse Sand; wet	136	Odor	
60	Brown fine Sand and Silt; wet	246	Odor	

Bottom of well at 50 feet below land surface

BORING WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-27		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		Off Site 12th Street Sidewalk			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/12/02-4/12/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	Concrete			
5	Brown fine to coarse SAND, trace Brick, trace Concrete, trace Gravel; dry to wet (fill)			
10	Brown fine to coarse SAND, little Gravel; wet (fill)	1.7		
15	Brown fine to coarse SAND, little Gravel; wet (fill)	6.9		
15	Brown fine to coarse SAND, little Gravel, trace Silt; wet (fill)	3.1		
15	PEAT and Green-Gray CLAY; moist	2.7		Thickness of peat interval interpreted from previous Site investigation
20	Brown fine SAND, little Silt, trace Gravel, trace coarse Sand; wet	17.7		
25	Brown fine SAND, little Silt; wet	32.4		
30	Brown fine SAND, little Silt, trace coarse Sand; wet	3.8		
35	Brown fine SAND, little Silt, trace coarse Sand; wet	5.2		
40	Brown fine SAND, some Silt; wet	3.8		
45	Brown fine SAND, some Silt; wet	7.1		
50				Bottom of well 50 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-29		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 4/25/02-4/25/02	
		TOP OF WELL CASING		TOTAL LENGTH 25.0	
		TOP & BOTTOM SCREEN		DIA. 4-inch	
				SLOT SIZE 20-Slot	
				GW SURFACE	
				GRAVEL PACK #2	

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
10	Black fine to coarse SAND, little Wood, trace Gravel; moist to wet (fill)		301	Odor and black staining
15	CONCRETE and WOOD; wet (fill)			Black staining
20	Brown fine to medium SAND, little Silt, trace Gravel, wet (fill)		12.8	Black staining
25	Green to gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
30	Gray fine SAND, little Silt, little Wood; wet		44.4	Black staining
35	Gray fine to coarse SAND, little Silt, trace Wood; wet		17.6	Odor and black staining
40	Gray fine SAND, some Silt, trace coarse SAND; wet		12.5	Odor and black staining
45	Gray to brown fine SAND, little Silt; wet		6.0	Odor
50	Gray to brown fine SAND, little Silt; wet		459	Odor
55	Brown fine to medium SAND, some Silt; wet		762	Odor and trace free product
60	Brown fine SAND, little Silt; wet		314	Odor

Bottom of well 60.5 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-30		NORTHING		EASTING			
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue					
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York			
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along Pathmark Wall					
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 4/26/02-4/26/02			
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot		
ELEVATION OF: GROUND SURFACE		TOP OF WELL CASING		TOP & BOTTOM SCREEN	GW SURFACE		
(FT.)					GRAVEL PACK #2		
Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 8"	PID Values (ppm)	REMARKS
5				Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
10				Brown coarse to fine SAND, little Gravel; moist (fill)		228	Odor and black staining
15				Brown fine to coarse SAND, little Gravel, trace Wood, trace Brick; wet (fill)		5.7	
20				Brown fine to medium SAND, trace Gravel, trace Silt; wet (fill)		6.2	
25				Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.9	Odor and black staining
30				Brown fine SAND, little Silt, trace Gravel; wet (fill)		8.7	Odor and black staining
35				Gray fine to medium SAND, trace Silt, trace Peat; wet		10.4	Odor and black staining
40				Fine SAND, trace Silt; wet		22.2	Black staining
45				Brown PEAT; moist		13.3	Odor and black staining
50				Brown fine SAND, little Silt; wet		12.7	Odor and black staining
				Gray fine SAND, trace Silt; wet		17.1	Odor and trace free product
				Brown fine SAND, little Silt; wet		728	Odor, black staining, and free product
				Fine SAND, little Silt; wet		1067	Odor, black staining, and free product
				Fine SAND, little Silt; wet		840	Odor, black staining, and free product
							Bottom of well 50 feet below land surface



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WELL CONSTRUCTION LOG

WELL NO. RW-31	NORTHING	EASTING
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site	LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers	LOGGED BY D. Moss	Brooklyn, New York
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams	GEOGRAPHIC AREA On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	SAMPLING METHOD 2" Split Spoon
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING
		TOP & BOTTOM SCREEN /
		GW SURFACE
		GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	6-Inch Locking Steel Protective Stand Pipe				
5	4-Inch Locking Test Well Plug	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5	Cement Bentonite Grout				
5	Bentonite Chips	Fine SAND, trace Silt; wet (fill)	945		Odor, black staining, and sheen
10	4-Inch PVC Well Casing				
15		Brown fine to medium SAND, trace Silt, trace Brick, trace Gravel, trace Wood, trace Coal Fragments; wet (fill)	35.9		
15		Brown fine to medium SAND, some Silt, trace Gravel; wet (fill)	26.3		
15		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)	>2000		Odor
20		Brown fine to coarse SAND, little Silt, trace Gravel; wet (fill)	886		Odor, black staining, and trace free product
20		Brown PEAT; moist	>2000		Odor and free product
20	20-Slot PVC Well Screen	Brown fine to coarse SAND, little Silt, trace Gravel; wet	1349		
25		Brown fine SAND, little Silt; wet			
25	#2 Sand	Gray to brown fine SAND, little Silt, trace coarse SAND; wet	257		Odor and trace free product
30		Gray to brown fine SAND, little Silt, trace coarse SAND; wet	192		Odor and trace free product
35		Gray to brown fine SAND, little Silt, trace coarse SAND; wet	254		Odor and trace free product
40		Gray to brown fine SAND, little Silt, trace coarse SAND; wet	415		Odor and trace free product
45		Gray to brown fine SAND, some Silt; wet	785		Odor and trace free product
50	5-foot PVC Sump				
50	Push on PVC Well Cap				

Bottom of well 50 feet below land surface

BORING WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-32		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along Pathmark Wall			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		MAT. SCH 40 PVC	TOTAL LENGTH 35.0
ELEVATION OF: (FT.)		GROUND SURFACE		TOP OF WELL CASING	TOP & BOTTOM SCREEN
				GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	6-inch Locking Steel Protective Stand Pipe 4-inch Locking Test Well Plug CEMENT Cement/Bentonite Grout Bentonite Chips	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
10	4-inch PVC Well Casing	Gray-brown fine to coarse SAND, trace Silt, trace Gravel; moist (fill)	21.1		
15		Gray-brown medium SAND, trace Silt, trace Gravel, trace coarse Sand; moist (fill)	13.8		Odor, sheen
20	#2 Sand	Brown coarse to fine Sand, little Silt, trace Gravel; moist (fill)	6.5		Odor, trace black staining
25		Brown fine to medium SAND, little Silt, trace coarse Sand; wet (fill)	7.3		Odor
30	20-Slot PVC Well Screen	Brown fine to coarse SAND, little Silt; wet	15.3		
35		Gray-brown fine SAND, little Silt, trace coarse Sand; wet	36.0		Odor, sheen
40		Gray-brown fine SAND, little Silt, trace coarse Sand; wet	87.4		Odor, sheen
45		Gray-brown fine SAND, little Silt, trace coarse Sand; wet	118		Odor, sheen
50	5-foot PVC Sump Push on PVC Well Cap	Brown fine SAND, some Silt; wet	67.4		Odor
		Brown fine to medium SAND, little Silt; wet	107		Odor
		Brown fine SAND, some Silt; wet	68.9		Odor
					Bottom of well 50 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-33		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				On Site Along Pathmark Wall	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 5/1/02-5/1/02	
		TOP OF WELL CASING		GW SURFACE	
		TOP & BOTTOM SCREEN		GRAVEL PACK #2	
		MAT. SCH 40 PVC		TOTAL LENGTH 25.0	
		DIA. 4-inch		SLOT SIZE 20-Slot	

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	6-inch Locking Steel Protective Stand Pipe				
0	4-inch Locking Test Well Plug				
0	CEMENT	Brown coarse to fine SAND, trace Silt, trace Brick, trace Gravel; dry to moist (fill)			
5					
5		Brown fine to coarse SAND, little Silt; wet (fill)		0.0	
10	Cement/Bentonite Grout 4-inch PVC Well Casing				
10		Brown fine SAND, some Silt; wet (fill)		1.3	
15	Bentonite Chips				
15		Brown fine SAND, some Silt, trace coarse Sand, trace Gravel; wet (fill)		8.3	
20	#2 Sand				
20		Brown to Black stained fine to coarse SAND, trace Gravel; wet (fill)		0.0	Trace free product
25		Gray-brown fine to medium SAND, little Silt, trace Gravel; Wet		0.0	
25		Brown fine SAND, little Silt, trace coarse Sand; wet		439	Odor
30	20-Slot PVC Well Screen				
30		Brown fine SAND, little Silt, trace coarse Sand; wet		7.2	Odor
35	Formation Collapse				
35		Brown fine SAND, some Silt; wet		18.4	
40		Brown fine SAND, some Silt; wet		79.5	Odor
45	5-foot PVC Sump				
45		Brown fine SAND, some Silt, trace coarse Sand; wet		194	Odor
50	#2 Sand				
50	Push on PVC Well Cap				
50					Bottom of well 49.5 feet below land surface

BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-34		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along 12th Street			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/3/02-5/3/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	6-inch Locking Steel Protective Stand Pipe				
0	4-inch Locking Test Well Plug				
5	Cement/Concrete	Brown fine to coarse SAND, little Silt, trace Gravel; moist to wet at approximately 7 ft bls (fill)		31.2	
10	Cement/Bentonite Grout	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)		10.3	
15	4-inch PVC Well Casing	Brown fine sand, little Silt, trace coarse Sand; wet (fill)		17.1	
15	Bentonite Chips	Green-gray CLAY and PEAT; moist		47.4	Thickness of peat interval interpreted from previous Site investigation Odor
20		Brown fine SAND, little Silt, trace coarse Sand; wet		26.9	Odor, sheen
25		Gray-brown fine SAND, little Silt, trace Gravel; wet		16.6	Odor
30	20-Slot PVC Well Screen	Gray-brown fine SAND, some Silt; wet		24.3	Odor
35	#2 Sand	Gray-brown fine SAND, some Silt, trace coarse Sand; wet		107	Odor, sheen
40		Brown fine SAND, little Silt; wet		126	Odor
45	5-foot PVC Sump	Brown fine SAND, little Silt; wet		134	Odor
50	Push on PVC Well Cap				Bottom of well 49 feet below land surface

BORINGWELL RECOVER-1.CPJ ROUX.GDT 6/11/02



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WELL CONSTRUCTION LOG

WELL NO. RW-35		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue			
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA On Site Along 12th Street			
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/6/02-5/8/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)		GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE
					#2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0	6-inch Locking Steel Protective Stand Pipe				
0	4-inch Locking Test Well Plug				
0	CEMENT Concrete	Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
5		Black fine SAND, trace Silt; moist to wet at approximately 5.5 ft bts (fill)		>2000	Odor, trace free product
5	Cement/Bentonite Grout	Black fine SAND, little Silt; wet (fill)		>2000	Odor, free product
10	4-inch PVC Well Casing	Green-gray CLAY and PEAT; moist		872	Odor, free product
10	Bentonite Chips	Black to brown fine SAND and SILT; wet			
15		Brown to black fine SAND, some Silt, trace coarse Sand; wet		272	Odor
20				311	
20		Gray-brown fine SAND, little Silt, trace Clay, trace Peat; wet			
25				182	Odor
25	#2 Sand	Brown fine SAND, little Silt; wet			
30	20-Slot PVC Well Screen			158	Odor
30		Brown fine SAND, little Silt; wet			
35				552	Odor, trace free product
35		Brown fine SAND, little Silt, trace coarse Sand; wet			
40	Formation Collapse			918	Trace free product
40		Gray-brown fine to medium SAND, little Silt; wet			
45	5-foot PVC Sump			723	Trace free product
45	#2 Sand	Gray-brown fine to medium SAND, little Silt; wet			
50	Push on PVC Well Cap				
50					Bottom of well 49 feet below land surface

BORINGWELL RECOVER-1 GPJ ROUX GDT 6/1/02



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WELL CONSTRUCTION LOG

WELL NO. RW-36		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 5/6/02-5/7/02	
		TOP OF WELL CASING		TOP & BOTTOM SCREEN	
		MAT. SCH 40 PVC		TOTAL LENGTH 25.0	
		DIA. 4-inch		SLOT SIZE 20-Slot	
				GRAVEL PACK #2	

Depth, feet	6-Inch Locking Steel Protective Stand Pipe	4-Inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown fine to coarse SAND, trace silt, trace gravel, trace brick; moist (fill)			
10				Black fine SAND, some Silt; wet (fill)		94.3	Odor
15				Brown to black fine SAND, some Silt, trace Clay, trace Coal, trace Shells, trace Gravel; wet (fill)		199	Odor
20				Black fine SAND, little silt; wet (fill)		8.7	Odor, trace free product
25				Brown to black fine to coarse SAND, little Silt, trace Gravel; wet (fill)		35.0	Odor, trace free product, sheen
30				Brown to black fine SAND, little Silt, trace Wood; wet (fill)		51.2	
35				Brown to black fine to medium SAND, little Silt; wet (fill)		109	Odor
40				Grey-brown fine SAND, some Silt; wet (fill)		22.9	Odor
45				Brown fine to coarse SAND; wet (fill)		5.0	
50				Green-grey CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site investigation
55				Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
60				Grey to black fine to coarse SAND, little Silt, trace Gravel; wet		111	Odor, trace free product
65				Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
70				Grey-brown fine to coarse SAND, little Silt, trace Gravel; wet		>2000	Odor, trace free product
75				Brown fine SAND, little Silt, trace coarse Sand; wet		1785	Odor, trace free product
80				Brown to light brown fine SAND, some Silt; wet		708	Odor, free Product

Bottom of well 50 feet below land surface



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WELL CONSTRUCTION LOG

WELL NO. RW-37		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		MAT. SCH 40 PVC	TOTAL LENGTH 25.0
ELEVATION OF: (FT.)		GROUND SURFACE		TOP OF WELL CASING	TOP & BOTTOM SCREEN
				GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	6-inch Locking Steel Protective Stand Pipe	Brown fine to coarse SAND, trace Gravel, trace Silt, trace Brick; moist to wet (fill)			
10	4-inch Locking Test Well Plug	Brown to black fine to medium SAND, little Silt, trace Gravel, trace Coal; wet (fill)	1271	Odor	
15	4-inch PVC Well Casing	Brown-green to black fine SAND, little Silt, trace Gravel, trace Wood; wet (fill)	1197	Odor	
20	Bentonite Chips	Brown fine to medium SAND, trace Gravel, trace Silt; wet (fill)	380		
25		Brown-green fine SAND, some Silt; wet (fill)	158		
30		Green-grey CLAY and PEAT; moist	252		Thickness of peat interval interpreted from previous Site Investigation
35		Brown fine SAND, little Silt, trace coarse SAND, trace Gravel; wet	207	Odor	
40		Brown fine SAND, little Silt, trace coarse SAND; wet	664	Odor	
45		Brown fine SAND, little Silt, trace coarse SAND; wet	775	Odor	
50		Brown fine SAND, little Silt; wet	1345	Odor	
55		Brown fine SAND, little Silt; wet	1489	Odor, trace free product	
60		Brown fine SAND, little Silt; wet	1183	Odor, trace free product	
65					Bottom of well at 50 ft bls

BORINGWELL RECOVER-1.GPJ ROUX GDT 6/11/02



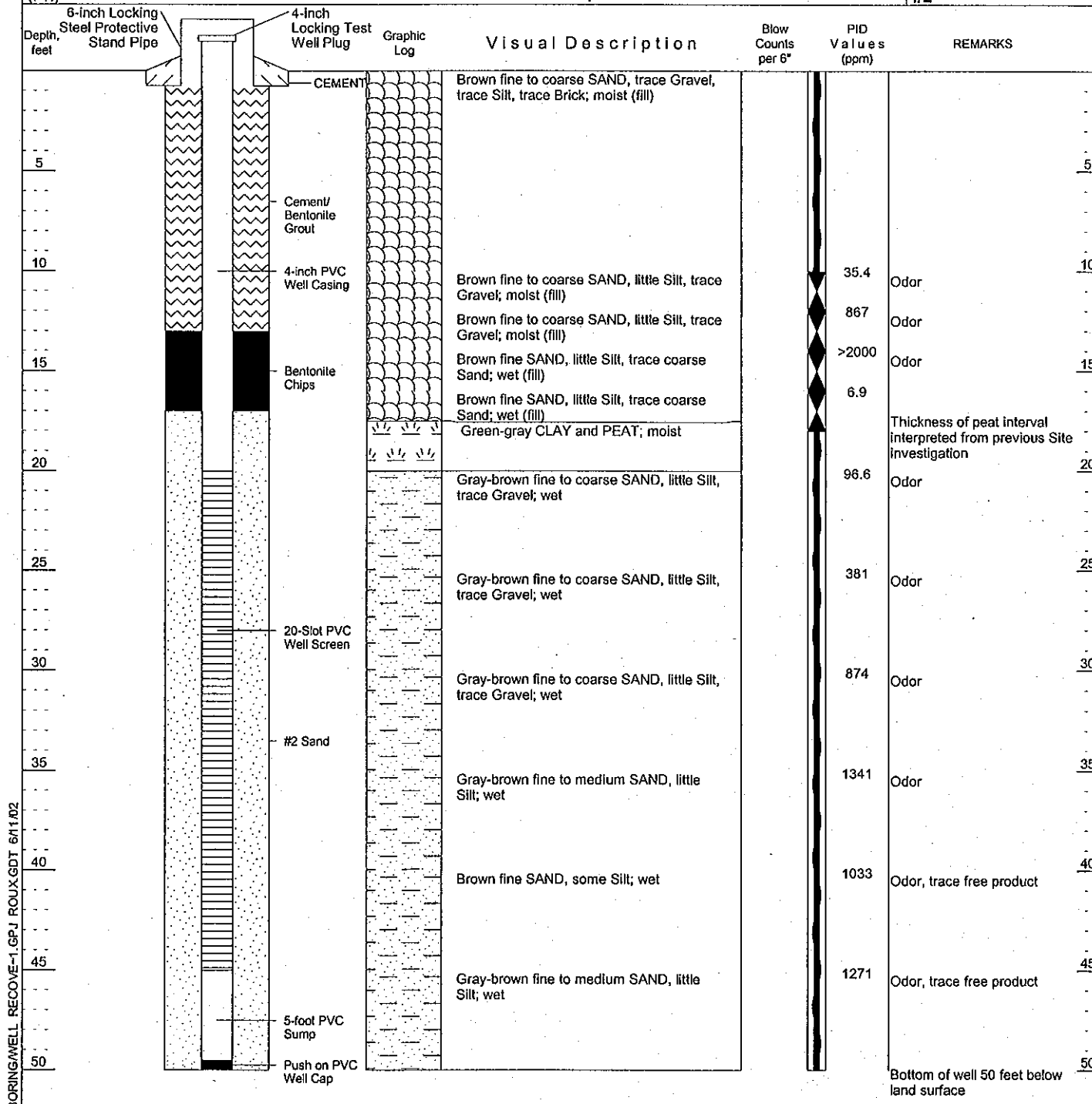
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WELL CONSTRUCTION LOG

WELL NO. RW-38	NORTHING	EASTING		
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York		
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		On Site Along 12th Street		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/10/02-5/10/02
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch
ELEVATION OF: (FT.)		GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN
				GW SURFACE
				GRAVEL PACK #2



BORINGWELL RECOVER-1.GPJ ROUX.GDT 6/11/02

Bottom of well 50 feet below land surface



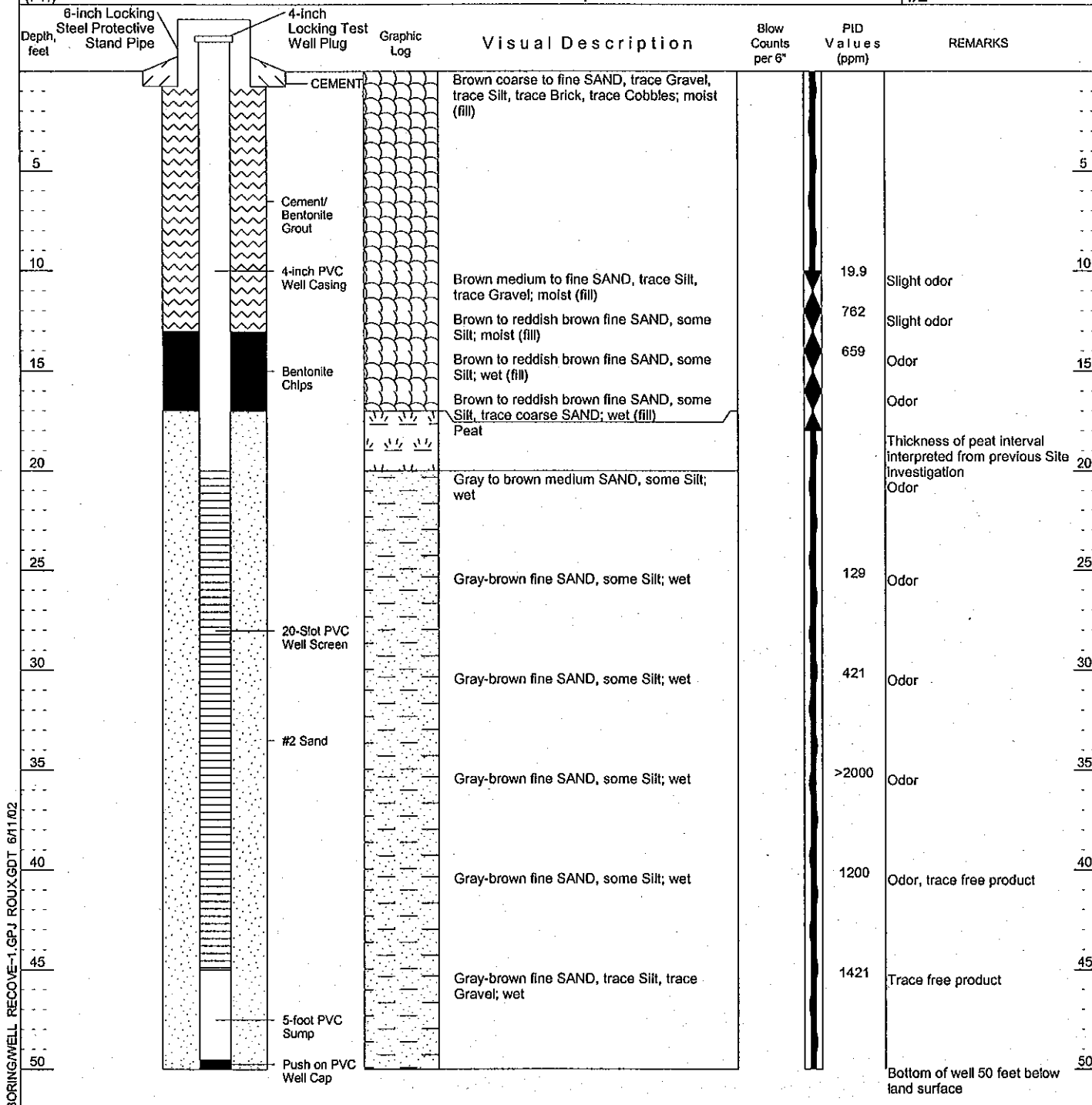
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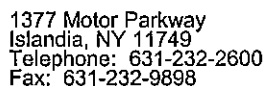
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WELL CONSTRUCTION LOG

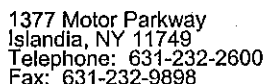
WELL NO. RW-39		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY R. Kovacks		GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				On Site Along 12th Street	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/13/02-5/13/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2





Page 1 of 1

Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0				Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)		17.1	
5							Odor
10				Gray-brown fine SAND, some Silt; wet (fill)		10.1	Odor
15				Brown fine to medium SAND, little Silt; wet (fill)		22.8	Odor
				Brown fine to coarse SAND, little Silt; wet (fill)		21.3	Odor
20				Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site Investigation
				Gray-brown fine to medium SAND, little Silt; wet		29.2	Odor
25				Gray-brown fine SAND, some Silt; wet		35.1	
30				Grey-brown fine SAND, some Silt; wet		65.2	Odor
35				Grey-brown fine SAND, some Silt; wet		149	Odor
40				Grey-brown fine SAND, some Silt; wet		78.1	Odor, trace free product
45				Brown fine SAND, little Silt; wet		522	Odor, trace free product
50							Bottom of well 50 feet below land surface



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WELL NO. RW-41		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site			LOCATION 124-136 2nd Avenue		
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams			GEOGRAPHIC AREA Off Site 12th Street Sidewalk		
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger		BOREHOLE DIAMETER 10-inches		DRILLING EQUIPMENT/METHOD CME-75 / HSA	
CASING MAT./DIA. SCH 40 PVC / 4-inch		SCREEN: TYPE Slotted		SAMPLING METHOD 2" Split Spoon	
ELEVATION OF: (FT.)		GROUND SURFACE		START-FINISH DATE 5/16/02-5/16/02	
		TOP OF WELL CASING		SLOT SIZE 20-Slot	
		TOP & BOTTOM SCREEN		GW SURFACE	
				GRAVEL PACK #2	

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5	Brown to black stained fine to medium SAND, little Silt, trace coarse SAND, trace Gravel; wet (fill)			
10	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)	166	Odor	
15	Brown fine to coarse SAND, trace Silt, trace Gravel; wet (fill)	1526	Odor	
20	Brown fine to coarse SAND, trace Silt; wet	713	Odor	
25	Green-gray CLAY and PEAT; moist			Thickness of peat interval interpreted from previous Site Investigation
30	Brown fine SAND, little Silt, trace coarse Sand; wet	23.5	Odor	
35	Brown to black fine SAND, little Silt, trace coarse Sand; wet	1029	Odor	
40	Brown fine SAND, little Silt, trace coarse Sand; wet	1785	Odor, trace free product	
45	Brown fine SAND, little Silt, trace coarse Sand; wet	>2000	Odor, trace free product	
50	Brown fine to medium SAND, little Silt; wet	1527	Odor, trace free product	
55	Brown fine to medium SAND, little Silt; wet	>2000	Odor, trace free product	

6-inch Locking Steel Protective Stand Pipe

4-inch Locking Test Well Plug

Graphic Log

CEMENT

Cement/Bentonite Grout

4-inch PVC Well Casing

Bentonite Chips

20-Slot PVC Well Screen

#2 Sand

5-foot PVC Sump

Push on PVC Well Cap

Bottom of well 50 feet below land surface



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WELL CONSTRUCTION LOG

WELL NO. RW-42		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/17/02-5/17/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	6-inch Locking Steel Protective Stand Pipe	4-inch Locking Test Well Plug	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5				Brown to black stained fine to medium SAND; little Silt, trace coarse SAND, trace Gravel; wet (fill)			
10							
15				Brown to black fine to medium SAND, trace Gravel, trace Silt, trace Coarse Sand; wet (fill) PEAT; moist	>2000	Odor	Thickness of peat interval interpreted from previous Site investigation
20				Brown fine to coarse SAND, trace Silt, trace Gravel; wet	>2000		
25				Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet	>2000	Odor	
30				Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet	520	Odor	
35				Gray-brown fine to medium SAND, little Silt, trace coarse Sand; wet	54.9	Odor, free product	
40				Gray-brown fine SAND, little Silt, trace coarse Sand; wet	280	Odor, free product	
45				Gray-brown fine to coarse SAND, little Silt; wet	>2000	Odor, free product	
50				Gray-brown fine to coarse SAND, little Silt; wet	>2000	Odor, free product	

5-foot PVC Sump
Push on PVC Well Cap

Bottom of well 50 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02

WELL CONSTRUCTION LOG

WELL NO.		NORTHING	EASTING
RW-43			
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers	LOGGED BY M. Kroll	Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0
ELEVATION OF:	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN
(FT.)			DIA. 4-inch GW SURFACE
			SLOT SIZE 20-Slot GRAVEL PACK #2

Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
0 - 5	Brown to black stained fine to medium SAND, little silt, trace coarse SAND, trace Gravel; wet (fill)			
5 - 10				
10 - 15	Grey to light brown fine to medium SAND, some silt, little Clay; wet	268		Slight odor, some staining
15 - 20	PEAT	>2000		Slight odor, some staining
20 - 25	Brown fine to coarse SAND, some silt; wet	>2000		
25 - 30	Brown fine to medium Sand and silt, some Clay, trace Gravel; wet	907		Odor
30 - 35	Brown fine to medium Sand and silt, some Clay, trace Gravel; moist	1235		Odor
35 - 40	Brown fine to coarse SAND, some silt and Clay; wet	>2000		Odor
40 - 45	Brown fine to coarse SAND, some silt and Clay; wet	1226		Odor
45 - 50	Brown fine to coarse SAND, some silt and Clay; wet	>2000		Odor
50	Brown fine to coarse SAND, some silt and Clay; wet	>2000		Odor

Bottom of well 50 feet below land surface



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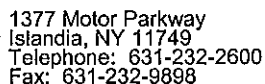
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WELL CONSTRUCTION LOG

WELL NO. RW-44		NORTHING		EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site				LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers		LOGGED BY D. Moss		Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams				GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon	START-FINISH DATE 5/21/02-5/21/02	
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 25.0	DIA. 4-inch	SLOT SIZE 20-Slot
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GRAVEL PACK #2

Depth, feet	Graphic Log	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
5		Brown fine to coarse SAND, trace Silt and Gravel; wet (fill)		32.7	
10					
15		Brown gray fine to medium SAND, little Silt; wet		0.0	
20		Brown PEAT and green-gray Clay			
25		Brown fine SAND, some Silt, trace coarse Sand and Gravel; wet		41.7	
30		Brown fine SAND, some Silt; wet		45.3	Organic odor
35		Brown fine SAND, little silt, trace coarse Sand; wet		77.2	
40		Brown fine SAND, some Silt; wet		137	Odor
45		Brown fine SAND, some Silt; wet		87.6	
50					Odor, free product
					Bottom of well 50 feet below land surface

BORING/WELL RECOVER-1.GPJ ROUX.GDT 6/11/02



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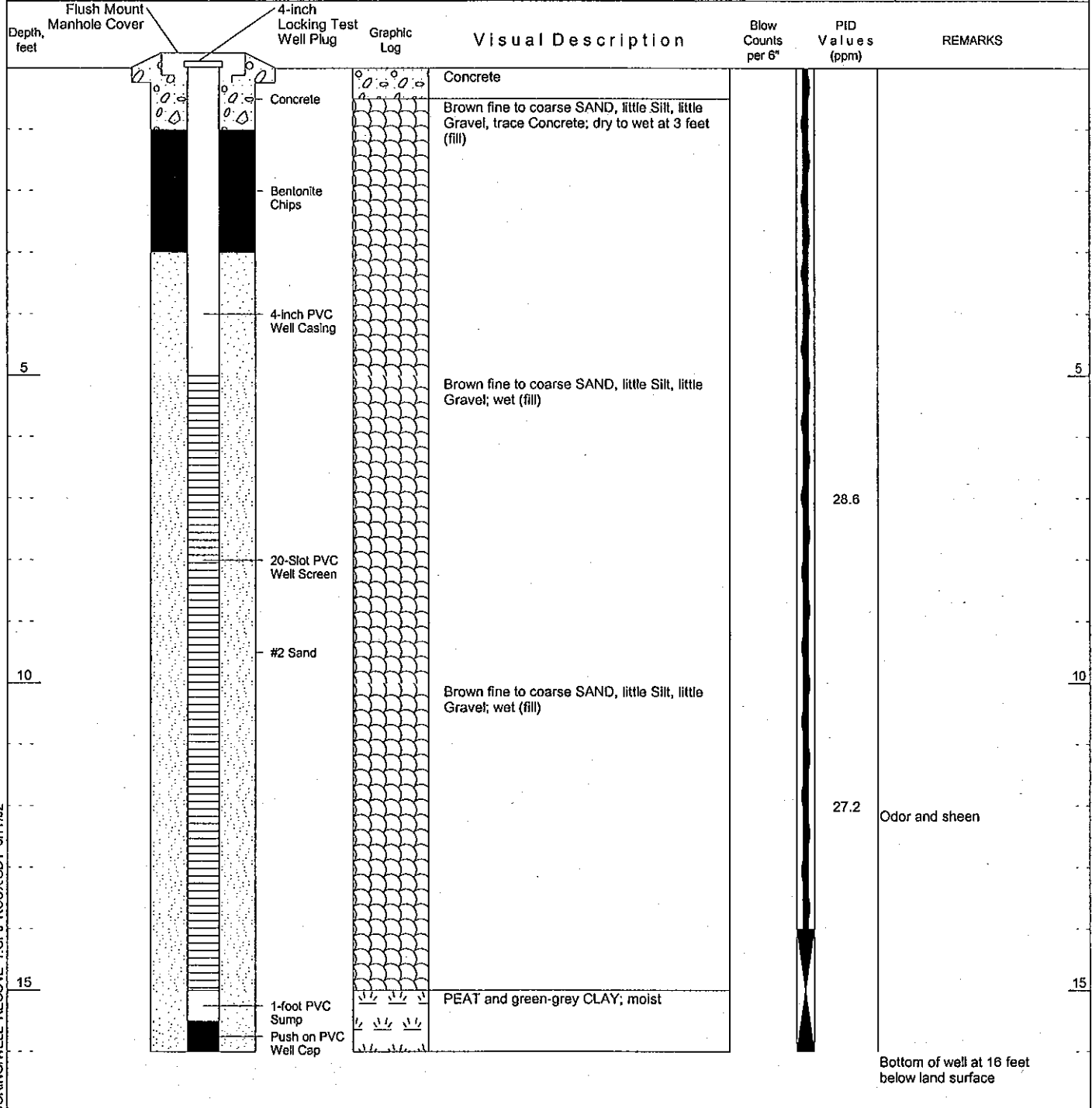
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WELL CONSTRUCTION LOG

WELL NO. RW-2S	NORTHING	EASTING	
PROJECT NO./NAME 92401Y03 / FC Gowanus former MGP Site		LOCATION 124-136 2nd Avenue	
APPROVED BY G. Tyers	LOGGED BY D. Moss	GEOGRAPHIC AREA Brooklyn, New York	
DRILLING CONTRACTOR/DRILLER Aquifer Drilling & Testing, Inc. / L. Adams		GEOGRAPHIC AREA Off Site 12th Street Sidewalk	
DRILL BIT DIAMETER/TYPE 6.25-in. / Auger	BOREHOLE DIAMETER 10-inches	DRILLING EQUIPMENT/METHOD CME-75 / HSA	SAMPLING METHOD 2" Split Spoon
CASING MAT./DIA. SCH 40 PVC / 4-inch	SCREEN: TYPE Slotted	MAT. SCH 40 PVC	TOTAL LENGTH 10.0
ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN
			DIA. 4-inch
			SLOT SIZE 20-Slot
			GRAVEL PACK #2

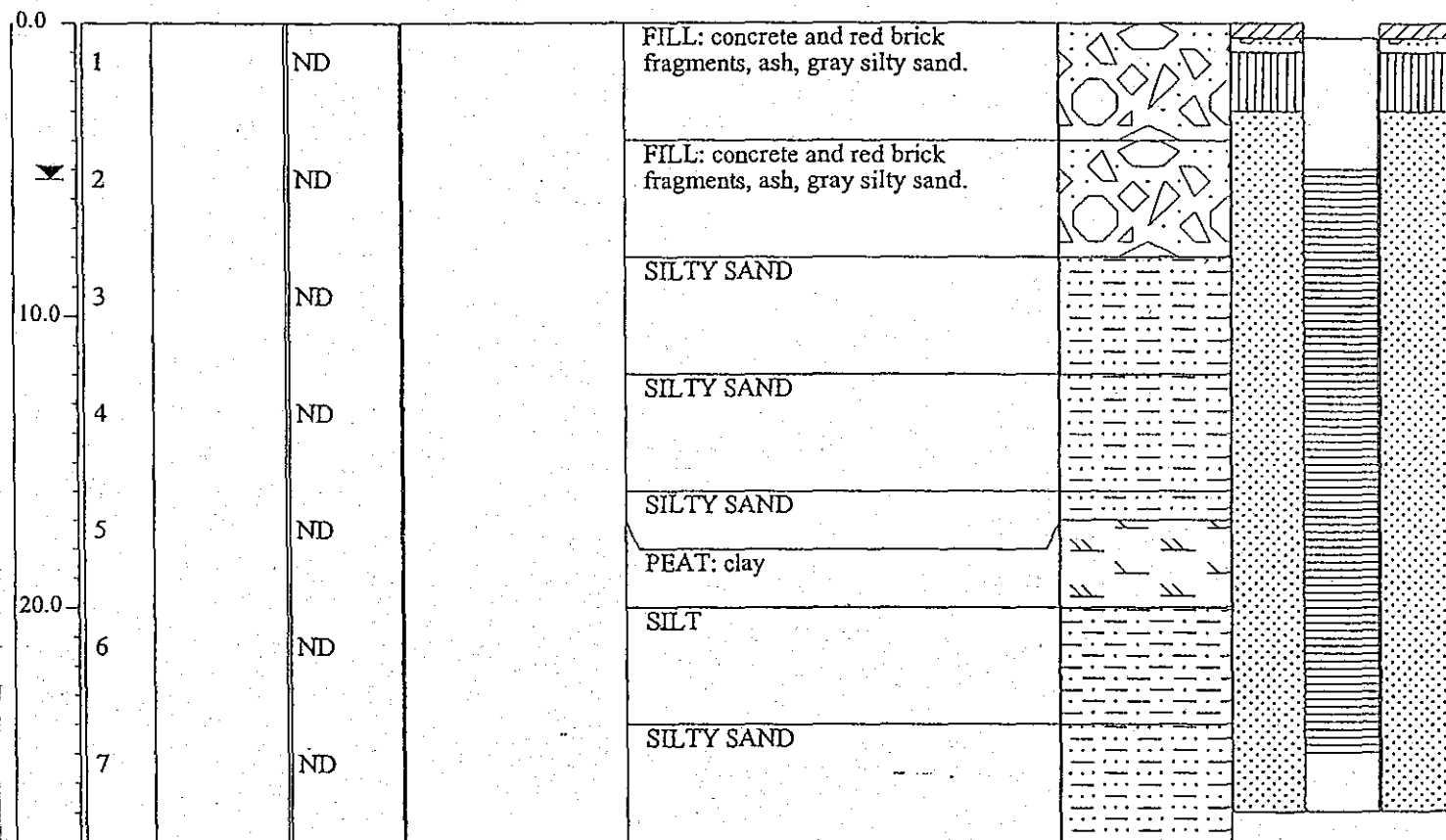


BORINGWELL RECOVER-1.GPJ ROUX.GDT \$/11/02

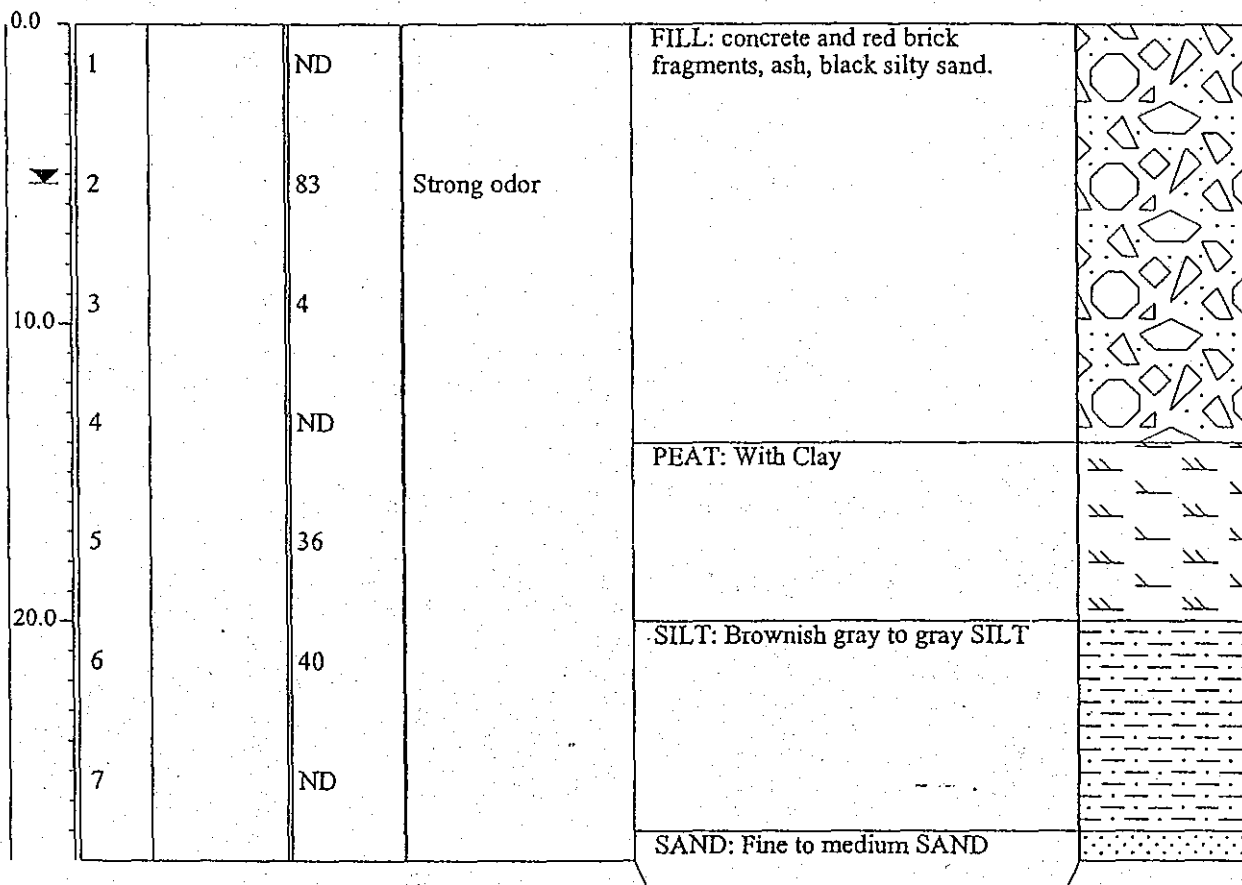
AKRF Engineering Logs – 2001

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				MW-2/DP-1													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 28 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>5.3</td> <td></td> </tr> <tr> <td>Time</td> <td>12:35</td> <td></td> </tr> <tr> <td>Date</td> <td>12/22/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	5.3		Time	12:35		Date	12/22/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	5.3																
Time	12:35																
Date	12/22/2000																
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROB																	
FIELD PARTY: CHRIS BOSS																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/14/2000		DATE COMPLETED: 12/14/2000															

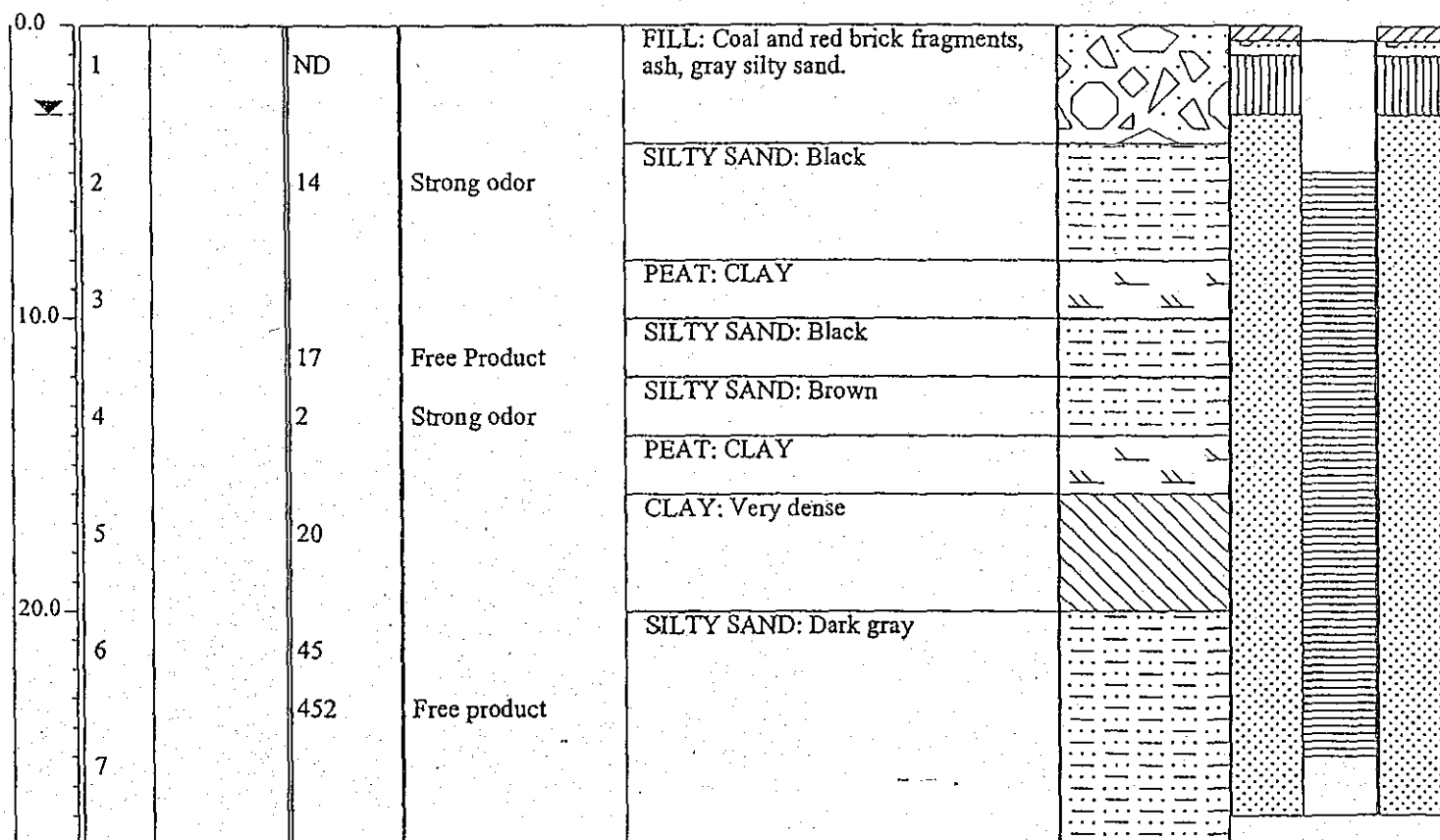
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION



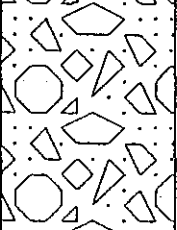
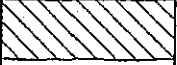
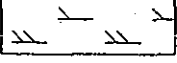
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				DP-2													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 28 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>5.0</td> <td></td> </tr> <tr> <td>Time</td> <td>10:10</td> <td></td> </tr> <tr> <td>Date</td> <td>12/14/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	5.0		Time	10:10		Date	12/14/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	5.0																
Time	10:10																
Date	12/14/2000																
DRILLING METHOD: GEOPROBE																	
FIELD PARTY: CHRIS BOSS/JAY SEALE																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/14/2000		DATE COMPLETED: 12/14/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										



AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				MW-4/DP-3													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 28 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>3.0</td> <td></td> </tr> <tr> <td>Time</td> <td>12:15</td> <td></td> </tr> <tr> <td>Date</td> <td>12/23/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	3.0		Time	12:15		Date	12/23/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	3.0																
Time	12:15																
Date	12/23/2000																
DRILLING METHOD: HOLLOW STEM AUGER/ GEOPROBE																	
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/13/2000		DATE COMPLETED: 12/13/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										



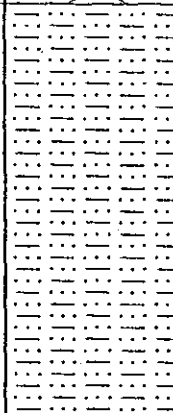
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				DP- 4													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 18 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>6.0</td> <td></td> </tr> <tr> <td>Time</td> <td>1:30</td> <td></td> </tr> <tr> <td>Date</td> <td>12/1/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	6.0		Time	1:30		Date	12/1/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	6.0																
Time	1:30																
Date	12/1/2000																
DRILLING METHOD: HOLLOW STEM AUGER																	
FIELD PARTY: CHARLIE GUZZARDO																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/1/2000		DATE COMPLETED: 12/1/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										

0.0	1				FILL: Red brick fragments, ash, woo black silty sand.	
2			250	Strong odor		
3			200	Strong odor		
4			50		CLAY: Little ash	
10.0	5		10		No Recovery	
6			ND			
7			ND		CLAY: With little Silt	
8			20		PEAT	

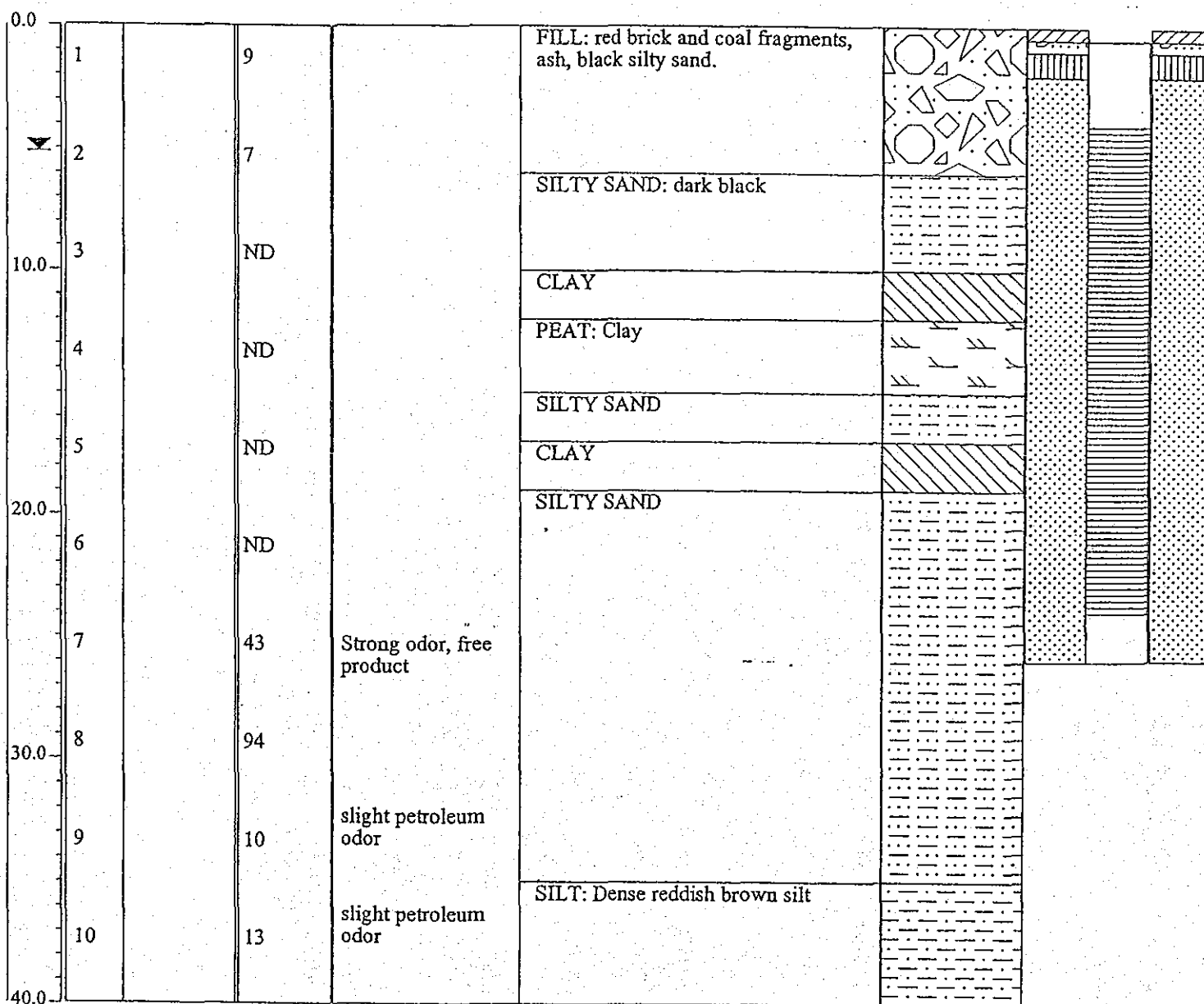
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				DP-6													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 18 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>6.0</td> <td></td> </tr> <tr> <td>Time</td> <td>10:40</td> <td></td> </tr> <tr> <td>Date</td> <td>11/30/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	6.0		Time	10:40		Date	11/30/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	6.0																
Time	10:40																
Date	11/30/2000																
DRILLING METHOD: HOLLOW STEM AUGER																	
FIELD PARTY: CHARLIE GUZZARDO																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 11/30/2000		DATE COMPLETED: 11/30/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										

0.0					FILL: Red brick and concrete fragments, ash, wood, black silty sand.	
1			ND			
2			25	Strong odor		
3			389	Strong odor		
4			243		SILTY SAND	
5			97			
6			20			
7			24			
8			24	Bottom of the gas holder (Refusal) @18 Feet		

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				DP-7													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 18 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>6.0</td> <td></td> </tr> <tr> <td>Time</td> <td>10:40</td> <td></td> </tr> <tr> <td>Date</td> <td>11/30/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	6.0		Time	10:40		Date	11/30/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	6.0																
Time	10:40																
Date	11/30/2000																
DRILLING METHOD: HOLLOW STEM AUGER																	
FIELD PARTY: CHARLIE GUZZARDO																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 11/30/2000		DATE COMPLETED: 11/30/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										

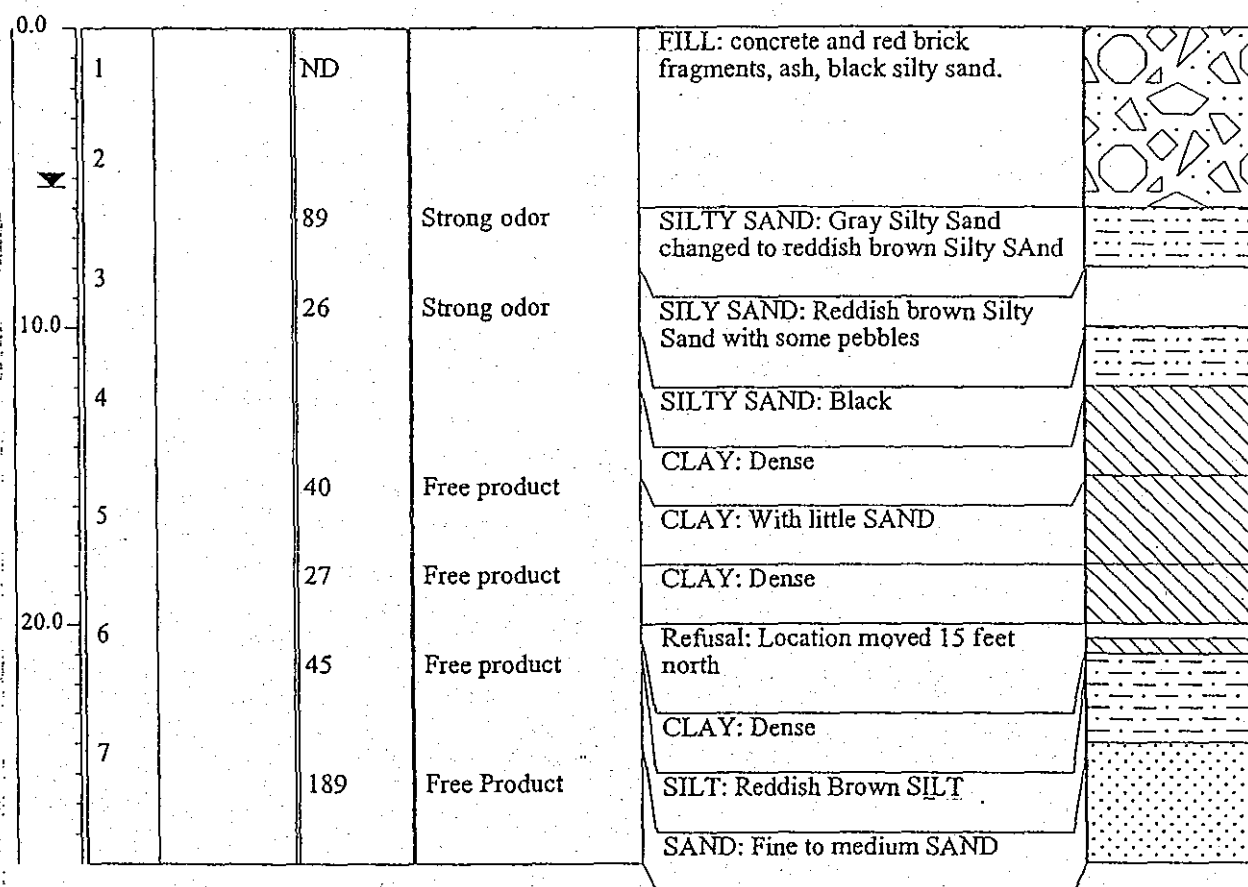
0.0					FILL: Red brick and concrete fragments, ash, wood, black silty sand.	
	1		ND			
	2		ND		SILTY SAND: With some Gravel and Wood	
	3		ND			
	4		75	Strong odor		
10.0	5		161	Strong odor		
	6		82	Strong odor		
	7		166	Free product		
	8		84	Free product		

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				MW-3/DP-9													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 40 FEET															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>5.15</td> <td></td> </tr> <tr> <td>Time</td> <td>11:20</td> <td></td> </tr> <tr> <td>Date</td> <td>12/23/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	5.15		Time	11:20		Date	12/23/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	5.15																
Time	11:20																
Date	12/23/2000																
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE																	
FIELD PARTY: JAY SALE																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/12/2000		DATE COMPLETED: 12/12/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										

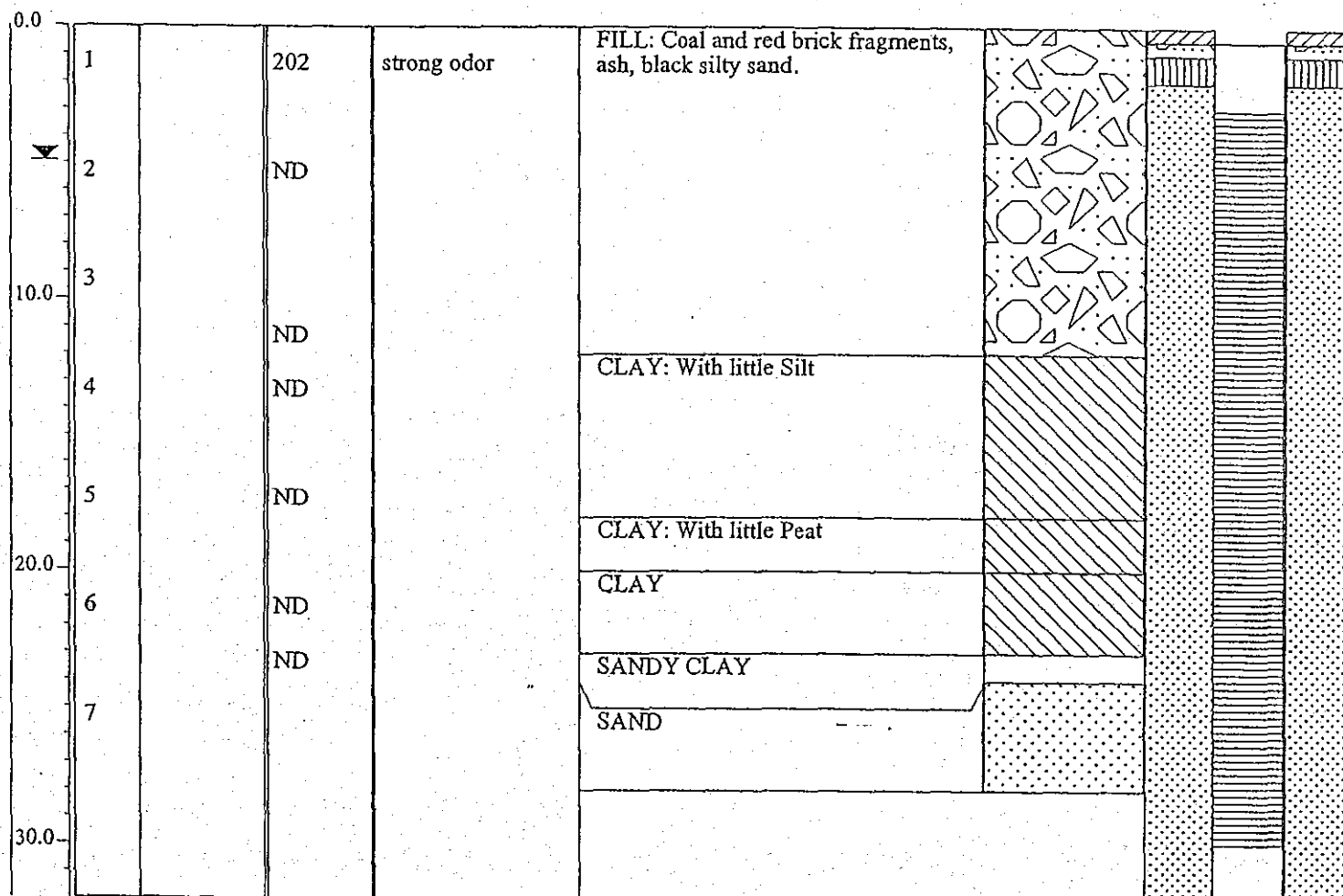


AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				DP- 10													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 28 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>5.0</td> <td></td> </tr> <tr> <td>Time</td> <td>10:10</td> <td></td> </tr> <tr> <td>Date</td> <td>12/13/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	5.0		Time	10:10		Date	12/13/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	5.0																
Time	10:10																
Date	12/13/2000																
DRILLING METHOD: GEOPROBE																	
FIELD PARTY: JAY SEALE																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/13/2000		DATE COMPLETED: 12/13/2000															

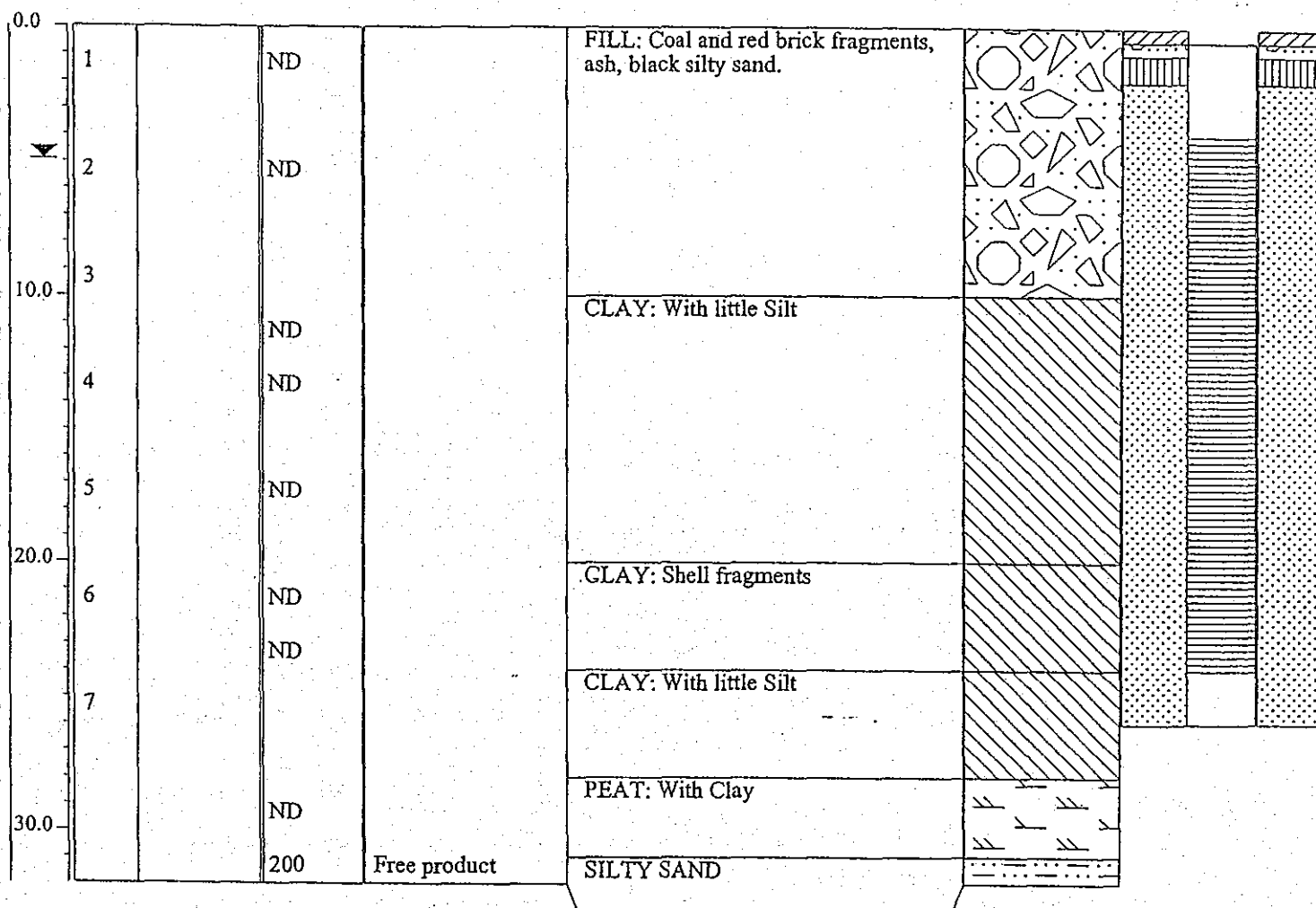
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION



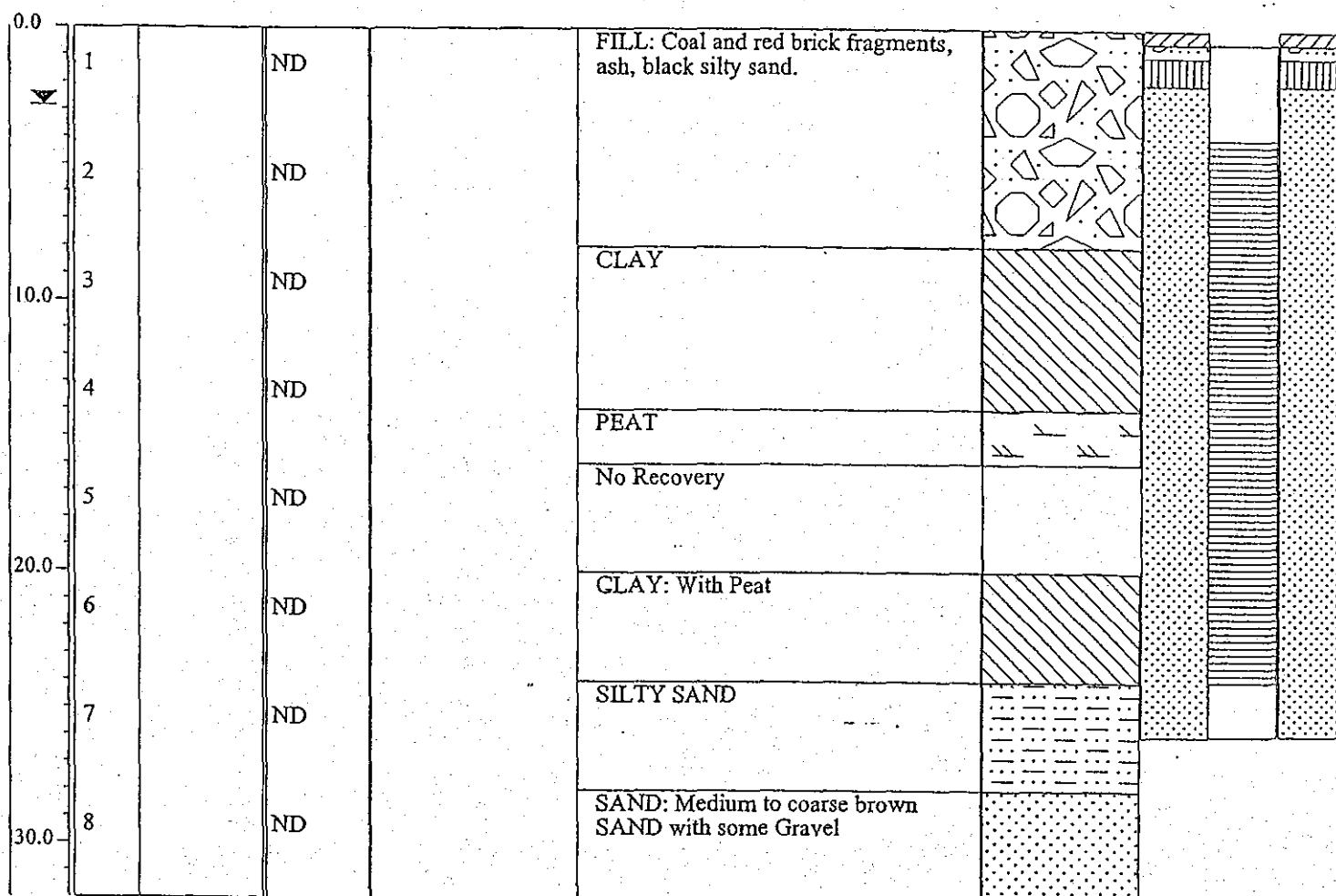
AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER MW-5/DP-11													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 32 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td style="width:33%;">Depth (ft)</td> <td style="width:33%;">5.3</td> <td style="width:33%;"></td> </tr> <tr> <td>Time</td> <td>2:45</td> <td></td> </tr> <tr> <td>Date</td> <td>12/22/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	5.3		Time	2:45		Date	12/22/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	5.3																
Time	2:45																
Date	12/22/2000																
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE																	
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/08/2000		DATE COMPLETED: 12/08/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										



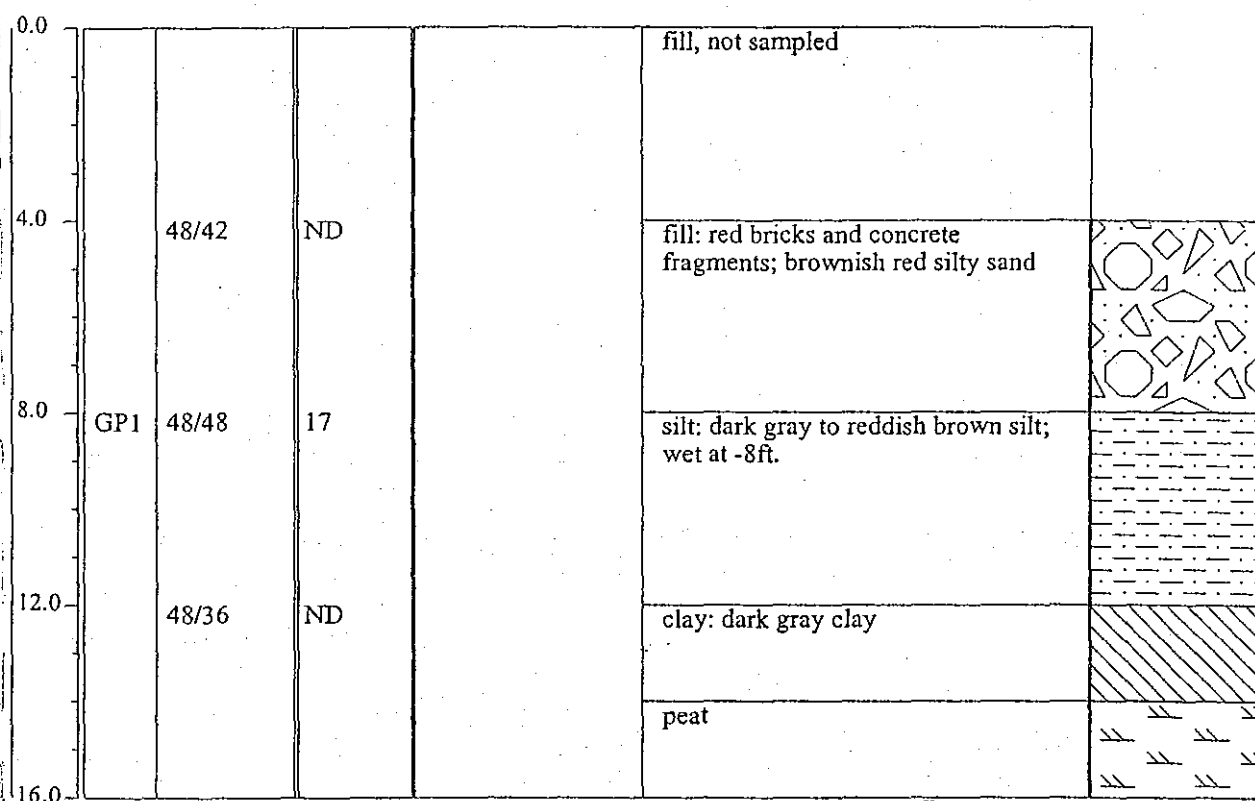
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				MW-6/DP-12													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 32 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>4.95</td> <td></td> </tr> <tr> <td>Time</td> <td>10:30</td> <td></td> </tr> <tr> <td>Date</td> <td>12/23/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	4.95		Time	10:30		Date	12/23/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	4.95																
Time	10:30																
Date	12/23/2000																
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE																	
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/6/2000		DATE COMPLETED: 12/6/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										



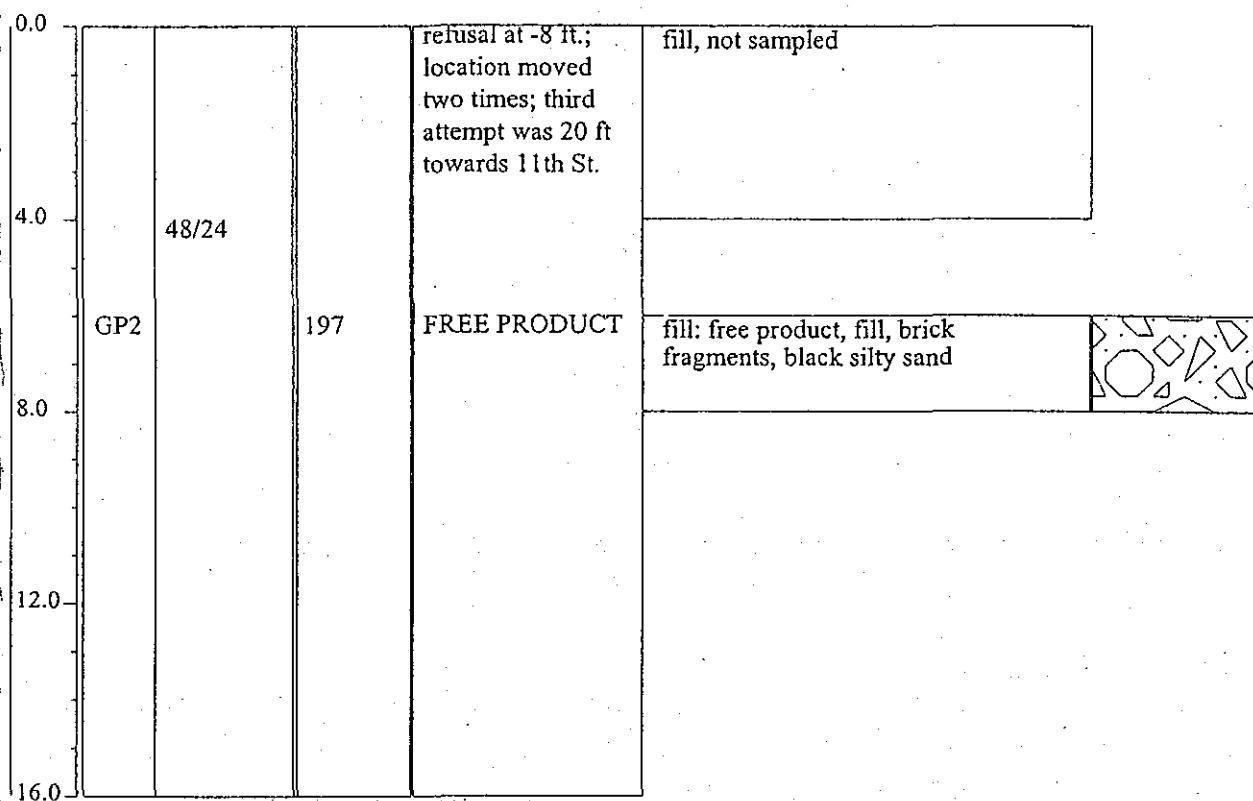
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				MW-7/DP-13													
PROJECT NUMBER: 80030-0002		FIELD BOOK NO: 301															
PROJECT NAME: 124-136 SECOND AVENUE		TOTAL DEPTH: 32 Feet															
LOCATION: BROOKLYN, NEW YORK		GROUND SURFACE ELEVATION: 0.0															
DRILLING CO: FENLEY & NICOL		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>2.8</td> <td></td> </tr> <tr> <td>Time</td> <td>1:15</td> <td></td> </tr> <tr> <td>Date</td> <td>12/22/2000</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	2.8		Time	1:15		Date	12/22/2000	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	2.8																
Time	1:15																
Date	12/22/2000																
DRILLING METHOD: HOLLOW STEM AUGER/GEOPROBE																	
FIELD PARTY: CHRIS MIGLIORE/JAY SEAL																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 12/06/2000		DATE COMPLETED: 12/06/2000															
DEPTH (ft)	SAMPLE NUMBER	BLOWS COUNT	PID/ppm	REMARKS	DESCRIPTION	LITHOLOGY	WELL INSTALLATION										



AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-1													
PROJECT NUMBER: 80030-0003		START TIME		0930													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1045													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/16/01		DATE COMPLETED: 02/16/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY (in) [driven/recovered]	PID (ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-2													
PROJECT NUMBER: 80030-0003		START TIME		1115													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1125													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/16/01		DATE COMPLETED: 02/16/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PTD(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



AKRF, INC.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

Environmental Consultants

GP-3

PROJECT NUMBER: 80030-0003

START TIME

1130

PROJECT NAME: 124-136 Second Ave. (Gowanus)

END TIME

1220

LOCATION: Brooklyn, NY

GROUND SURFACE ELEVATION: 0

DRILLING CO:

DRILLING METHOD: GeoProbe

FIELD PARTY:

GEOLOGIST: MOHAMED AHMED

DATE BEGUN: 02/16/01 DATE COMPLETED: 02/16/01

STATIC WATER LEVEL (BLS)

Depth (ft)

NA

Time

NA

Date

NA

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0				refusal at -12 ft.; location moved 12 ft. towards 11th St.	fill, not sampled	
4.0		48/24	15.3		fill: black sandy silt, odor	
8.0	GP3	48/15	218	FREE PRODUCT	silty sand: dark black silty sand, free product	
12.0		48/30	36	FREE PRODUCT		
16.0					peat	

AKRF, INC.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

Environmental Consultants

GP-6

PROJECT NUMBER: 80030-0003

START TIME 0850

PROJECT NAME: 124-136 Second Ave. (Gowanus)

END TIME 0925

LOCATION: Brooklyn, NY

GROUND SURFACE ELEVATION: 0

DRILLING CO:

DRILLING METHOD: GeoProbe

FIELD PARTY:

GEOLOGIST: MOHAMED AHMED

DATE BEGUN: 02/21/01 DATE COMPLETED: 02/21/01

STATIC WATER LEVEL (BLS)

Depth (ft)

NA

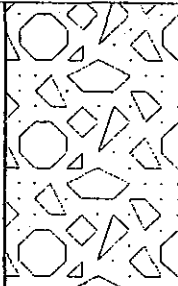
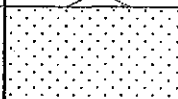
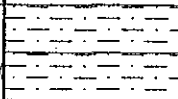
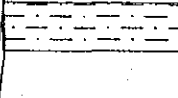
Time

NA

Date

NA

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0				refusal at -11 ft.; three attempts made; refusal at 7 ft. and 4 ft.; sampling location 5 ft. SE of flag	fill: light brown medium coarse sand and gravel	
4.0						
		0.5			sand: black/dark brown medium sand and silt; wet at -6 ft.	
8.0	GP6				silt: black/dark brown silt and medium coarse sand with small cobbles	
					silt: brown/tan silt and medium coarse sand with small cobbles	
12.0		1.9			silt: black silt and medium coarse sand with small cobbles	
16.0						

AKRF, INC.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

Environmental Consultants

GP-15

PROJECT NUMBER: 80030-0003

START TIME 0900

PROJECT NAME: 124-136 Second Ave. (Gowanus)

END TIME 0930

LOCATION: Brooklyn, NY

GROUND SURFACE ELEVATION: 0

DRILLING CO:

DRILLING METHOD: GeoProbe

FIELD PARTY:

GEOLOGIST: MOHAMED AHMED

DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

STATIC WATER LEVEL (BLS)

Depth (ft)

NA

Time

NA

Date

NA

DEPTH (ft)	SAMPLE NUMBER	RECOVERY (in) [driven/recovered]	PID (ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0					fill, not sampled	
4.0	48/36	8.0	FREE PRODUCT	fill: coal fragments, loose, stained with free product		
8.0	GP15 48/12	21.0	FREE PRODUCT	fill: coal fragments, loose, stained with free product		
12.0	48/24	9.0	FREE PRODUCT	silty sand: fill, black silty sand, loose, free product		
16.0				peat: dark brown peat		

AKRF, INC.

Environmental Consultants

FIELD BOREHOLE LOG

BOREHOLE NUMBER

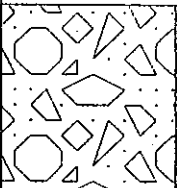
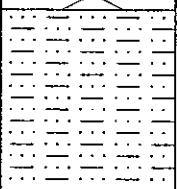
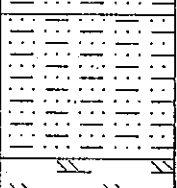
GP-16

PROJECT NUMBER: 80030-0003 START TIME 0945
 PROJECT NAME: 124-136 Second Ave. (Gowanus) END TIME 1030
 LOCATION: Brooklyn, NY GROUND SURFACE ELEVATION: 0
 DRILLING CO:
 DRILLING METHOD: GeoProbe
 FIELD PARTY:
 GEOLOGIST: MOHAMED AHMED
 DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

STATIC WATER LEVEL (BLS)

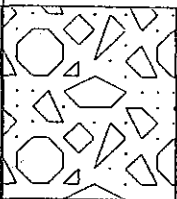
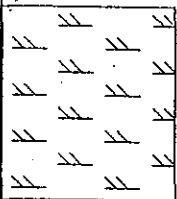
Depth (ft)	NA	
Time	NA	
Date	NA	

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

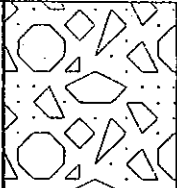
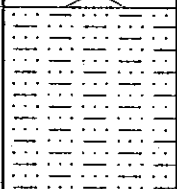
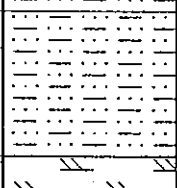
0.0					fill, not sampled	
4.0		48/32	3.5	stained with FREE PRODUCT	fill: dark black silty sand, stained with free product	
8.0	GP16	48/48	12.5	FREE PRODUCT	silty sand: black silty sand, dense free product	
12.0		48/24	63.0	FREE PRODUCT	silty sand: black silty sand, free product	
16.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-17													
PROJECT NUMBER: 80030-0003		START TIME		1045													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1130													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/22/01		DATE COMPLETED:															

DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0					fill, not sampled	
4.0		48/4	8		fill: ash, brick fragments	
8.0		48/0		no recovery	(no recovery)	
12.0	GP17	48/36			peat: dark brown peat	
16.0						

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-18													
PROJECT NUMBER: 80030-0003		START TIME		1135													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1215													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/22/01		DATE COMPLETED: 02/22/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0		48/42	16.0		fill: red bricks, coal fragments, ash, black silty sand	
8.0	GP18	48/20	2.5	FREE PRODUCT	silty sand: black silty sand, free product	
12.0		48/24	7.0	FREE PRODUCT	silty sand: brownish gray silty sand	
16.0					peat	

AKRF, INC.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

Environmental Consultants

GP-19

PROJECT NUMBER: 80030-0003

START TIME

1330

PROJECT NAME: 124-136 Second Ave. (Gowanus)

END TIME

1415

LOCATION: Brooklyn, NY

GROUND SURFACE ELEVATION: 0

DRILLING CO:

DRILLING METHOD: GeoProbe

FIELD PARTY:

GEOLOGIST: MOHAMED AHMED

DATE BEGUN: 02/22/01 DATE COMPLETED: 02/22/01

STATIC WATER LEVEL (BLS)

Depth (ft)

NA

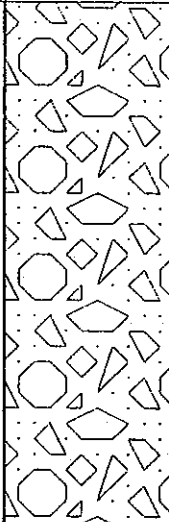
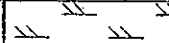
Time

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Date

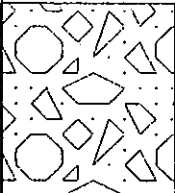
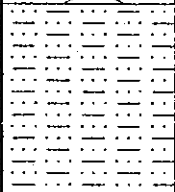
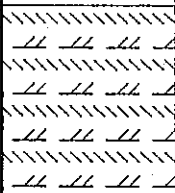
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DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

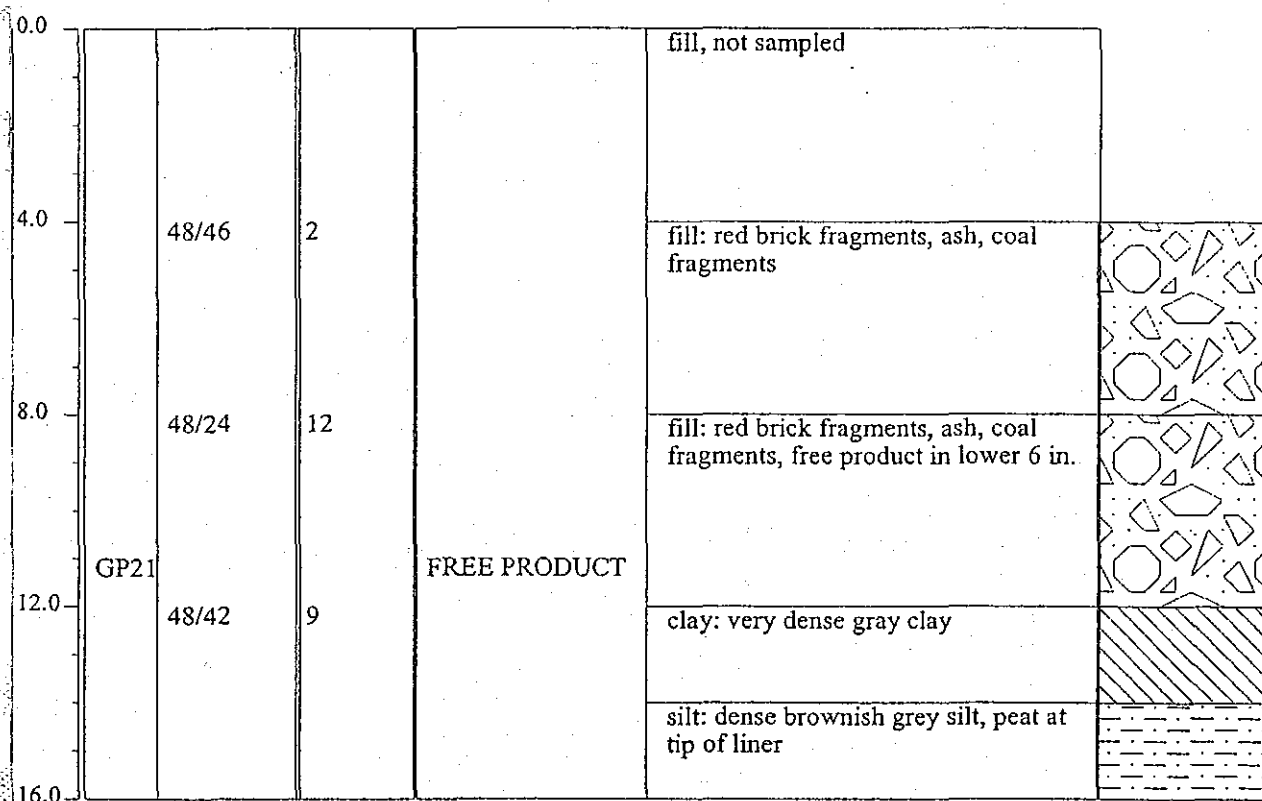
0.0					fill, not sampled	
4.0		48/40	3.0		fill: ash, coal fragments, red bricks, black to brownish gray silty sand	
8.0		48/36	2.5			
12.0	GP19	48/36	3.0			
16.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-20													
PROJECT NUMBER:	80030-0003	START TIME	1420														
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	1515														
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0														
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD:	GeoProbe																
FIELD PARTY:																	
GEOLOGIST:	MOHAMED AHMED																
DATE BEGUN:	02/22/01	DATE COMPLETED:	02/22/01														

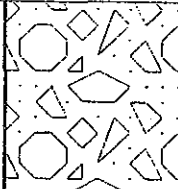
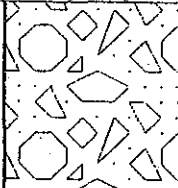
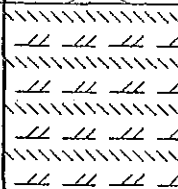
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY	

0.0							
4.0		48/48			fill: coal fragments, ash, red bricks, black silty sand		
8.0		48/36			silty sand: brownish gray silty sand, dense, peat at tip of sampler		
12.0	GP20	48/48			clay and peat: dense peat and clay		
16.0							

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-21													
PROJECT NUMBER: 80030-0003		START TIME		0815													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		0830													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



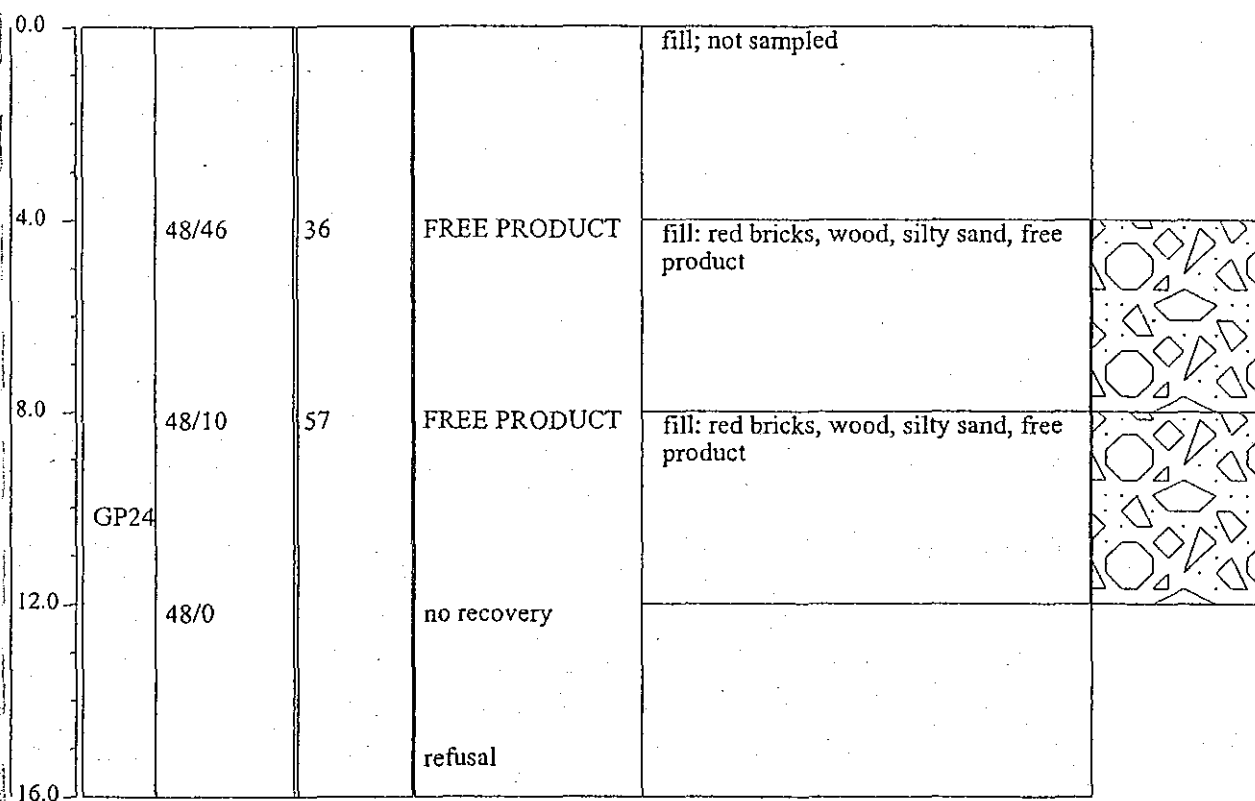
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-22													
PROJECT NUMBER: 80030-0003		START TIME		0835													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		0850													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	GP22	48/42	65	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
8.0		48/36	11	FREE PRODUCT	fill: ash, coal fragments, black silty sand, loose, free product	
12.0		48/48	ND		clay and peat: very dense clay and peat	
16.0						

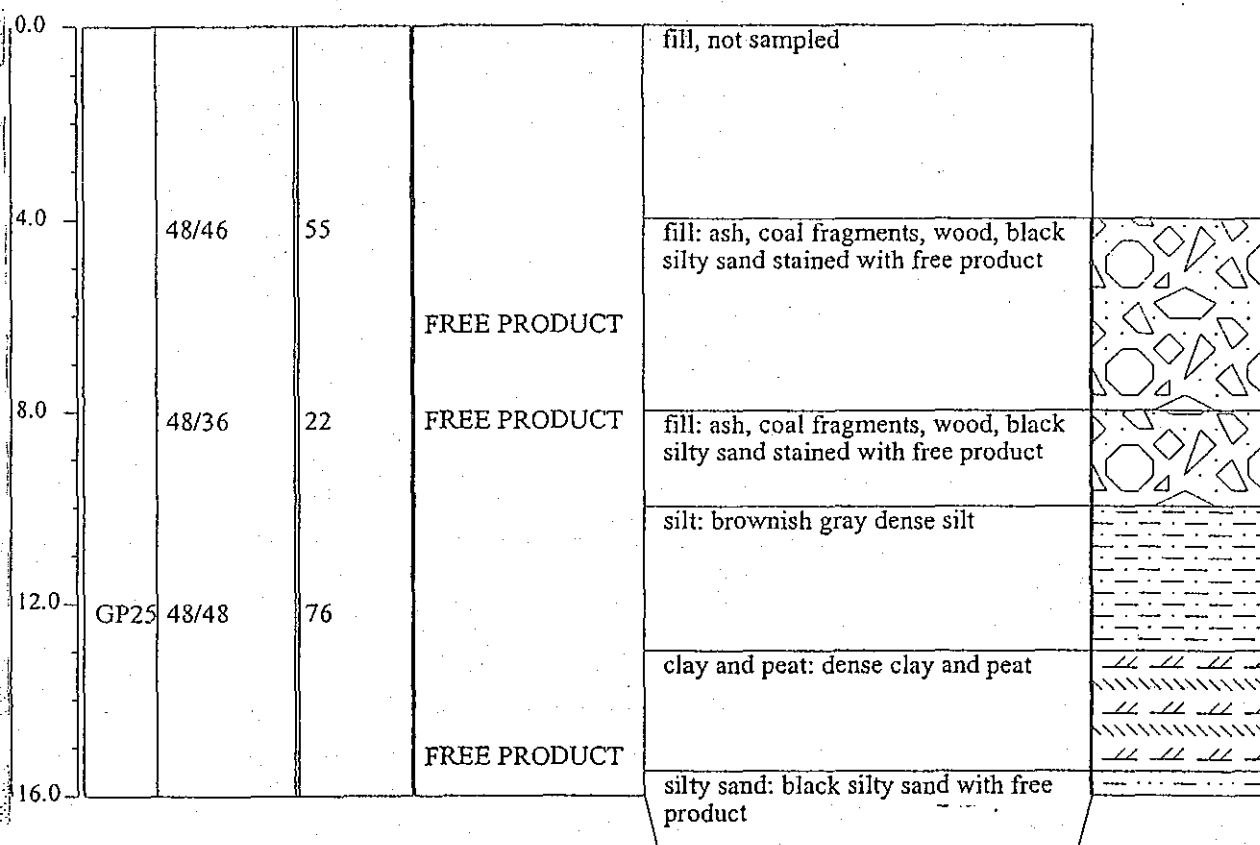
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Environmental Consultants				GP-23													
PROJECT NUMBER:	80030-0003	START TIME	0852														
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME	0905														
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0														
DRILLING CO:																	
DRILLING METHOD:	GeoProbe	<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST:	MOHAMED AHMED																
DATE BEGUN:	02/27/01	DATE COMPLETED:	02/27/01														
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill; not sampled	
4.0	GP23	48/44	173		fill: brick and concrete fragments	
8.0		48/46	118	FREE PRODUCT FREE PRODUCT	silt: brownish gray dense silty sand with free product silt: light gray dense silt with free product	
12.0		48/48	60		clay and peat: dense clay and peat	
16.0					clay: dense clay	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-24													
PROJECT NUMBER: 80030-0003		START TIME		0915													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		0950													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



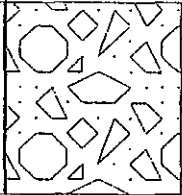
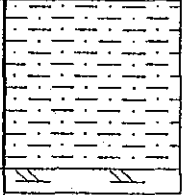
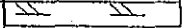
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-25													
PROJECT NUMBER: 80030-0003		START TIME		1000													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1045													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-26													
PROJECT NUMBER: 80030-0003		START TIME		1050													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1120													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/40	61	FREE PRODUCT	fill: ash, wood, black silty sand with free product		
8.0	48/47	14	FREE PRODUCT	silt: dense dark black silt with free product		
12.0	48/48	109		clay and peat: dense clay and peat		
16.0	GP26		FREE PRODUCT	silty sand: black silty sand with free product		

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-27													
PROJECT NUMBER: 80030-0003		START TIME		1130													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1215													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0		48/24	ND		fill: red bricks, concrete [and] coal fragments, ash	
8.0		48/0		no recovery	(no recovery, void)	
12.0		48/48	ND		silt: light gray dense silt; peat at tip of sampler	
16.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-28													
PROJECT NUMBER: 80030-0003		START TIME		1230													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1255													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED:		02/27/01													
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/46	ND			fill: red brick, concrete, ash, wood;	
8.0	48/48	ND			silt: brownish gray to light gray dense silt	
12.0	48/48	14				
16.0	GP28				clay and peat: dense clay and peat	

AKRF, INC.

FIELD BOREHOLE LOG

BOREHOLE NUMBER

Environmental Consultants

GP-29

PROJECT NUMBER: 80030-0003

START TIME

1330

PROJECT NAME: 124-136 Second Ave. (Gowanus)

END TIME

1345

LOCATION: Brooklyn, NY

GROUND SURFACE ELEVATION: 0

DRILLING CO:

DRILLING METHOD: GeoProbe

FIELD PARTY:

GEOLOGIST: MOHAMED AHMED

DATE BEGUN: 02/27/01 DATE COMPLETED: 02/27/01

STATIC WATER LEVEL (BLS)

Depth (ft)

NA

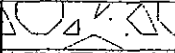
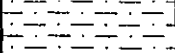
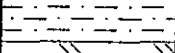
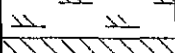
Time

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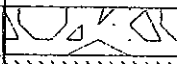
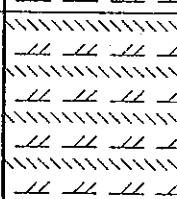
Date

NA

DEPTH (ft)	SAMPLE NUMBER	RECOVERY (in) [driven/recovered]	PID (ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0					fill, not sampled	
4.0	GP29	48/48	25		fill: ash, concrete fragments, wood	
					silt: dark black to gray silt	
8.0		48/48	ND		peat: dense layer of peat	
					clay: dense clay	
12.0				end of boring		
16.0						

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-30													
PROJECT NUMBER: 80030-0003		START TIME		1305													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1320													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/27/01		DATE COMPLETED: 02/27/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/48	ND			fill: brick, concrete, wood	
					clay and peat: dense clay and peat	
8.0	48/46	ND			clay and peat	
12.0				end of boring		
16.0						

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-31													
PROJECT NUMBER: 80030-0003		START TIME 1345															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME 1425															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/21/01		DATE COMPLETED: 02/21/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0		48/30	1.8		sand: medium coarse brown sand	
					sand and silt: fine to medium sand [with] some silt; lt. red/tan/brown	
8.0	GP31	48/24	74.1	odor, staining	sand: black fine to medium sand some silt; odor staining	
					sand and silt: dark brown fine to medium sand some silt	
12.0		48/42	0.3		sand and silt: dark brown sand and silt	
					peat: dark brown tan peat	
16.0						

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-32													
PROJECT NUMBER: 80030-0003		START TIME		1255													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1345													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/21/01		DATE COMPLETED: 02/21/01															

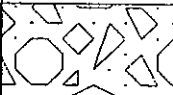
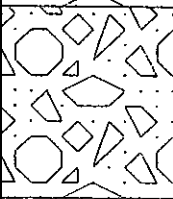
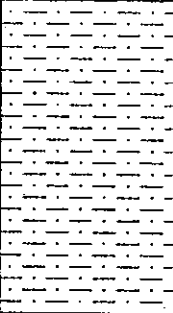
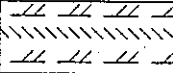
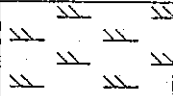
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY	

0.0				2 ft. NW of flag-- refusal at -4 ft.; [sampling location] 3 ft. SW of flag	fill, not sampled	
4.0	GP32 48/42		382	odor; sheen on liner	sand: black sand--strong odor, some dark brown sand and silt at -4 ft., fine gravel at -8 ft.; sheen on liner	
8.0	48/12		63.8	odor	sand: black sand--odor	
12.0	48/48		0		sand and silt: silt and fine to medium sand, black	
16.0					peat: tan peat	

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-33													
PROJECT NUMBER: 80030-0003		START TIME 1215															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME 1250															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
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Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 02/21/01		DATE COMPLETED: 02/21/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0				[sampling location] 3 ft. SE of flag	fill, not sampled	
4.0	GP33	48/48	14	staining	sand: dark brown sand; some staining at 6 ft.; 2 in of wet peat or other organic at -6 ft.	
8.0		48/12	4.4		sand: medium coarse sand and fine gravel	
12.0		48/30	1.9		gravel: gray/black fine gravel and sand	
16.0					peat: brown/tan peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-41													
PROJECT NUMBER: 80030-0003		START TIME		1300													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1345													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/01/01		DATE COMPLETED: 03/01/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

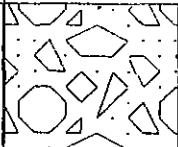
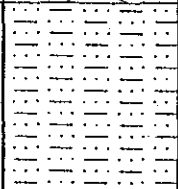
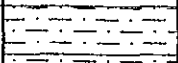
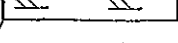
0.0					fill, not sampled	
4.0	48/36	ND			fill: red brick, gray silty sand	
8.0	48/48	ND			fill: cinders, ash, coal fragments, black silty sand	
12.0	48/24	ND			silt: reddish brown dense silt	
16.0	48/40	ND			clay and peat: dense clay and peat	
20.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-42													
PROJECT NUMBER: 80030-0003		START TIME		1400													
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME		1405													
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION:		0													
DRILLING CO:																	
DRILLING METHOD: GeoProbe		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/01/01		DATE COMPLETED: 03/01/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

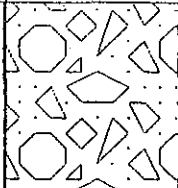
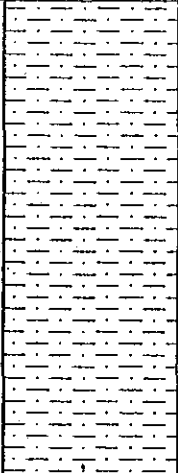
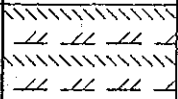
0.0					fill, not sampled	
4.0	48/24	ND			fill: cinders, ash, coal fragments	
8.0	48/24	ND			fill: black silty sand, red bricks	
12.0	48/10	ND			silt: reddish brown loose silt	
16.0	48/40	ND			clay and peat	
20.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-44													
PROJECT NUMBER:	80030-0003	START TIME	1440														
PROJECT NAME:	124-136 Second Ave. (Gowanus)	END TIME															
LOCATION:	Brooklyn, NY	GROUND SURFACE ELEVATION:	0														
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD:	GeoProbe																
FIELD PARTY:																	
GEOLOGIST:	MOHAMED AHMED																
DATE BEGUN:	03/01/01	DATE COMPLETED:	03/01/01														

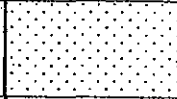
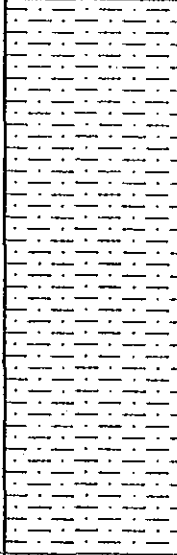
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY	

0.0					fill, not sampled	
4.0	48/20	9.0			fill: red brick, glass, ash, gray silty sand	
8.0	48/46			FREE PRODUCT FREE PRODUCT	silty sand: black silty sand, free product	
	GP44	30			silt: gray loose silt	
12.0	48/46	1.6		FREE PRODUCT	silt: reddish brown silt, free product; peat at tip of liner	
16.0					peat	

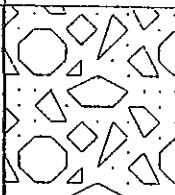
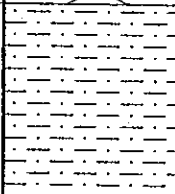
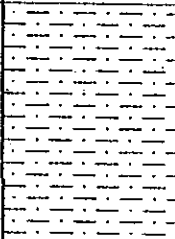
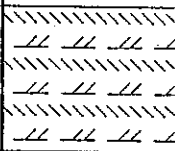
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-45													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/44	ND			fill: ash, red bricks, gray silty sand	
8.0	48/42	ND			silt: reddish brown loose silt	
12.0	48/48	ND				
16.0	48/48	ND				
20.0					clay and peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-46													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/01/01		DATE COMPLETED: 03/01/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

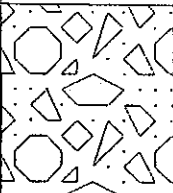
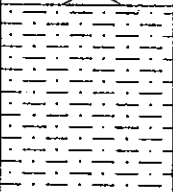
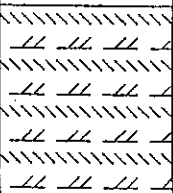
0.0					fill, not sampled	
4.0	GP46	48/46	46		fill: concrete, ash , red bricks	
					sand: black to reddish gray silty sand	
8.0		48/42	ND		silt: reddish brown loose silt; peat at lower 3 in.	
12.0		48/24	ND			
16.0		48/24	ND			
20.0					peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-47													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/42	ND			fill: concrete, ash, red brick, yellow silt	
8.0	48/30	ND			silt: gray loose silt	
12.0	48/15	ND			silt: reddish brown loose silt	
16.0	48/48	ND			clay and peat	
20.0						

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-48													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															

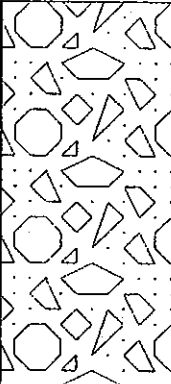
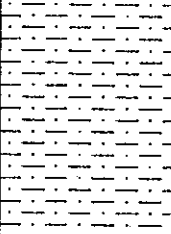
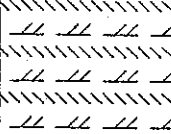
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY

0.0					fill, not sampled	
4.0	48/46	ND			fill: cinders, ash, wood, red bricks, concrete chips	
8.0	48/46	ND			silt: reddish brown loose silt	
12.0	48/44	ND			clay and peat	
16.0						

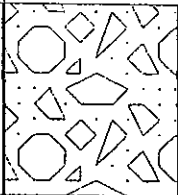
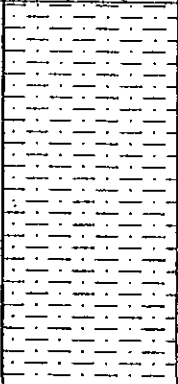
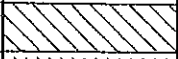
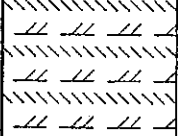
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-49													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/48	ND			fill: concrete chips, ash, gray silty sand	
8.0	48/48	ND			clay: dense clay; peat at tip of sampler	
12.0					clay and peat	

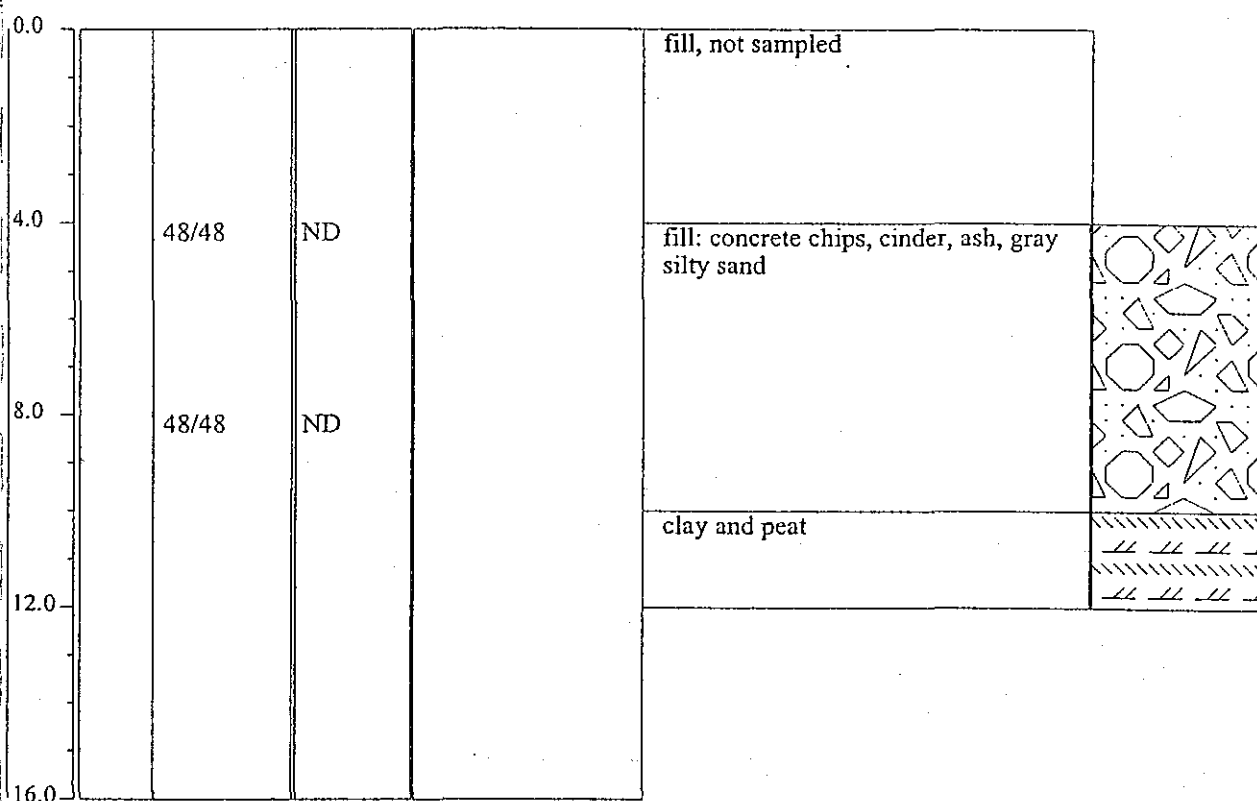
AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-50													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY: MOHAMED AHMED																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: DATE COMPLETED:																	
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/30	ND			fill: concrete, red brick, black silty sand	
8.0	48/36	ND				
12.0	48/36	ND			silt: reddish/brown loose silt	
16.0	48/40	ND			clay and peat	
20.0						

AKRF, INC. Environmental Consultants		FIELD BOREHOLE LOG		BOREHOLE NUMBER GP-51													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	48/36	ND			fill: concrete, red brick, ash, gray silty sand	
8.0	48/48	ND			silt: reddish brown loose silt	
12.0	48/24	ND				
16.0	48/48	ND			clay: dense clay	
20.0					clay and peat	

AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-53													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: DATE COMPLETED:																	
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											



AKRF, INC.		FIELD BOREHOLE LOG		BOREHOLE NUMBER													
Environmental Consultants				GP-54													
PROJECT NUMBER: 80030-0003		START TIME															
PROJECT NAME: 124-136 Second Ave. (Gowanus)		END TIME															
LOCATION: Brooklyn, NY		GROUND SURFACE ELEVATION: 0															
DRILLING CO:		<table border="1"> <tr> <th colspan="3">STATIC WATER LEVEL (BLS)</th> </tr> <tr> <td>Depth (ft)</td> <td>NA</td> <td></td> </tr> <tr> <td>Time</td> <td>NA</td> <td></td> </tr> <tr> <td>Date</td> <td>NA</td> <td></td> </tr> </table>				STATIC WATER LEVEL (BLS)			Depth (ft)	NA		Time	NA		Date	NA	
STATIC WATER LEVEL (BLS)																	
Depth (ft)	NA																
Time	NA																
Date	NA																
DRILLING METHOD: GeoProbe																	
FIELD PARTY:																	
GEOLOGIST: MOHAMED AHMED																	
DATE BEGUN: 03/02/01		DATE COMPLETED: 03/02/01															
DEPTH (ft)	SAMPLE NUMBER	RECOVERY(in) [driven/recovered]	PID(ppm)	REMARKS	DESCRIPTION	LITHOLOGY											

0.0					fill, not sampled	
4.0	GP54	48/46	324	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
8.0		48/24	159	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
12.0		48/24	227	FREE PRODUCT	silty sand: dark black silty sand, fill, red brick, free product	
16.0						

Nelson, Pope and Voorhis Logs – 1999

TEST BORING / PROBE LOG

CODE: SP-1

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		1.0		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6			12.4					
9	Gley Greenish-black 2.5/10Y		9.1		OH		Organic clay; high plasticity Presence of coal fragments mixed with clam/oyster shell	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-2

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	2

Depth Below Grade [feet]	Color [Munsell]	Recovery	PTD Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0								
3	Very dark grayish-brown 10 YR 3/2		1.1		SM		Poorly sorted fine sand + silt with some gravel Some solid waste debris noted	
6			3.9					
9	Gley Greenish-black 2.5/10Y		2.1		SC		Sand-clay mixture Clayey Soil some debris	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-3

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	3

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		1.0		SM		Poorly sorted fine sand + silt with some gravel Some solid waste debris noted	
6			13.2					
9	Gley Greenish-black 2.5/10Y		5.4		SC		Sand-clay mixture Clayey Soil some debris	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-4

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR 3/2		2.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	Gley Greenish-black 2.5/10Y				SC		Clayey sand Large chips of coal, High volume of clam/oyster shells	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-5

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	5

Depth Below Grade [feet]	Color [Munsell]	Recovery	PID Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10 YR 3/2		1.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	Gley Greenish-black 2.5/10Y		0.0		OH		Organic clay Coal chips	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

TEST BORING / PROBE LOG

CODE: SP-6

Site Location:	Brooklyn Commons	Installer:	Impact Environmental
Job Number:	99.001	Installation Method:	Geoprobe
Client:	Nelson, Pope & Voorhis	Date Begin/End:	06/10/1999
Client Contact:	C. Voorhis	Surface Elevation:	
Boring Code:		Depth to Water:	~10 feet BEG
Location Description:	DMU-	Total Depth:	
Geologist:	R. Parrish, P.G./Franzen	Page #:	6

Depth Below Grade [feet]	Color [Munsell]	Recovery	PTD Reading [ppm]	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0							CONCRETE	
3	Very dark grayish-brown 10YR3/2		1.1		SM		Poorly sorted fine sand & silt with some gravel Some solid waste debris noted	
6								
9	2.5Y Olive brown 4/3		6.0		SP		Petroleum scent Poorly graded sand with some gravel	99-240-SP-1 @ 8-10
10	End Probe							
12								
15								

Nelson, Pope and Voorhis Logs – 1997

CODE: SP-7

[illegible]

Note: USCS (Unified Soil Classification System)

CODE: SP-8

[illegible]

Note: USCS (Unified Soil Classification System)

CODE: SP-9

Installer: Impact Environmental

Installation Method: Geoprobe

Date Begin/End: 4/24/97

Surface Elevation:

Depth to Water:

Total Depth: 7 feet

Page #: 1

Note: USCS (Unified Soil Classification System)

CODE: SP-10

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
3	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
4	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
5	10YR 2/1 Black					Fine to Medium	
6	10YR 2/1 Black					Fine to Medium	
7	10YR 2/1 Black					Fine to Medium	
8	10YR 2/1 Black					Fine to Medium	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-11

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-11	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
2	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
3	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
4	10YR 2/2 Very Dark Brown					Fine to Medium Brick Fines	
5	10YR 2/1 Black					Fine to Medium	
6	10YR 2/1 Black					Fine to Medium	
7	10YR 2/1 Black					Fine to Medium	
8	10YR 2/1 Black					Fine to Medium	
9	10YR 2/2 Very Dark Brown					Fine to Medium	
10	10YR 2/2 Very Dark Brown					Fine to Medium	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-12

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorthis	Surface Elevation:	
Boring Code:	SP-12	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0	10YR 5/6 Yellowish Brown					Asphalt	
2						Brick Fines	
3	10YR 5/6 Yellowish Brown					Brick Fines	
4	10YR 5/6 Yellowish Brown					Brick Fines	
5	10YR 5/6 Yellowish Brown					Brick Fines	
6	10YR 4/8 Red					Hard Red Clay	
7	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	
9	10YR 2/1 Black					Fine to Medium Strong Odor	
10	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-13

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	NPV	Date Begin/End:	5/7/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-13	Depth to Water:	
Location Description:		Total Depth:	10 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0	10YR 5/6 Yellowish Brown					Asphalt	
2						Brick Fines	
3	10YR 5/6 Yellowish Brown					Brick Fines	
4	10YR 5/6 Yellowish Brown					Brick Fines	
5	10YR 5/6 Yellowish Brown					Brick Fines	
6	10YR 4/8 Red					Hard Red Clay	
7	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	
9	10YR 2/1 Black					Fine to Medium Strong Odor	
10	10YR 2/2 Very Dark Brown					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-16

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-16	Depth to Water:	
Location Description:		Total Depth:	8 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0	10YR 2/2 Very Dark Brown					Asphalt Fine to Medium	
2	10YR 2/2 Very Dark Brown					Fine to Medium	
3	10YR 2/1 Black					Fine to Medium Strong Odor	
4	10YR 2/1 Black					Fine to Medium Strong Odor	
5	10YR 2/1 Black					Fine to Medium Strong Odor	
6	10YR 2/1 Black					Fine to Medium Strong Odor	
7	10YR 2/1 Black					Fine to Medium Strong Odor	
8	10YR 2/1 Black					Fine to Medium Strong Odor	

Note: USCS (Unified Soil Classification System)

CODE: SP-17

[illegible]

Note: USCS (Unified Soil Classification System)

CODE: SP-18

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
	10YR 2/2 Very Dark Brown					Brick Fines	
2							
	10YR 2/1 Black					Brick Fines	
3							
	10YR 2/2 Very Dark Brown					Brick Fines	
4							
	10YR 2/2 Very Dark Brown					Brick Fines	
5							
	2 Clay 5/1 Blueish Gray					Clay	
6							
	10R 4/6 Red					Medium to coarse Gravel	
7							

Note: USCS (Unified Soil Classification System)

CODE: SP-19

[illegible]

Note: USCS (Unified Soil Classification System)

TEST BORING / PROBE LOG

CODE: SP-20

Site Location:	Brooklyn	Installer:	Impact Environmental
Job Number:	97-070	Installation Method:	Geoprobe
Client:	Brooklyn	Date Begin/End:	5/5/97
Client Contact:	Charles Voorhis	Surface Elevation:	
Boring Code:	SP-20	Depth to Water:	
Location Description:		Total Depth:	4 feet
Geologist:	James Mulvey	Page #:	1

Depth Below Grade [feet]	Color [Munsell]	Recovery	FID Reading [ppm]	Description [USCS]	Lithology	Description	Sample
0						Asphalt	
3	10YR 1/1 Black					1/4" Blue Gravel Stone	
4	10YR 1/1 Black					Pieces of Anthracite	
	REFUSAL						

Note: USCS (Unified Soil Classification System)

CODE: SP-21

[illegible]

Note: USCS (Unified Soil Classification System)

CODE: SP-22

[illegible]

Note: USCS-(Unified Soil Classification System)