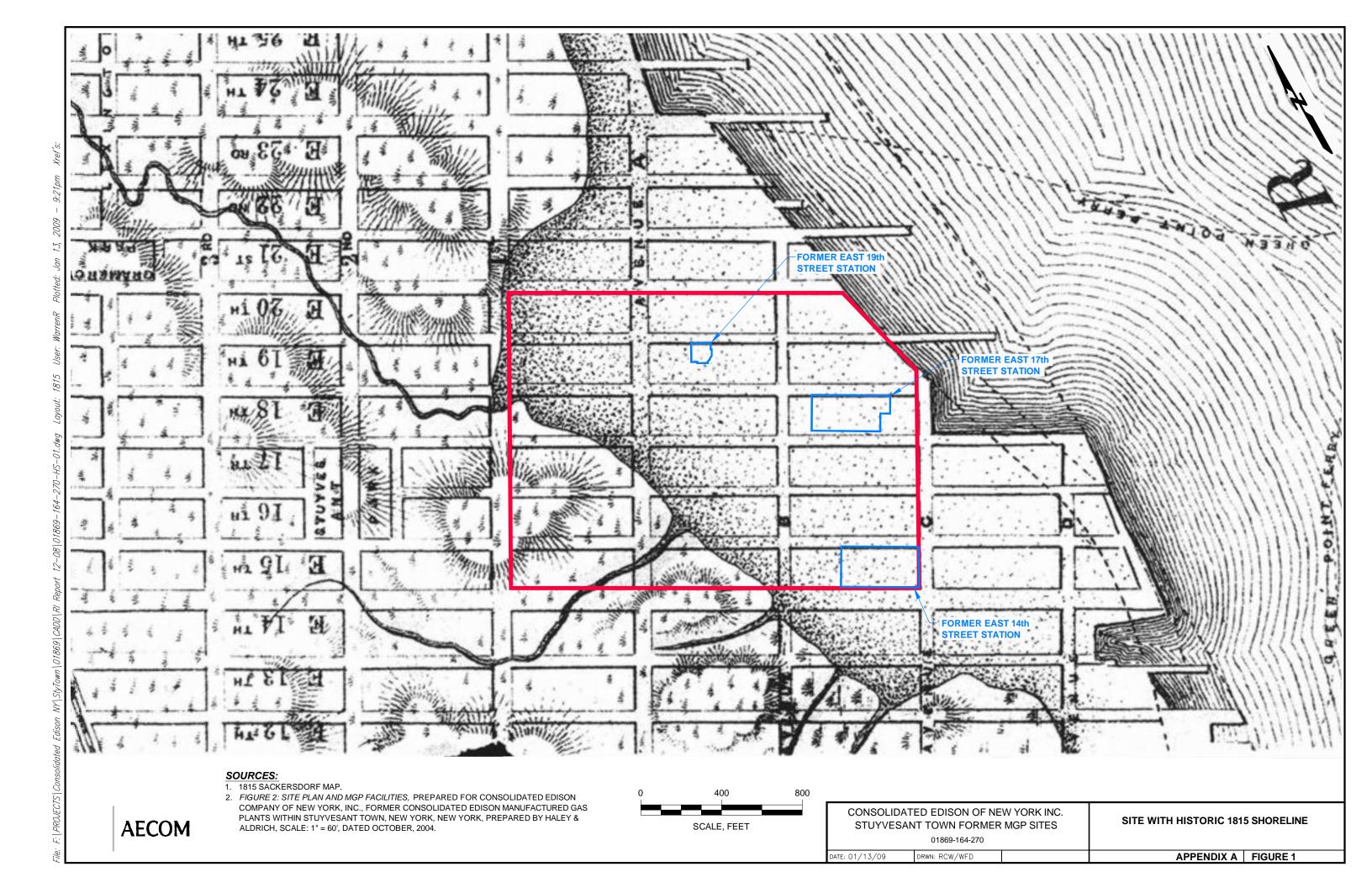
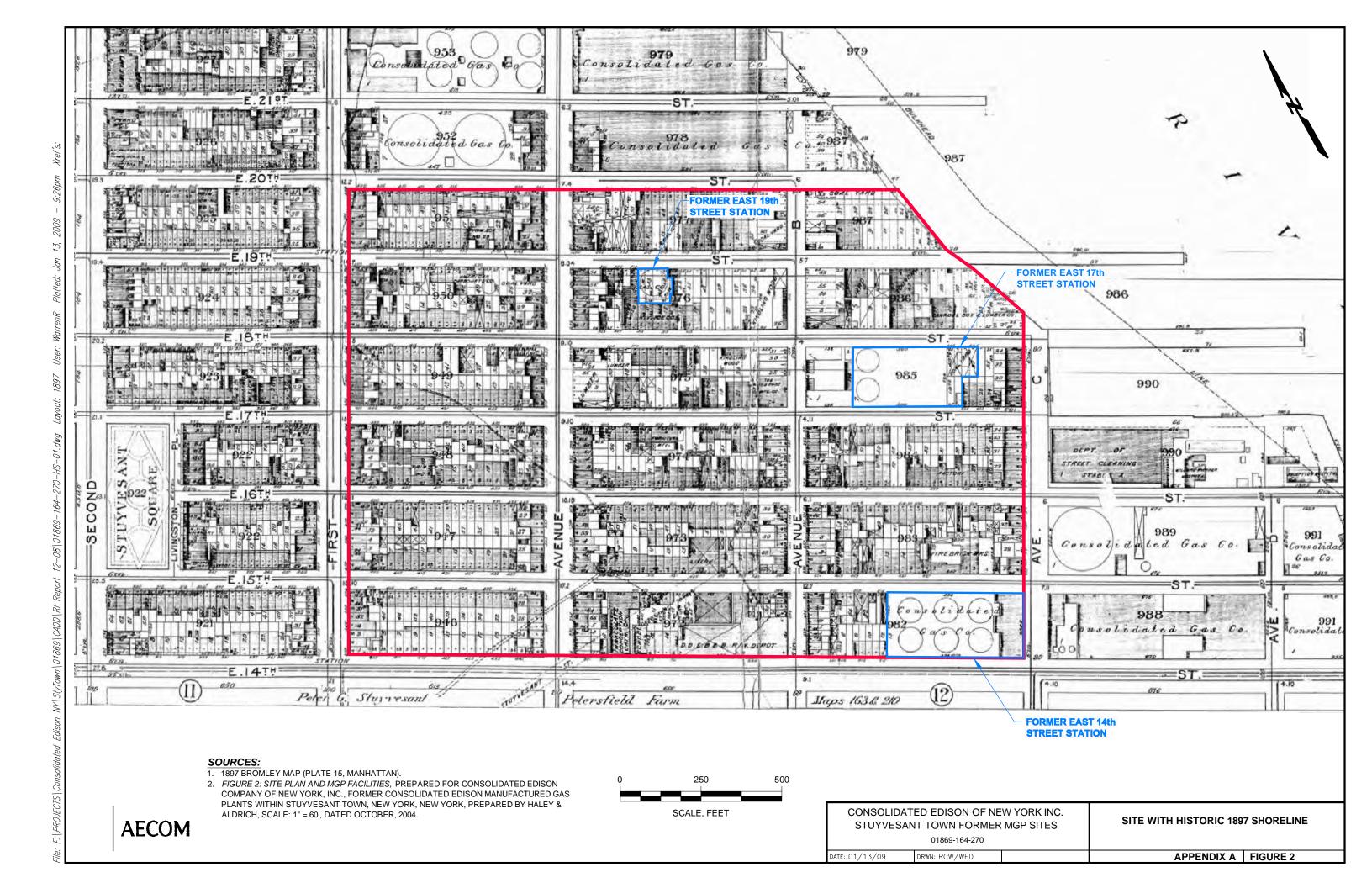
# Appendix A

**Historic Site Maps** 





# Appendix B

**Boring and Well Construction Logs** 



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# **Boring/Well Log Legend**

Sheet 1 of 1

Project: Stuyvesant Town Former MGP Stations

Location: Manhattan, New York

Project #: 01869-164

E-Logs by: J. Shackford

Client: Consolidated Edison

Lithology Description Lithology Description Abbreviations
---

	No Recovery		Sand	bgs: below ground surface	USCS : United Soil Classification System
				c : coarse	Jystem
				f: fine	GW : well-graded gravel
	Clay		Sand and Clay	Fe : Iron	GP : poorly-graded gravel
	1		·	ft: feet	GM : silty gravels
				H2S: hydrogen suldfide	GC : clayey gravels
-/-/-/-/-/-/-/-	Clay and Sand		Sand and Silt	HCLO: hydrocarbon-like odor	SW : well-graded sands
-7-7-7-7-7-7	Siay and Sand		Sana ana Sin	HSA : hollow stem auger	SP : poorly-graded sands
-7-7-7-7-7-7-7				It : light	SM : silty sands
-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\-\	Clayey Sand		Sandy Silt	m : medium	SC : clayey sands
			cana, on	MGP : manufactured gas plant	ML : inorganic silts and very fine
				MGPO : manufactured gas plant-like odor	sands
	Clay and Silt	000000000	Schist	NAVD88 : North American Vertical Datum	CL : inorganic clays of low plasticity
I			Comor	1988 NLO : naphthalene-like odor	OL : organic silts and silty clays of
					low plasticity
	Cobbles/	· · · · · · · · · · · · · · · · · · ·	Silt	NY : New York	MH : inorganic elastic silts
KOXOX	Cobblestone/ Boulder			N/A : not applicable	CH: inorganic clays of high plasticity
	Boulder			NR : not recorded	OH: organic clays of medium to high
	Concrete	T: T: T: T: T: T	Silt and Clay	OLM : oil-like material	plasticity
				PEC : Paragon Environmental	PT : peat and other highly organic
				Construction, Inc. PLO : petroleum-like odor	soils
	Fill		Silt and Sand		
			Circ diria Caria	SAA : same as above	
				TLM : tar-like material	
	Mica	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Topsoil	TLO : tar-like odor	
	I WILCO	【	1 000011	tr : trace	
	1			vf : very fine	
	Peat	Rongran	Weathered	VP : very poor	
	- Cal	1333333	Schist		
		13333333			
		00000			L

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**SAMPLE** 

#### **Boring Log**

Boring ID: ST14SB09

Sheet 1 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/21/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 11 Total Depth (ft): 45'

Location: Manhattan, New York

Northing: 990645.716 Easting: 204947.908

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 9.539'

Water Level (ft bgs): 10'

Logged by: M. Stepanova, E. Vivaudou

	SAMPLE						>		nts
Sample ID	Total Recovery Blowcounts (per 6") PID (ppm) Moisture USCS Lithology		Lithology	Lithologic Description	Comments				
						0			
0' - 1'	N/A	N/A	0.0	Moist	N A			(0-0.5' bgs) - COBBLESTONES; FILL	
1' - 2'	N/A	N/A	0.0	Moist	SP			(0.5-1' bgs) - Loose brown-yellow m-f grained SAND, few roots, tr rounded pebbles; FILL; moist; no odor or visible impact	
2' - 3'	N/A	N/A	0.0	Moist	_	_		(1-2' bgs) - Loose brown TOPSOIL, some Bricks and Cobbles, few roots, tr gravel and pebbles; FILL; moist; no odor but a few pieces of coal	
3' - 4'	N/A	N/A	0.0	Moist	SW	-		(2-3' bgs) - Loose brown f grained SAND, some Organics, few Pebbles and Bricks, tr clay and gravel; FILL; moist; no odor or visible impact	
4' - 5'	N/A	N/A	0.0	Moist				(3-4' bgs) - Loose dark brown f grained SAND, tr clay, gravel, and pebbles; FILL; no odor or visible impact	
5' - 6'	0.8'/1' 80%	2 3	4.5	Moist				(4-5' bgs) - Loose It brown f grained SAND, some Cobbles and brick, tr gravel and pebbles; FILL; no odor or visible impact	
					SM			5' bgs: END PRE-CLEAR	
6' - 8'	0.8'/2' 40%	2 3 4 4 n = 7	NR	Moist	SM SP			(5-5.4' bgs) - Lt brown m-f grained SAND, tr bricks; FILL; no odor or visible impact  (5.4-6' bgs) - Brown f grained SAND and SILT; FILL; no odor or visible impact	
8' - 10'	0.4'/2'	2	11.3	Moist				(6-6.4' bgs) - Brown m grained SAND, some Mica; FILL; no odor or visible impact	
	20%	4 4 3 n = 8			N/A	-		(6.4-8' bgs) - Brown f grained SAND and SILT, weathered Schist in core tip; FILL; no odor or visible impact	
10' - 12'	0.75'/2'	2	7.7	Wet	SM	- 10		(8-10' bgs) - WEATHERED SCHIST with mica; FILL; no odor or visible impact	
	37.5%	2 4 2			Ø	1		(10-10.4' bgs) - Brown f grained SAND and SILT; FILL; wet; no odor or visible impact	
		n = 6						(10.4-12' bgs) - WEATHERED SCHIST with mica; FILL; wet; no odor or visible impact	
12' - 14'	0.6'/2' 30%	3 3 5 5 n = 8	12.0	Wet	N/A	_		(12-14' bgs) - WEATHERED SCHIST and brown SILT; FILL; wet; no odor or visible impact	
14' - 16'	1'/2' 50%	2 2 3 7	4.4	Wet	<u>a</u>			(14-16' bgs) - Brown m grained SAND, some c-grained Sand, little mica and weathered schist; FILL; wet; slight PLO from 14-15' bgs but no visible impact	

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# **Boring Log**

Boring ID: ST14SB09

Sheet 2 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/21/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 11 Total Depth (ft): 45'

Location: Manhattan, New York

Northing: 990645.716 Easting: 204947.908 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 9.539'

Water Level (ft bgs): 10'

Logged by: M. Stepanova, E. Vivaudou

	SAMPLE								nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
						15			
		n = 5			U)	15			
16' - 18'	0.8'/2' 40%	5 5 2 2	1.5	Wet	N/A		<u> </u>	(16-16.4' bgs) - WEATHERED SCHIST; FILL; no odor or visible impact	
		n = 7			ML	_		(16.4-18' bgs) - Brown SILT, tr mica; no odor or visible impact	
18' - 20'	0.8'/2' 40%	2 1 1 1 n = 2	1.0	Moist	CL	_		(18-20' bgs) - Lt brown SILT and CLAY, tr mica, and f grained sand; no odor or visible impact	Analytical sample ST14SB09 (18-20)
20' - 22'	0.6'/2' 30%	1 1 1 1 n = 2	4.0	Wet	SP	- 20		(20-22' bgs) - Brown m-c grained SAND, some Mica; no odor or visible impact	
22' - 24'	1.4'/2' 70%	2 17 15 12	8.9 7.7	Wet	SM			(22-22.3' bgs) - M-f grained SAND and SILT, tr mica; MGPO but no visible impact	Analytical sample ST14SB09
		n = 32	146.2		SM CL	_		(22.3-22.8' bgs) - Gray CLAY and SILT, tr c grained sand; MGPO but no visible impact	(22-24)
24' - 26'	2'/2'	2	22.42	Wet	SPS			(22.8-23.3' bgs) - Black f grained SAND and SILT; MGPO and staining	
	100%	3 4 4	732		Š			(23.3-24' bgs) -Brown f-m grained SAND and SILT, tr brick; no odor or visible impact	
		n = 7			ML			(24-24.5' bgs) - Brown m-f grained SAND, some Mica; no odor or visible impact	
26' - 28'	1.1'/2' 55%	4 4 4 8	92.4	Wet				(24.5-24.7' bgs) - Black m-c grained SAND and SILT; MGPO and staining	
		n = 8			J J	-		(24.7-26' bgs) - Stiff laminated red-brown SILT; no odor or visible impact	
28' - 30'	1.1'/2' 55%	8 9 11	13.6 3.6 5.6	Wet	SFCL	-		(26-26.5' bgs) - Gray-brown CLAY, tr gravel, wet; slight MGPO but no visible impact	
		11 11 n = 20	5.6		SC	-		(26.5-28' bgs) - Lt brown CLAY, tr mica; slight MGPO from 26.5-27.2' bgs but no visible impact	
	1 71/01		22.2	14/ /		30		(28-28.3' bgs) - Lt brown CLAY; slight MGPO but no visible impact	

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# **Boring Log**

Boring ID: ST14SB09

Sheet 3 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/21/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location: Manhattan, New York

Northing: 990645.716 Easting: 204947.908 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 9.539'

Water Level (ft bgs): 10'

Start Date: 5/21	art Date: 5/21/2008 End Date: 5/23/2008						11 To	otal Depth (ft): 45' Logged by: M. Stepanova, E. Vivaudou		
		SAM	PLE			æ	<u>&gt;</u>		,	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lith	ologic Description	Comments
30' - 32'	1.772 85%	2 2 2	28.8	vvet	ML	30	<u></u>	(28.3-28.5' bgs) - staining	Black m-f grained SAND; MGPO with	
		2 n = 4			SP	-		odor or visible imp		
32' - 34'	1.1'/2' 55%	8 10	28.6	Wet		-	· · · · · · · · · · · · · · · · · · ·	(30-30.6' bgs) - Br slight MGPO but r	rown SILT, some f grained SAND; no visible impact	
		11 15			_	_		(30.6-32' bgs) - Br MGPO but no visi	rown-black m-f grained SAND, tr mica; ble impact	
	4.41/01	n = 21	7.0	)A(	ರ			(32-32.25' bgs) - E slight odor but no	Black-brown m-f grained SAND; very visible impact	A I fi I
34' - 36'	1.1'/2' 55%	8 9 6 6	7.8	Wet		35			- Laminated red-brown and olive- e Mica, tr gravel; no odor or visible	Analytical sample ST14SB09 (34-36)
		n = 15			SW	_ 35		1	rown f grained SAND, some Mica, tr visible impact	
36' - 38'	0.7'/2' 35%	5 10 13 18 n = 23	5.2	Wet	ر ت	-		(36-38' bgs) - Lt b odor or visible imp	rown CLAY, little Mica, tr gravel; no pact	
38' - 40'	1.8'/2' 90%	10 14 16 18 n = 30	19.6	Wet	SP	_			wn m-f grained SAND, some Mica, tr c odor or visible impact	
40' - 42'	1'/2' 50%	6 5 9 11 n = 14	16	Wet	SC	- 40	-7-7-7- -7-7-7- -7-7-7- -7-7-7-	(40-42.25' bgs) - 9	Stiff CLAY and m grained SAND, some and gravel; no odor or visible impact	
42' - 44'	0.5'/2' 25%	7 10 14 7 n = 24	1.6	Wet	ರ	<del> </del>		(42.25-44' bgs) - \ visible impact	White CLAY, some Mica; no odor or	Analytical sample ST14SB09 (42-45)
44' - 45'	1.1'/2' 55%	7 8 50/0.08'	2.6	Wet	SC	45	-7-7-7- -7-7-7- -7-7-7-		wn-olive CLAY and SAND, some Mica, no odor or visible impact BORING	

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#### **Boring Log**

Boring ID: ST14SB10

Sheet 1 of 6

Project: Stuyvesant Town Former MGPs

E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/27/2008 Depth: 5'

1.2'/2

60%

6' - 8'

0.0

16

8

5 4

n = 13

Moist

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 12 Total Depth (ft): 41'

Location: Manhattan, New York

Northing: 204815.301 Easting: 990666.647

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 8.521'

Water Level (ft bgs): 10'

(6-6.1' bgs) - Loose to moderately dense brown SAND,

(6.1-8' bgs) - Tan m grained SAND; FILL; no odor or

some Silt; FILL; no odor or visible impact

visible impact

	SAMPLE						>		nts
Sample ID	Total Recovery Blowcounts (per 6") PID (ppm)	nscs	Depth (ft)	Lithology	Lithologic Description	Comments			
0' - 1'	N/A	N/A	N/A	Moist	N/A			(0-0.3' bgs) - CONCRETE; FILL; no odor or visible impact	
								(0.3-1' bgs) - Brown f-c grained SAND, some Gravel; FILL; no odor or visible impact	
								Till, no sasi si visible impast	
1' - 2'	N/A	N/A	N/A	Moist		-		(1-2' bgs) - Brown m-c grained SAND, layer of concrete debris from 1-1.2' bgs, some Gravel, tr cobbles; FILL; no odor or visible impact	
2' - 3'	N/A	N/A	N/A	Moist		-		(2-4' bgs) - M grained SAND, some Silt and Cobbles, tr gravel; FILL; no odor or visible impact	
					SW				
3' - 4'	N/A	N/A	N/A	Moist		-			
4' - 5'	N/A	N/A	N/A	Moist					
4 - 5	IVA	N/A	IVA	WOSt				(4-5' bgs) - Dark and It brown m grained SAND, some Clay, tr gravel, piece of brick in core tip; FILL; no odor or visible impact	
5' - 6'	N/A	N/A	N/A	Moist		5		(5-6' bgs) - BRICKS and SLAG; FILL; no odor or visible impact	
					N/A				

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# **Boring Log**

Boring ID: ST14SB10

Sheet 2 of 6

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/27/2008 Depth: 5'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 12 Total Depth (ft): 41'

Location: Manhattan, New York

Northing: 204815.301 Easting: 990666.647 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 8.521'

Water Level (ft bgs): 10'

Start Date: 5/2/	72000 Li	nu Date. :	0/20/20			auon n		Logged by: J. DeBoer, S. Jain, E. Viva	udou
		SAM	IPLE			æ	) AE		ints
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
					SP				
8' - 10'	1.8'/2' 90%	2 2 3 2 n = 5	0.7	Moist	ws			(8-9.2' bgs) - Multi-color SAND, some Silt and brick at 8.2' bgs; FILL; no odor or visible impact	
					SP			(9.2-10' bgs) - SAND and BRICK; FILL; no odor but coal at 9.8' bgs	
10' - 12'	0.8'/2' 40%	1 1 1 1 n = 2	0.6	Wet	N/A SF SW	- 10		(10-10.3' bgs) - Brown f grained SAND, some Silt and Organics; FILL; no odor or visible impact  (10.3-10.4' bgs) - Tan m grained SAND; FILL; no odor or visible impact  (10.4-12' bgs) - ASPHALT-like material; FILL	Analytical sample ST14SB10 (10-14)
12' - 14'	0.9'/2' 45%	2 2 2 1 n = 4	0.9	Wet				(12-14' bgs) - Dark brown m grained SAND, little Silt; FILL; no odor or visible impact	

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**SAMPLE** 

#### **Boring Log**

Boring ID: ST14SB10

Sheet 3 of 6

Project: Stuyvesant Town Former MGPs

E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/27/2008 Depth: 5'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 12 Total Depth (ft): 41'

Location: Manhattan, New York

Northing: 204815.301 Easting: 990666.647

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 8.521'

Water Level (ft bgs): 10'

(20.3-21' bgs) - Gray-brown SILT, some Clay, very wet, slight MGPO. no visible impact  $\,$ 

						⊋			) ants	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments	
14' - 16'	0.7'/2' 35%	2 2 1 1 n = 3	0.4	Wet	MS	— 15		(14-16' bgs) - Dark brown m grained SAND, some c grained Sand, f grained Gravel, Organics, and brick fragments; FILL; no odor or visible impact		
16' - 18'	1.7'/2' 85%	2 3 17 18 n = 20	0.9	Wet	Ž			(16-16.3' bgs) - Dense gray vf-grained SAND, some Silt; FILL; no odor or visible impact  (16.3-16.4' bgs) - COBBLES and SLAG material; FILL; no odor or visible impact  (16.4-19.2' bgs) - Dark brown m-grained SAND, some c-grained Sand, some Gravel, some organic material, some brick fragments, little silt; FILL; no odor or visible impact		
18' - 20'	2'/2' 100%	10 18 24 37 n = 46	0.8	Moist	MS	-			Analytical sample ST14SB10 (18-20)	
001 001	2'/2'	29	0.5	Wet	SW CL	- 20		(19.2-19.4' bgs) - Gray CLAY, some Silt, slight MGPO, no visible impact (19.4-19.6' bgs) - Brown vf-grained SAND, some Silt, no odor or visible impact	Applytical	
20' - 22'	100%	19 17 17 17 n = 36	0.5	vvet		-		(19.6-20' bgs) - Red-brown f-grained SAND, some Silt, Pyrite flakes, no odor or visible impact  (20-20.3' bgs) - Loose dark brown m-grained SAND, some Silt, little Gravel, no odor or visible impact	Analytical sample ST14SB10 (20-24)	

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# **Boring Log**

Boring ID: ST14SB10

Sheet 4 of 6

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/27/2008 Depth: 5'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 12 Total Depth (ft): 41'

Location: Manhattan, New York

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 8.521'

Water Level (ft bgs): 10'

		SAM	PLE			5	<b>\</b>		
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
1	i	I	ı	ı			<b>.</b>	<b>1</b> · • · · · · · · · · · · · · · · · · ·	ı
					SP			(21-22' bgs) - F-grained SAND, rock fragments (21.8-22'), no odor or visible impact	
22' - 24'	2'/2' 100%	10 17 19 15 n = 36	0.5	Wet	SW	_		(22-23.3' bgs) - Loose dark brown f-c-grained SAND, some Silt, some brick fragments (23.2'), no odor or visible impact	
					CL SP			(23.3-23.5' bgs) - M-dense lt. brown vf-grained SAND, no odor or visible impact (23.5-24' bgs) - Dense red-brown SILT, some Clay, no	
24' - 26'	2'/2' 100%	6 11 18 21 n = 29	0.4	Wet	SW	<b>- 25</b>		odor or visible impact  (24-25.3' bgs) - Dark brown f-c-grained SAND, some brick (24.6'), wood pieces (25'), no odor or visible impact	
					ОГ			(25.3-25.8' bgs) - Brown SILT with high organic content, some Clay, no odor or visible impact	
26' - 28'	1.8'/2'	23	0.4	Wet	귕			(25.8-26' bgs) - Dense It. brown CLAY, no odor or visible impact	
	90%	17 34 50/.3 n = 51			SW	_		(26-27.2' bgs) - Very loose brown CLAY, some Silt, some Sand, some Gravel, no odor or visible impact	
					SM			(27.2-27.5' bgs) - Firm gray SILT to f-grained SAND, no odor or visible impact	
								(27.5-27.6' bgs) - Gray COBBLES, no odor or visible impact	

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# **Boring Log**

Boring ID: ST14SB10

Sheet 5 of 6

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/27/2008 Depth: 5'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 12 Total Depth (ft): 41'

Location: Manhattan, New York

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 8.521'

Water Level (ft bgs): 10'

		SAM	PLE			(ft)	_		nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (f	Lithology	Lithologic Description	Comme
28' - 30'	1.3'/2' 65%	17 37 50/0 4'	0.3	Wet	<u> </u>			(27.6-30' bgs) - Dense dark brown m grained SAND, some Silt, with 0.5-1" rock fragments from 29.6-30' bgs;	/

28' - 30' 30' - 32'	1.3'/2' 65%	17 37 50/0.4' n = 37	0.3	Wet	ws			(27.6-30' bgs) - Dense dark brown m grained SAND, some Silt, with 0.5-1" rock fragments from 29.6-30' bgs; no odor or visible impact
2'/2' 100%	23 34 44	0.1	Wet		- 30	· · · · · · · · · · · · · · · · · · ·	(30-31.4' bgs) - Very loose brown-tan SILT, some Sand, and f grained Gravel, very wet; no odor or visible impact	
		49 n = 78			ML	_		
								(31.4-32' bgs) - Very dense dark brown m grained SAND, some Silt and 0.5-1" Rock fragments; no odor or visible impact
32' - 34'	2'/2' 100%	38 42 47 50 n = 89	0.2	Wet	SW			(32-32.7' bgs) - Moderately dense dark brown f-c grained SAND, little Silt; no odor or visible impact
					SP			(32.7-33.3' bgs) - Dense dark brown f grained SAND; no odor or visible impact
					SW			(33.3-34' bgs) - Moderately dense m-f grained SAND, little Silt, very soft white material in core tip; no odor or visible impact
34' - 36'	2'/2' 100%	7 11 42 54 n = 53	0.2	Wet		-		(34-35.7' bgs) - Dense dark brown f grained SAND grading to c grained SAND with depth; no odor or visible impact
					SP	35		

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# **Boring Log**

Boring ID: ST14SB10

Sheet 6 of 6

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Contractor: PEC

Operator: R. Baldoze

Location: Manhattan, New York

Northing: 204815.301 Easting: 990666.647 NY State Plane - Long Island Lambert

Client: Consolida Pre-Clear Date: Start Date: 5/27/	5/27/2008 2008 E	Depth nd Date:	5/29/20 PLE		Me Loc		.25" HSA	ck-Mounted  otal Depth (ft): 41'  Litt	Comments	
Sample 15	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Del	Lit Lit			පි
					CL	35			ery soft white material, no odor or	
36' - 38'	1.5'/2' 75%	44 21 17 19 n = 38	0.0	Wet				visible impact (36-38' bgs) - Sof some c grained S	t SLOUGH brown f-m grained SAND, and and Silt; no odor or visible impact	
38' - 40'	2'/2' 100%	7 11 29	0.1	Wet	CL SW			(38-38.4' bgs) - V visible impact	ery soft white material; no odor or	Analytical sample ST14SB10
		17 n = 40				-			Dense brown c-f grained SAND, little no odor or visible impact	. (38-40)
					N/A			(39.5-40' bgs) - B WEATHERED RO	lue grading to green possible DCK; no odor or visible impact	
40' - 41'	1'/1' 100%	27 59	0.0	Wet	CL SP CL SF	- 40		no odor or visible (40.1-40.4' bgs) - impact	loderately dense gray f grained SAND; impact  Red CLAY, little Silt; no odor or visible  Moderately dense gray f grained	
						] [ [		SAND; no odor or (40.7-41' bgs) - B impact		

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**SAMPLE** 

# **Boring Log**

Boring ID: ST14SB11

Sheet 1 of 3

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Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/24/2008 Depth: 5.5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 13 Total Depth (ft): 44'

ogy

Location: Manhattan, New York

Northing: Easting: NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88):

Water Level (ft bgs): 10'

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth	Litholo	Lithologic Description	Сошш
						O			
0' - 1'	N/A	N/A	0.0	Moist	N/A			(0-0.3' bgs) - CONCRETE; FILL; no odor or visible impact	
1' - 2'	N/A	N/A	0.3	Moist	SW			(0.3-1' bgs) - SLAG material, pieces of brick; FILL; no odor but ash-like material and cinders	
2' - 3'	N/A	N/A	3.8	Moist				(1-2' bgs) - Brown m-f grained SAND with layer of slag at 1.2' bgs; FILL; no odor but cinders at 1.3' bgs	/
3' - 4'	N/A	N/A	0.8	Moist				(2-3' bgs) - Brown-tan f-m grained SAND and SILT, little Gravel; FILL; no odor or visible impact	
3 - 4	1070	IN// C	0.0	WOO	SM			(3-4' bgs) - Lt brown f-m grained SAND and SILT, some Gravel; FILL; no odor but little cinders	
4' - 5'	N/A	N/A	0.0	Moist		_		(4-5' bgs) - Brown-black SAND and SILT, some Gravel; FILL; no odor but tr cinders	
5' - 6'	0.9'/1' 90%	3 4	0.0	Moist	SIS\ N/A	<del>-</del>		(5-5.6' bgs) - Brown Soil with piece of brick; FILL; moist; no odor or visible impact 5.5' bgs: END OF PRE-CLEAR	
6' - 8'	0.4'/2'	4 4	0.0	Moist	S	1		(5.6-5.8' bgs) - Brown f-vf grained SAND, tr silt; FILL; no	
	20,0	3 5						odor or visible impact	
		n = 7			N/A	_		(5.8-8' bgs) - Dark brown m-f grained SAND; FILL; slight sweet odor and moderate PLO starting at 6' bgs with piece of coal	
8' - 10'	0.5'/2' 25%	3 3 2 2	34.8	Moist	SW			(8-10' bgs) - Dark brown f-vf grained SAND, tr pebbles; FILL; moist; moderate PLO but no visible impact	Analytical sample ST14SB11 (8-10)
		n = 5			S	_ 10			
10' - 12'	0.8'/2' 40%	2 2 3	0.0	Wet				(10-10.3' bgs) - Dark brown vf grained SAND and GRAVEL, tr pebbles; FILL; wet; organic odor but no	
		2 n = 5			SM	_		visible impact  (10.3-12' bgs) - Dark brown f-vf grained SAND and SILT, lighter colored material at 10.5' and 10.7' bgs;  FILL; slight organic odor but no visible impact	Analytical sample ST14SB11 (11-13)
12' - 14'	1.3'/2' 65%	2 2 3 2	0.0	Wet	>	+ -		(12-14.2' bgs) - Dark brown SAND and GRAVEL, some Pebbles, piece of brick in core tip; FILL; no odor or visible impact	(11.5)
		n = 5			SW				
14' - 16'	1.2'/2'	1 1	0.0	Wet		-			
	0076	1 1			용	  - 15		(14.2-15.25' bgs) - Soft gray CLAY; FILL; slight organic odor but no visible impact	

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**SAMPLE** 

# **Boring Log**

Boring ID: ST14SB11

Sheet 2 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/24/2008 Depth: 5.5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 13 Total Depth (ft): 44'

Location: Manhattan, New York

Northing: Easting: NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88):

Water Level (ft bgs): 10'

SAMPLE						Ð	>		) ants	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments	
	<u>.                                    </u>	I	<u>'</u> I	<u>'                                     </u>	<u> </u>	 	¥///////	1	1	
		n = 2			CL			(15.25-16' bgs) - Gray SILTY CLAY; FILL; no odor or visible impact		
16' - 18'	1.8'/2' 88%	2 2 2 2	0.0	Wet	9			(16-16.3' bgs) - Very soft dark gray CLAY and GRAVEL; FILL; slight organic odor but no visible impact		
		n = 4			ರ	_		(16.3-18' bgs) - Moderately firm gray CLAY; FILL; no odor or visible impact		
18' - 20'	2'/2' 100%	1 1 1 3	0.0	Wet	OF	-		(18-19.3' bgs) - Soft gray SILT and CLAY, tr wood and gravel; FILL; wet; organic odor but no visible impact		
	91/91	n = 2			SM	20		(19.3-20' bgs) - Gray f grained SAND and SILT, wet; no odor or visible impact		
20' - 22'	2'/2' 100%	9 15 16 18	0.0	Wet	NS		::::::::::::::::::::::::::::::::::::::	(20-20.3' bgs) - Dark gray vf grained SAND and SILT; no odor or visible impact	Analytical sample ST14SB11 (20-23)	
		n = 31			SP	<del> </del> 		(20.3-20.6' bgs) - Gray vf grained SAND, tr silt, few pebbles, moist; organic odor but no visible impact	(====)	
22' - 24'	2'/2' 100%	5 8	0.0	Wet	SP SM	-	······································	(20.6-22' bgs) - Brown f-vf grained SAND, moist; no odor or visible impact		
		11 11 n = 19			SW			(22-22.3' bgs) - Very soft vf grained SAND and SILT; no odor or visible impact		
0.41 0.01	1.7'/2'	5	0.0	Wet				(22.3-22.7' bgs) - Brown vf grained SAND, wet; no odor or visible impact		
24' - 26'	85%	7 8 10	0.0	vvei	SW			(22.7-23.3' bgs) - Very soft vf grained SAND and SILT; no odor or visible impact		
		n = 15				- 25		(23.3-26' bgs) - Brown vf-grained SAND, tr silt; organic odor starting at 24- bgs, but no visible impact		
26' - 28'	2'/2' 100%	7 6 6	0.0	Wet	SW SM			(26-26.3' bgs) - Very soft brown vf grained SAND and SILT; no odor or visible impact	Analytical sample ST14SB11	
		8 n = 12			MLSWA	-		(26.3-26.9' bgs) - Red-brown vf grained SAND, tr silt, wet; organic odor but no visible impact	(26-28)	
28' - 30'	2'/2' 100%	5 7	0.0	Wet	NS W			(26.9-27' bgs) - Brown SILT and CLAY, moist; no odor or visible impact		
	10070	7 9						(27-27.4' bgs) - Red-brown vf grained SAND, tr silt; no odor or visible impact		
		n = 14			SW ML	30	=: ±: ±: =: ±: =: =	(27.4-27.7' bgs) - Brown SILT and CLAY, moist; no odor or visible impact		

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# **Boring Log**

Boring ID: ST14SB11

Sheet 3 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/24/2008 Depth: 5.5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location: Manhattan, New York

Northing: Easting: NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88):

Start Date: 6/24	/2008 Eı	nd Date: 6	6/25/20	800	Loc	ation #	13 To	otal Depth (ft): 44'	Water Level (ft bgs): 10' Logged by: E. Vivaudou, G. Kirkwood		
		SAM	PLE			£	2		33	ents	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	SOSO	Depth (ft)	Lithology	Litl	hologic Description	Comments	
30' - 32'	1.472 70%	5 7 7	U.U	vvet	ОГ	30	   ± : ± : =  - : - : - :	(27.7-28' bgs) - R odor or visible im	red-brown vf grained SAND, tr silt; no pact		
		9 n = 14			SW	_		(28-28.8' bgs) - B odor or visible im	rown vf grained SAND, some Silt; no pact		
32' - 34'	1.9'/2' 95%	8 11	0.0	Wet		-	_:_:_: :_:_:	(28.8-29.7' bgs) - visible impact	Soft brown SILT and CLAY; no odor or		
	9376	17 50/4"			ರ		=:	(29.7-30' bgs) - B organic odor but i	rown vf grained SAND, some Silt; no visible impact		
		n = 28			SP			(30-30.4' bgs) - S odor but no visible	oft brown SILT and CLAY; organic e impact		
34' - 36'	2'/2' 100%	8 10 11 14	0.0	Wet	SW	35		(30.4-32' bgs) - M SAND, SILT and impact	loderately soft alternating red, gray CLAY; organic odor but no visible		
		n = 21			GW			(32-32.9' bgs) - S odor or visible im	oft brown SILT and CLAY, wet; no pact		
36' - 38'	0.8'/2' 40%	23 28 35 38	0.0	Wet	SM			(32.9-34.2' bgs) - Mica, rock at 33 but no visible imp	Brown vf grained SAND, some Silt and .6' bgs; organic odor from 34-34.2' bgs act		
		n = 63			SW	-		(34.2-34.3' bgs) - organic odor but i	Loose brown m grained SAND; no visible impact		
38' - 40'	N/A	17 21 24 20	N/A	Wet		.   _			Red-brown vf grained SAND, some ained sand at 34.8' bgs; no odor or		
		n = 45				_			ery soft/loose brown SAND and r or visible impact		
40' - 42'	0.8'/2' 40%	10 14	0.0	Wet		-40	······································	(36-36.7' bgs) - S gravel; no odor or	oft brown f grained SAND and SILT, tr r visible impact	Analytical sample	
		18 21				-		SAND, some Silt	loderately dense red-brown vf grained and Mica; organic odor but no visible	ST14SB11 (40-44)	
		n = 32						impact (40-44' bgs) - Der	nse brown vf grained SAND and SILT,		
42' - 44'	0.9'/2' 45%	18 24 27 32	0.0	Wet				wet; no odor or vi	sidie impact		
		n = 51						44' bgs: Refusal	- END OF BORING		

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# **Boring Log**

Boring ID: ST14SB12

Sheet 1 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/22/2008 Depth: 5'

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 10 Total Depth (ft): 48'

Location: Manhattan, New York

Northing: 205058.053 Easting: 991121.053

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 6.649'

Water Level (ft bgs): 6'

Logged by: M. Stepanova, J. Shackford

		SAM	PLE			<b>⊕</b>	>	>	
Sample ID	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
								,	
0' - 1'	N/A	N/A	0.0	Moist	NA	$\begin{bmatrix} 0 \end{bmatrix}$		(0-0.5' bgs) - COBBLESTONES; FILL	
1' - 2'	N/A	N/A	0.0	Moist		-		(0.5-1' bgs) - Loose yellow f-m grained SAND, tr gravel; FILL; moist; no odor or visible impact	
2' - 3'	N/A	N/A	0.3	Moist	SW	_		(1-2' bgs) - Loose dark brown TOPSOIL, some m-f grained SAND, tr gravel and pebbles, few bricks, pieces of terracotta pipe; FILL; moist; no odor or visible impact	
3' - 4'	N/A	N/A	0.5	Moist	•	_		(2-5' bgs) - Loose dark brown f-m grained SAND, some organic material, roots, gravel, and pebbles; FILL; moist; no odor or visible impact	
4' - 8'	1.7'/4' 42.5%	N/A	0.3	Wet		- - -5		5' bgs: END OF PRECLEAR	
						-		(5-8' bgs) - Moderately dense brown m-c-f grained SAND changing to black at 4.95' bgs, tr gravel; FILL; wet at 6' bgs, no odor or visible impact	
8' - 12'	1'/4' 25%	N/A	0.0	Wet	dS	- 10		(8-12' bgs) - Loose brown c-m-f grained SAND, some m-c-grained Gravel, plant matter at 8.54' bgs; FILL; wet; no odor or visible impact	
12' - 16'	1.6'/4' 40%	N/A	0.0	Wet		-	 	(12-12.45' bgs) - Loose brown m-f grained SAND, wet; no odor or visible impact	
					MS GW	-		(12.45-13.5' bgs) - Loose brown c grained GRAVEL, some c-m grained Sand, wet; no odor or visible impact	
						_ _ 15		(13.5-13.6' bgs) - Very soft It gray to white f-vf grained SAND and SILT, possible weathered rock; no odor or visible impact	
16' - 20'	2.5'/4'	N/A	0.0	Wet				(13.6-20.2' bgs) - Loose to moderately dense dark brown m-c grained angular GRAVEL and m-f grained SAND, shell fragment at 20.2' bgs; no odor or visible	
10 - 20	62.5%				GP			impact	

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# **Boring Log**

Boring ID: ST14SB12

Sheet 2 of 3

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/22/2008 Depth: 5'

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 10 Total Depth (ft): 48'

Location: Manhattan, New York

Northing: 205058.053 Easting: 991121.053

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 6.649'

Water Level (ft bgs): 6'

Logged by: M. Stepanova, J. Shackford

	SAMPLE							Logged by. M. Stepanova, J. Shackion	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
20' - 24'	3.2'/4' 80%	N/A	0.0	Wet		- 20		(20.2-24' bgs) - Loose to moderately dense gray m-f grained SAND changing to brown at 21.65' bgs, wet; no odor or visible impact	
24' - 28'	NR	N/A	0.0	Wet	MS	- 25 -		(24-28' bgs) - Red-brown m-f grained SAND, few c grained Gravel fragments; no odor or visible impact	Analytical sample ST14SB12 (24-28)
28' - 32'	NR	N/A	0.0	Wet	SM	-30		(28-34.7' bgs) - Very dense red-brown f-vf grained SAND, some Silt; no odor or visible impact	
32' - 36'	3.25'/4' 81.3%	N/A	0.0	Wet		-			

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#### **Boring Log**

Boring ID: ST14SB12

Sheet 3 of 3

Project: Stuyvesant Town Former MGPs

E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/22/2008 Depth: 5'

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 10 Total Depth (ft): 48'

Location: Manhattan, New York

Northing: 205058.053 Easting: 991121.053

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 6.649'

Water Level (ft bgs): 6'

Logged by: M. Stepanova, J. Shackford

	SAMPLE						/		ıts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
	1	ı	1	ı	1			1	ı
					2	35		(34.7-35' bgs) - Stiff gray CLAY and SILT with layers of red-brown Clay; no odor or visible impact	
36' - 40'	3.7'/4' 92.5%	N/A	0.0	Wet				(35-36' bgs) - Stiff red-brown vf grained SAND, SILT and CLAY; no odor or visible impact  (36-48' bgs) - Dense red-brown vf grained SAND, SILT and CLAY with gray Clay laminae throughout, stiffens with depth; no odor or visible impact	
40' - 44'	3.7'/4' 92.5%	N/A	0.0	Wet	SS	-			
44' - 48'	3.7'/4' 92.5%	N/A		Wet		- - 45 -			Analytical sample ST14SB12 (44-48)

48' bgs: END OF BORING

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**SAMPLE** 

#### **Boring Log**

Boring ID: ST14SB13

Sheet 1 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 4/30/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 5 Total Depth (ft): 50'

Location: Manhattan, New York

Northing: 205265.035 Easting: 990969.285

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 9.452'

Water Level (ft bgs): 10'

Logged by: E. Vivaudou, K. Kachel, C. Basinski

				1	Œ	) S		ent	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comment
							-	,	
0' - 1'	N/A	N/A	2.5	Dry				(0-1' bgs) - F grained SAND and SILT, tr gravel and organic material; FILL; no odor or visible impact	
1' - 2'	N/A	N/A	0.6	Dry	SM			(1-2' bgs) - Brown SAND and SILT, tr gravel; FILL; no odor or visible impact	
2' - 3'	N/A	N/A	0.9	Dry		_		(2-3' bgs) - Lt brown SAND, some Silt, tr gravel; FILL; no odor or visible impact	
3' - 4'	N/A	N/A	0.9	Dry				(3-4' bgs) - Brown SILT, some Sand, tr concrete, brick fragments, and gravel; FILL; no odor or visible impact	
4' - 5'	N/A	N/A	1.4	Dry	ML			(4-5' bgs) - Brown-black SILT, some Sand, Concrete fragments and Gravel; FILL; no odor or visible impact	
5' - 6'	0.3'/1'	1 2	0.4	Moist		-5		5' bgs: END OF PRE-CLEAR	
	3070							(5-6' bgs) - Dark brown m-f grained SAND and SILT, tr f grained angular gravel; FILL; no odor or visible impact	
6' - 8'	0.5'/2' 25%	5 7 12 50/.4'	0.4	Moist				(6-8' bgs) - Concrete fragments; FILL; no odor or visible impact	
		n=19							
8' - 10'	0.6/2'	4 3 4 3 n=7	3.0	Moist		-		(8-10' bgs) - Dark brown f-vf grained SAND and SILT, tr clay, f grained angular gravel, and brick fragments; FILL; no odor or visible impact	
		''-'							
10' - 12'	1'/2' 50%	3 5 8 12	0.6	Moist	SM	<u>- 10</u>		(10-12' bgs) - Black m-f grained SAND and SILT, tr clay; FILL; no odor or visible impact	
		n=13							
12' - 14'	0'/2'	14 8 7 7		N/A		-		(12-14' bgs) - NO RECOVERY	
		n=15							
14' - 16'	0.5'/2' 25%	2 1 2 2	2.2	Wet		-		(14-16' bgs) - Dark brown m-f grained SAND, tr silt and c-m grained angular gravel; FILL; no odor or visible impact	

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# **Boring Log**

Boring ID: ST14SB13

Sheet 2 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 4/30/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 5 Total Depth (ft): 50'

Location: Manhattan, New York

Northing: 205265.035 Easting: 990969.285

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 9.452'

Water Level (ft bgs): 10'

Logged by: E. Vivaudou, K. Kachel, C. Basinski

SAMPLE						Ð	2		nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
						, 15,	•		
		n=3							
401 401	1.3'/2'	2	0.8	Wet					
16' - 18'	65%	2 3 5	0.8	vvet	SP			(16-17' bgs) - Black c grained SAND and f-vf grained GRAVEL, tr brick and shell fragments; FILL; no odor or visible impact	
		n=5			0)			(17-18' bgs) - Black c grained SAND and c-m grained angular GRAVEL, tr shell fragments; FILL; no odor or visible impact	
18' - 20'	0.3'/2' 15%	5 4 4 4 n=8	0.7	Wet	SC	-		(18-20' bgs) - Dark brown vf grained SAND and CLAY, tr silt, m grained subangular gravel, and brick fragments; FILL; no odor or visible impact	
20' - 22'	0.6/2'	3 3 2 2 2 n=5	0.8	Wet	SM	20		. (20-22' bgs) - Black c-m grained SAND, some vf grained angular Gravel and shell fragments, tr silt; no odor or visible impact	
22' - 24'	0.3'/2' 15%	2 2 2 2 2 n=4	14.3	Wet	ъ	_		(22-24' bgs) - Black CLAY, tr m-f grained sand; NLO from 20-22.3' bgs but no visible impact	
24' - 26'	0.5'/2' 25%	5 6 8 12 n=14	1.5	Wet		- 25		(24-28' bgs) - Dark grayish brown vf grained SAND and SILT; no odor or visible impact	Analytical Sample ST14SB13 (24-28)
26' - 28'	2'/2' 100%	10 5 8 12 n=13	1.5	Wet	SM	-			
201 201	1.2'/2'	7	0.9	Wet					
28' - 30'	60%	14 19 22 n=33	0.9	VVCL		- 30		(28-30' bgs) - Dark grayish brown vf grained SAND and SILT, tr clay; no odor or visible impact	

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# **Boring Log**

Boring ID: ST14SB13

Sheet 3 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Contractor: PEC

Operator: D. Warris

Location: Manhattan, New York

Northing: 205265.035 Easting: 990969.285 NY State Plane - Long Island Lambert

Client: Consolida	ated Ediso	n			Dri	II Rig Ty	/pe: Truc	ck-Mounted	Surface Elevation (ft NAVD88): 9.452'	
Pre-Clear Date:	4/30/2008	Depth	: 5'		Ме	thod: 4.	25" HSA	1	Water Level (ft bgs): 10'	
Start Date: 4/30/	′2008 Eı	nd Date:	5/13/20	800	Loc	cation #	5 Tot	al Depth (ft): 50'	, , ,	Danimaldi
		SAM	PLE						Logged by: E. Vivaudou, K. Kachel, C	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Litl	hologic Description	Comments
30' - 32'	1.17 <i>2</i> ° 55%	/ 4 9 15 n=13	υ.6	vvet		30		(30-36' bgs) - Dar clay; no odor or v	rk brown SILT and vf grained SAND, tr isible impact	Analytical Sample ST14SB13 (30-32)
32' - 34'	1.2'/2' 60%	10 12 35 22 n=47	0.7	Wet		-				
34' - 36'	0.8'/2' 40%	17 22 36 32 n=58	0.6	Moist	ML	- 35				
36' - 38'	2'/2' 100%	12 22 32 47 n=54	0.6	Moist		-		(36-38' bgs) - Dai grained sand; no	rk reddish brown SILT, tr clay and vf odor or visible impact	
38' - 40'	1.3'/2' 65%	3 3 5 7	0.6	Moist	ರ			(38-38.7' bgs) - D impact	eark gray CLAY; no odor or visible	
		n=8			SP	_		grained SAND; no	Park gray to dark reddish brown moo odor or visible impact	
40' - 42'	1'/2' 50%	4 4 7 5 n=11	0.7	Moist		- 40		impact	eark gray CLAY; no odor or visible  // rk gray and brown CLAY; no odor or	
42' - 44'	0.9'/2' 45%	5 6 7 7 n=13	0.6	Moist	บี	_				
44' - 46'	2'/2' 100%	10 14 17 19	1.1	Moist		- - 45		(44-46' bgs) - Dar grained SAND an	rk brown and dark brownish gray f-vf d SILT; no odor or visible impact	

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# **Boring Log**

Boring ID: ST14SB13

Sheet 4 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Location: Manhattan, New York

Northing: 205265.035 Easting: 990969.285

NY State Plane - Long Island Lambert

Pre-Clear Date: Start Date: 4/30	Depth		008	Met		25" HSA	A al Depth (ft): 50'	Surface Elevation (ft NAVD88): 9.452'  Water Level (ft bgs): 10'  Logged by: E. Vivaudou, K. Kachel, C. Basinski		
Sample ID	Total Recovery	Blowcounts (per 6")	PLE (mdd) QIA	Moisture	nscs	Depth (ft)	Lithology	Litl	hologic Description	Comments
46' - 48' 48' - 50'	1.3'/2' 65%	n=31  14 23 32 43 n=55	1.1	Moist Moist	ML	45		SAND, tr clay; no	eark reddish brown SILT and vf grained odor or visible impact eark reddish brown SILT with gray Clay r visible impact	
	100%	27 28 41 n=55								Analytical Sample ST14SB13 (49-50)

50' bgs: END OF BORING

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**SAMPLE** 

#### **Boring Log**

Boring ID: ST14SB16

Sheet 1 of 4

Project: Stuyvesant Town Former MGPs

E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/23/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 16 Total Depth (ft): 50'

Location: Manhattan, New York

Northing: 205076.516 Easting: 990414.097

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.244'

Water Level (ft bgs): 8.5'

Logged by: G. Kirkwood, E. Vivaudou

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Commen
									'
0' - 1'	N/A	N/A	N/A	Moist	ž	] [0		(0-0.3' bgs) - COBBLESTONES; FILL	PID readings from 0-20'
					SP			(0.3-0.8' bgs) - Lt brown m grained SAND; FILL; moist;	bgs not recorded due
1' - 2'	N/A	N/A	N/A	Moist				no odor or visible impact	to moisture content.
								(0.8-2.3' bgs) - Red-brown m-f grained SAND, tr organic material, brick fragments and angular and rounded	
2' - 3'	N/A	N/A	N/A	Moist				pebbles, some roots and large piece of metal from 1-2' bgs; FILL; moist; no odor or visible impact	
3' - 4'	N/A	N/A	N/A	Moist		-		(2.3-5' bgs) - BRICKS and brown f-vf-grained SAND, some brick fragments, tr gravel, mortar, and pebbles,	
					SW			piece of slag material; FILL; moist, no odor or visible impact	
4' - 5'	N/A	N/A	N/A	Moist		-			
								(5' bgs) - END OF PRE-CLEAR	
5' - 6'	0.5'/1' 50%	6 8	N/A	Moist		-5		(5-6' bgs) - Lt brown f-vf grained SAND, brick fragments;	1
	0070							FILL; moist; no odor or visible impact	
6' - 8'	0.4'/2' 20%	4 6	N/A	Moist				(6.2.9.2' has) PDICK, FILL	-
		7						(6.2-8.2' bgs) - BRICK; FILL	
		n = 13			NA				
			ļ						
8' - 10'	0.6'/2' 30%	3 3 2	N/A	Wet		-		(8.2-10' bgs) - Lt brown f-vf grained SAND, brick	1
		3			SW			fragments; FILL; water table at 8.5'; no odor or visible impact	
		n = 5			S				
10' - 12'	NR	2	N/A	N/A		10			-
10 - 12	""	3 2						(10-12' bgs) - NO RECOVERY	
		3			N/A	-			
		n = 5			2				
12' - 14'	2'/2'	4	N/A	Wet		-		(12-12.3' bgs) - Loose brick fragments and brown f	1
	100%	3 10						grained SAND; FILL; wet; no odor or visible impact	Λ
		7 n = 13			SW			(12.3-12.6' bgs) - Moderately dense dark brown vf grained SAND and SILT; FILL; organic odor but no	
								visible impact	
14' - 16'	1.2'/2' 60%	2 2 4	N/A	Wet				(12.6-14' bgs) - Very soft dark brown m-f grained SAND, tr angular and rounded pebbles; FILL; wet; no odor or visible impact	

visible impact

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# **Boring Log**

Boring ID: ST14SB16

Sheet 2 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/23/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 16 Total Depth (ft): 50'

Location: Manhattan, New York

Northing: 205076.516 Easting: 990414.097

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.244'

Water Level (ft bgs): 8.5'

Logged by: G. Kirkwood, E. Vivaudou

	SAM	PLE			<b>₽</b>	_		ents	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
		n = 6				15		(14-15.1' bgs) - Moderately soft vf grained SAND and SILT, dark brown layer at 15.1' bgs; FILL; no odor or	<u> </u>
								visible impact	
16' - 18'	2'/2' 100%	2 3 5 5	N/A	Wet				(15.1-16' bgs) - Brown v-vf grained SAND, tr silt; FILL; no odor or visible impact	
		n = 8				-		(16-17.3' bgs) - Moderately soft brown vf grained SAND and SILT, tr gravel from 18-20' bgs, moderately firm from 18.6-20' bgs; FILL; organic odor from 17.3-19.4' bgs but no other odor or visible impact	
18' - 20'	1.4'/2' 70%	3 3 5 6 n = 8	N/A	Wet	SM	_		age sat no ether eder of violate impact	
						-20			
20' - 22'	1'/2' 50%	4 4 17	2.3	Wet	CL	-   20		(20-20.3' bgs) - Soft It brown vf grained SAND and SILT, few pebbles; FILL; wet; no odor or visible impact	PID readings from 20-50' bgs
		14 n = 21			SP	-		(20.3-20.6' bgs) - Lt gray CLAY; organic odor but no visible impact	measured on core.
22' - 24'	2'/2'	6	0.0	Wet		-		(20.6-22' bgs) - Brown f grained SAND; no odor or visible impact	Analytical
	100%	12 17 15			J C			(22-22.3' bgs) - Brown m-f grained SAND; no odor or visible impact	sample ST14SB16 (22-24)
		n = 29			SM SP	7	::::::::::::::::::::::::::::::::::::::	(22.3-22.7' bgs) - Moderately soft gray CLAY; no odor or visible impact	
24' - 26'	1.8'/2' 90%	3 6 9	N/A	Wet	SP	-	<del></del>	(22.7-23.6' bgs) - Brown f grained SAND; no odor or visible impact	
		14 n = 15				- 25		(23.6-24' bgs) - Stiff red-brown vf grained SAND and SILT; no odor or visible impact	
201 201	1.6'/2'	6	0.0	Wet				(24-24.6' bgs) - Gray f-vf grained SAND; no odor or	
26' - 28'	80%	9 12 11 n = 21	0.0	vvet		-		visible impact  (24.6-34' bgs) - Moderately dense red vf grained SAND, tr silt and mica, moderately soft from 32-32.3' and 33-34' bgs, and soft from 32.3-33' bgs; very slight organic odor from 26-27.8' bgs, but no other odor or visible impact	
28' - 30'	1.9'/2' 95%	5 7 7 8	0.0	Wet		-			
		n = 14			SW				
	1 11/01					30		1	

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# **Boring Log**

Boring ID: ST14SB16

Sheet 3 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Location: Manhattan, New York

Northing: 205076.516 Easting: 990414.097 NY State Plane - Long Island Lambert

Client: Consolida	ated Ediso	n			Dri	II Rig T	ype: Truc	ck-Mounted	Surface Elevation (ft NAVD88): 11.244'	
Pre-Clear Date:	6/23/2008	Depth	: 5'		Ме	thod: 4	.25" HSA	1	Water Level (ft bgs): 8.5'	
Start Date: 6/23/	2008 E	nd Date: (	6/24/20	800	Loc	cation #	‡16 To	otal Depth (ft): 50'	, , ,	
		SAM	PLE			_			Logged by: G. Kirkwood, E. Vivaudou	ts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Litt	nologic Description	Comments
30' - 32'	1.47 <i>2</i> ° 70%	3 5 6 7 n = 11	U.U	vvet		30				
32' - 34'	2'/2' 100%	8 11 14 17 n = 25	0.0	Wet		_				
34' - 36'	2'/2' 100%	2 3 4 8 n = 7	0.0	Wet	SM			(34-36' bgs) - Sof 36' bgs red SANE no odor or visible	t from 34-34.6' bgs to m-soft from 34.6-0 and SILT with gray layer at 33.6' bgs; impact	
36' - 38'	N/A	7 8 11 15 n = 19	N/A	N/A	N/A			(36-38' bgs) - NO	T RECORDED	
38' - 40'	2'/2' 100%	6 9 9	N/A	Wet	CL			(38-38.6' bgs) - S impact	oft red-brown CLAY; no odor or visible	
		12 n = 18			SM	-40			oft to moderately soft red vf grained no odor or visible impact	
40' - 42'	2'/2' 100%	3 3 3 2	0.0	Wet	CL CL			slight MGPO but	·	
		n = 6						grained SAND; no	Moderately firm red CLAY and vf o odor or visible impact	
42' - 44'	2'/2' 100%	2 2 6 8	0.0	Wet	SM			(41.2-43.3' bgs) - grained SAND; no	Moderately firm red SILT and vf o odor or visible impact	
		n = 8						(43.3-44' bgs) - G or visible impact	iray f-vf grained SAND, tr silt; no odor	
44' - 46'	2'/2' 100%	5 7 7 9	0.0	Wet	SP	  -45		(44-45.4' bgs) - B gray sand at 45.3	rown-red vf grained SAND, layer of ' bgs; no odor or visible impact	

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# **Boring Log**

Boring ID: ST14SB16

Sheet 4 of 4

Project: Stuyvesant Town Former MGPs E.14th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 6/23/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 16 Total Depth (ft): 50'

Location: Manhattan, New York

Northing: 205076.516 Easting: 990414.097

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.244'

Water Level (ft bgs): 8.5'

Logged by: G. Kirkwood, E. Vivaudou

		SAM	PLE			Ð	<b>&gt;</b>		nts	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (f	Lithology	Lithologic Description	Comme	

						45			
		n = 14					[ ]		
401 401	2'/2'	2	0.0	Wet				(45.4-46' bgs) - Brown-red vf grained SAND, tr mica; no odor or visible impact	,
46' - 48'	100%	3 6 6 7	0.0	Wet	귕		-7-7-7-3 -7-7-7-3 -7-7-7-3	(46-47.1' bgs) - Lt brown CLAY and vf grained SAND, layer of gray sand at 47' bgs; no odor or visible impact	
		n = 12			SW			(47.1-48' bgs) - Brown vf grained SAND, layer of gray sand at 47.9' bgs, some Silt; no odor or visible impact	
48' - 50'	2'/2' 100%	3 4 6 5	0.0	Wet	ر ا			(48-49' bgs) - Lt brown CLAY, some Silt; no odor or visible impact	Analytical sample ST14SB16 (48-50)
		n = 10			SP			(49-50' bgs) - Brown vf grained SAND; no odor or visible impact 50' bgs: END OF BORING	

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**SAMPLE** 

# **Boring Log**

Boring ID: ST17SB07

Sheet 1 of 3

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/9/2008 Depth: 6'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

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Location # 5 Total Depth (ft): 36'

Location: Manhattan, New York

Northing: 205817.719 Easting: 991152.634 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.75'

Water Level (ft bgs): 10'

Logged by: B. Ergezen, J. Shackford

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	SOSU	Depth (f	Litholog	Lithologic Description	Сотте
						_0 pzzz	,,,,,,,,		
0' - 1'	N/A	N/A	0.5	Moist	SW			(0-1' bgs) - Loose dark brown c-f grained SAND, some Organics and c-f Gravel; FILL; no odor or visible impact	
1' - 2'	N/A	N/A	0.4	Moist	4.5			(1-2' bgs) - Loose light brown m-f grained SAND, some c-f gravel; FILL; no odor or visible impact	
2' - 3'	N/A	N/A	1.1	Moist	SP/GP			(2-3' bgs) - Loose light brown m-f grained SAND, some m-f grained Gravel; FILL; no odor or visible impact	
3' - 4'	N/A	N/A	1.8	Moist	SP			(3-4' bgs) - Loose grayish brown m-f grained SAND, some c-f grained Gravel and bricks; FILL; no odor but some coal	
4' - 5'	N/A	N/A	1.8	Moist	>	-5		(4-5' bgs) - Loose dark brown c-f grained SAND, some c-f grained Gravel, Cobbles, and Brick, tr rootlets; FILL; no odor or visible impact	
5' - 6'	N/A	N/A	2.1	Moist	SW			(5-6.2' bgs) - Loose dark brown c-f grained SAND, some c-f-grained Gravel, rootlets, and mica, large brick	
6' - 8'	0.3'/2' 15%	50/0.18'	1.0	Dry		-		fragments from 6-6.2' bgs; FILL; no odor or visible impact  (6.2-8' bgs) - Gray rock and concrete fragmants; FILL; no odor or visible impact	
8' - 10'	0.9'/2' 45%	11 44 14 10 n = 54	1.0	Moist	SP	-		(8-8.43' bgs) - Dark brown c-f grained SAND, tr rootlets; FILL; no odor or visible impact  (8.43-10' bgs) - Brown-gray c-f grained SAND, green root and plant matter at 8.62' bgs; FILL; no odor or visible impact	
10' - 12'	1.5'/2' 58%	14 14 7 5	1.6	Wet	S	- 10 -		(10-10.15' bgs) - Brown c-f grained SAND; FILL; no odor or visible impact (10.15-10.21' bgs) - Black m-f grained SAND; FILL;	
		n = 21			_			slight burnt odor with clinker-like material (10.21-12.68' bgs) - F grained SILTY SAND, some soft	
12' - 14'	0.8'/2' 40%	5 6 8 10 n = 14	1.2	Wet	SM			brown-gray Clay; FILL; no odor but slight staining at 12.2' bgs  (12.68-14' bgs) - Brown vf-f grained SAND with large rock; FILL; no odor or visible impact	
14' - 16'	0.95'/2' 48%	3 5 3 5 n = 8	0.9	Wet	SP	- - 15		(14-16' bgs) - Loose brown-gray vf-m grained SAND; FILL; slight burnt odor with tr black staining from 14.1- 14.14', 14.35-14.36', 14.5', and 14.6' bgs	

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# **Boring Log**

Boring ID: ST17SB07

Sheet 2 of 3

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/9/2008 Depth: 6'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 5 Total Depth (ft): 36'

Location: Manhattan, New York

Northing: 205817.719 Easting: 991152.634 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.75'

Water Level (ft bgs): 10'

Logged by: B. Ergezen, J. Shackford

		SAM	PLE			Œ	_		nts
Sample ID	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (f	Lithology	Lithologic Description	Comme
		-							

16' - 18'	0.9'/2' 45%	1	0.6	Wet	Ū		(16'-16.2' bgs) - Loose dark brown m-grained GRAVE and c-m grained SAND; FILL; no odor or visible impa	EL
		2 2 n = 3			SP	_	(16.2-18' bgs) - Soft dark brown-light brown m-c grain SAND, tr brick fragments; FILL; slight organic-like odd but no visible impact	ed
18' - 20'	2'/2' 100%	1 1 3 2 n = 4	0.8	Wet	В	-	(18-20' bgs) - Loose dark brown-gray m-c grained GRAVEL, some m grained SAND; no odor or visible impact	
20' - 22'	1.2'/2' 60%	8 2 1	0.7	Wet		- 20	(20-20.4' bgs) - Very loose brown m-c grained SAND odor or visible impact	no
		1 n = 3			SM		(20.4-20.9' bgs) - Soft black vf grained SAND and SIL tr clay; very slight organic-like odor but no visible imp	T,
22' - 24'	2'/2' 100%	1 1	1.6	Wet	GP	_	(20.9-22.45' bgs) - Loose m-f grained GRAVEL and SAND; no odor or visible impact	
		1 1 n = 2				_	(22.45-24' bgs) - Soft dark gray-black SILTY CLAY, tr rootlets; slight organic-like odor but no visible impact	
24' - 26'	1.05'/2' 53%	1 1 1 1 n = 2	10.1	Wet	ال ال	- 25		
26' - 28'	2'/2' 100%	1 1 1 5 n = 2	10.2	Wet		-	(26-28' bgs) - Soft dark gray-black SILTY CLAY; organic-like odor and slight MGPO but no visible impa	Analytical Sample ST17SB0 (26-28)
28' - 30'	1.6'/2' 80%	2 7 10 8	1.1	Wet			(28-28.84' bgs) - Very loose brown m-f grained SANE rootlets; no odor or visible impact	, tr
		n = 17				-	(28.84-32' bgs) - Loose red-brown f-m-grained SAND slight MGPO and black staining from 31.05-31.3' bgs	;
30' - 32'	1.8'/2' 90%	4 3	1.2	Wet		30		

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# **Boring Log**

Boring ID: ST17SB07

Sheet 3 of 3

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/9/2008 Depth: 6'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 5 Total Depth (ft): 36'

Location: Manhattan, New York

Northing: 205817.719 Easting: 991152.634 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.75'

Water Level (ft bgs): 10'

Logged by: B. Ergezen, J. Shackford

		SAM	PLE			- <del>-</del>			nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
32' - 34'	2'/2' 100%	5 n = 6 4 5 8 13 n = 13	0.8	Wet	- &	-		(32-36' bgs) - Loose f-vf grained SAND; no odor or visible impact	Analytical Sample ST17SB01 (31-32) Analytical Sample ST17SB01 (32-34)
34' - 36'	2'/2' 100%	16 19 22 27 n = 41	0.8	Wet		- 35		36' bgs: END OF BORING	

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**SAMPLE** 

#### **Boring Log**

Boring ID: ST17SB08

Sheet 1 of 3

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Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/23/2008 Depth: 5.8'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 7 Total Depth (ft): 36'

ogy

Location: Manhattan, New York

Northing: 205471.434 Easting: 990942.625

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.012'

Water Level (ft bgs): 10'

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (	Litholog	Lithologic Description	Соште
0' - 1'	N/A	N/A	0.0	Moist	ž	-0		(0-0.25' bgs) - TOPSOIL, grass, and roots; FILL; no odor or visible impact	
1' - 2'	N/A	N/A	0.1	Moist	SW	_		(0.25-1' bgs) - Loose dark brown m-f grained SAND, tr rootlets and pebbles; FILL; moist; no odor or visible impact	
2' - 3'	N/A	N/A	0.0	Moist	0)			(1-2' bgs) - Loose brown f-vf grained SAND, tr gravel, pebbles, and cobbles; FILL; no odor or visible impact	
3' - 4'	N/A	N/A	0.0	Moist	A/A	-		(2-3.3' bgs) - Loose brown-gray f-vf grained SAND, some Bricks and Cobbles, little Silt, Gravel, and Mortar; FILL; moist; no odor, but little ash from 2-3' bgs	
4' - 5'	N/A	N/A	0.0	Moist				(3.3-4' bgs) - Brown m-f-grained SAND, SLAG material, some metal, glass, and bricks; FILL; moist; no odor or visible impact	
5' - 6'	N/A	N/A	0.0	Moist	SW	-5		(4-5' bgs) - Loose brown-gray vf grained SAND, some slate, angular white rock fragments, little glass, pieces of ceramic and incinerator material, few fragments of	
6' - 8'	0'/2' 0%	7 24 37 32		Moist		1		black material from 4.5-5' bgs; FILL; strong MGPO in fragments of black material, very slight odor throughout, little ash and coal	
		n = 61			N/A			(5-6' bgs) - Loose f grained SAND, glass fragments at 5' bgs, some brick fragments and white rock fragments, metal object at 5.8' bgs; FILL; no odor or visible impact	
8' - 10'	1'/2' 50%	10 7 5	3.8	Moist		-		(6-8' bgs) - NO RECOVERY	
		8 n = 12			SW			(8-8.5' bgs) - White QUARTZ; FILL; no odor or visible impact	
10' - 12'	0.5'/2' 25%	14 8	3.8	Wet		10		(8.5-10' bgs) - Brown f-m grained SAND, little wood and gravel, tr bricks; FILL; no odor or visible impact	ł
		2 2 n = 10				-		(10-12' bgs) -Brown f-m grained SAND and SILT, tr gravel; FILL; no odor or visible impact	
12' - 14'	0.75'/2' 37.5%	2 2 4 1 n = 6	0.0	Wet		-		(12-17.8' bgs) - Brown SAND and SILT, some pyrite; FILL; no odor or visible impact	
14' - 16'	0.75'/2' 37.5%	1 1 1	1.7	Wet	SM	_			Analytical sample ST17SB0
		1				15			(14-18)

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# **Boring Log**

Boring ID: ST17SB08

Sheet 2 of 3

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/23/2008 Depth: 5.8'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 7 Total Depth (ft): 36'

Location: Manhattan, New York

Northing: 205471.434 Easting: 990942.625 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.012'

Water Level (ft bgs): 10'

	SAMPLE								ints	
Sample ID	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Uscs Depth (ft)	Lithology	Lithologic Description	Comments	
		1								
16' - 18'	2'/2' 100%	1 1 2 1 n = 3	0.0	Wet		-				
18' - 20'	1.25'/2' 62.5%	2 2 2 2 2 n = 4	0.0	Wet	<u> </u>	-		(17.8-18' bgs) - PEAT; FILL; no odor or visible impact (18-22' bgs) - Black SAND and SILT, Pyrite, tr ceramic debris and organics; FILL; no odor or visible impact		
20' - 22'	0.75'/2' 37.5%	3 3 2 2 2 n = 5	0.1	Wet	SM	-20				
22' - 24'	0.25'/2' 12.5%	2 2 3 3 n = 5	8.1	Wet	CL	-		(22-24.25' bgs) - Black SILT and CLAY, tr pyrite; FILL; no odor or visible impact	Analytical sample ST17SB08 (22-26)	
24' - 26'	0.75'/2' 37.5%	2 3 5 6 n = 8	2.8	Wet	CL SN	- 25		(24.25-26' bgs) - Gray SILT, some Clay, tr ceramic debris; FILL; no odor or visible impact		
26' - 28'	2'/2' 100%	6 4 10 7 n = 14	0.0	Wet	SP	-		(26-28' bgs) - Brown-gray f grained SAND; FILL; slight organic odor but no visible impact		
28' - 30'	2'/2' 100%	10 15 17 19 n = 32	2.3	Wet	SP SW	- - - -		(28-28.75' bgs) - Brown-black f grained SAND, tr brick; FILL; no odor or visible impact  (28.75-30' bgs) - Gray-tan f-m grained SAND; no odor or visible impact		
30' - 32'	2'/2' 100%	6 9 10	0.3	Wet	S	- 30		(30-31.2' bgs) - Brown-black to brown-tan f-m grained SAND; no odor or visible impact		

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# **Boring Log**

Boring ID: ST17SB08

Sheet 3 of 3

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/23/2008 Depth: 5.8'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 7 Total Depth (ft): 36'

Location: Manhattan, New York

Northing: 205471.434 Easting: 990942.625 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.012'

Water Level (ft bgs): 10'

		SAM	PLE			Ð	>		nts	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	USCS	Depth (f	Litholog	Lithologic Description	Comme	

		6 n = 19			ML	_	(31.2-34' bgs) - Gray SILT, tr mica; no odor or visible impact	
32' - 34'	0.75'/2' 37.5%	16 10 11 11 n = 21	1.0	Wet	ML			Analytical sample ST17SB08 (32-36)
34' - 36'	0.9'/2' 46%	15 17 19 24 n = 36	0.0	Wet	SP SM	<b>-</b> 35	(34-34.4' bgs) - Gray SILT and f grained SAND; no odor or visible impact (34.4-36' bgs) - Brown-gray m-c grained SAND; no odor or visible impact 36' bgs: END OF BORING	

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**SAMPLE** 

#### **Boring Log**

Boring ID: 17WVSB01

Sheet 1 of 1

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 5/6/2008 Depth: 5'

Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

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Location # 6 Total Depth (ft): 8.1'

Location: Manhattan, New York

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.687'

Water Level (ft bgs): NOT ENCOUNTERED

Logged by: M. Stepanova, K. Kachel, J. Shackford

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (f	Litholog	Lithologic Description	Сотте
0' - 1'	N/A	N/A	N/A	N/A				(0-0.6' bgs) - ASPHALT	
					N/A			(0.6-1' bgs) - CONCRETE; FILL	
1' - 2'	N/A	N/A	0.0	Dry	_			(1-1.4' bgs) - Brown SOIL, tr cobbles and pebbles; FILL; dry; no odor or visible impact	
		N//						(1.4-1.9' bgs) - Hard, black, brittle material; FILL; moderate MGPO but no visible impact	
2' - 3'	N/A	N/A	1.4	Dry				(1.9-2.5' bgs) - Loose brown m-f grained SAND, tr gravel, and tr bricks from 2-2.5' bgs; FILL; dry; no odor or visible impact	
3' - 4'	N/A	N/A	1.0	Moist	<del>-</del>	-		(2.5-4' bgs) - Loose dark gray-brown m-f grained SAND, tr gravel, pieces of brick; FILL; MGPO with cinders and ash to 3' bgs, no odor or visible impact from 3-4' bgs	
4' - 5'	N/A	N/A	1.2	Moist		_		(4-5' bgs) - Loose dark gray-brown m-f grained SAND, tr gravel, with rock at 4.3' bgs; FILL; MGPO but no visible impact 5' bgs: END OF PRECLEAR	
5' - 6'	0.3'/0.2' 15%	5 8	N/A	Moist	SW	-5		(5-6' bgs) - Slough material; FILL	
6' - 8'	0.55'/2' 27.5%	5 7 8 12 n = 15	N/A	Moist		_		(6-8' bgs) - Dark brown-black m-vf grained SAND, tr silt, brick, and concrete; FILL; slight burnt odor from 6-6.55' bgs but no visible impact	
8' - 8.1'	0.1'/2' 5%	50/1"	N/A	Moist				(8-10' bgs) - Brown m-grained SAND, tr c-grained sand, some m-grained gravel, brick; FILL; no odor or visible impact 8.1' bgs: END OF BORING	Utility Encountered

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### **Boring Log**

Boring ID: 17WVSB02

Sheet 1 of 2

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: 4/30/2008 Depth: 5'

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Method: Direct Push and 4.25" HSA

Location #8 Total Depth (ft): 30'

Location: Manhattan, New York

Northing: 205423.983 Easting: 990843.17 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.074'

Water Level (ft bgs): 9.8'

Logged by: E. Vivaudou, K. Kachel, J. Shackford

	SAMPLE						>		nts	
Sample ID	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments	
	1 1/4	L 1/4		L NA . T. C		,O ı	,,,,,,,,,,	, , , , , , , , , , , , , , , , , , ,		
0' - 1'	N/A	N/A	0.9	Moist	SP			(0-1' bgs) - Brown f-c grained SAND, some roots; FILL; no odor or visual impact		
1' - 2'	N/A	N/A	4.2	Moist	SW			(1-2' bgs) - Tan c-f grained SAND; FILL; no odor or visual impact		
2' - 3'	N/A	N/A	4.8	Moist	sc			(2-3' bgs) - Brown f grained SAND and CLAY, tr mica; FILL; no odor or visual impact		
3' - 4'	N/A	N/A	1.2	Moist	SW			(3-4' bgs) - Brown c-f grained SAND and SILT; FILL; no odor or visual impact		
4' - 5'	N/A	N/A	2.0	Moist	SC			(4-5' bgs) - Brown f grained SAND and CLAY, tr gravel; FILL; no odor or visual impact		
5' - 8'	1.3'/2' 65%	N/A	N/A	Moist		-  5  -  -		(5-8' bgs) - Moderately dense brown SAND, some Silt, tr clay and f grained rounded gravel; FILL; no odor or visible impact		
8' - 12'	2.4'/4' 60%	N/A	0.0	Wet	WS	- - 10		(8-12' bgs) - Moderately dense brown SAND, some Silt, tr clay and f grained, rounded gravel; FILL; wet at 9.8' bgs; no odor, but some coal fragments at 8.8' bgs		
12' - 16'	2.1'/4' 53%	N/A	0.0	Wet		- - - -15		(12-16' bgs) - Loose brown SAND and fine angular GRAVEL; FILL; slight HCLO and possible light gray staining from 13.2-14.1' and 16-20' bgs		
16' - 20'	0.6'/4' 15%	N/A	0.0	Wet	SP					

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# **Boring Log**

Boring ID: 17WVSB02

Sheet 2 of 2

Project: Stuyvesant Town Former MGPs E.17th Street Station

Project #: 01869-164

Client: Consolidated Edison

Contractor: PEC

Operator: D. Warris

Drill Rig Type: Truck-Mounted

Location: Manhattan, New York

Northing: 205423.983 Easting: 990843.17 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 11.074'

Start Date: 5/12/	SAMPLE & Q					Depth (ft)	Lithology	al Depth (ft): 30'	Logged by: E. Vivaudou, K. Kachel, J.	Comments Comments	
20' - 23.5'	1.7'/3.5' 49%	N/A	0.0	Wet	ML	20		gray Sand layer	Black SILT and CLAY, tr rootlets, light from 21.3-21.4' bgs, wood fragments rial in geoprobe shoe; FILL; moderate al impact	_	
23.5' - 24' 24' - 26'	0.5'/0.5' 100% 0.9'/2' 45%	3 18 34 17 22 n=51	3.3	Wet		25 <u>-</u>		moderate NLO a impact (24-26' bgs) - Lo	(23.5-24' bgs) - Black SILT and CLAY, tr rootlets; FILL; moderate NLO and slight organic-like odor but no visual impact  (24-26' bgs) - Loose brown m-c grained SAND, some Gravel; no odor or visual impact		
26' - 28'	0.4'/2'	14 17 17 20 n=34	3.4	Wet	SP	-		odor or visual im	s) - Gray f-vf grained gray SAND, tr c- nd wood fragments, no wood fragments		
28' - 30'	2'/2' 100%	12 11 17 10 n=28	1.5	Wet		30		1	Moderately dense m-f grained SAND; impact	Analytical Sample 17WVSB02 (28-30)	

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**SAMPLE** 

# **Boring Log**

Boring ID: 19WVSB01

Sheet 1 of 2

Project: Stuyvesant Town Former MGPs E.19th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Not Recorded Depth: 5'

Start Date: Not Recorded End Date: 5/13/2008

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 2 Total Depth (ft): 26'

Location: Manhattan, New York

Northing: 206442.489 Easting: 990344.335 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.029'

Water Level (ft bgs): 4'

Logged by: M. Stepanova, K. Kachel

Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	SOSN	Depth (ft)	Lithology	Lithologic Description	Comment
0' - 1'	N/A	N/A	NR	Moist				(0-4' bgs) - Not Recorded	
1' - 2'	N/A	N/A	NR	Moist	wn	-			
2' - 3'	N/A	N/A	NR	Moist	Unknown	-			
3' - 4'	N/A	N/A	NR	Moist		-			
4' - 8'	1.3'/4' 32.5%	N/A	0.0	Wet	GW	_5 _		(4-4.6' bgs) - Red SAND and GRAVEL, brick fragments; FILL; wet; no odor or visible impact (4.6-8.2' bgs) - Dense dark gray SAND and GRAVEL; FILL; slight HCLO and staining from 4.6-5.3' bgs 5' bgs: END PRE-CLEAR	Analytical sample 19WVSB01 (4-8)
8' - 12'	1.8'/4' 45%	N/A	0.0	Wet	WS //N	<del> </del>  -		(8.2-9.2' bgs) - Soft gray to lt gray f grained SAND, tr silt; FILL; slight HCLO and possible staining throughout	
					NS WS	— 10 —		(9.2-9.5' bgs) - Red brick fragments; FILL  (9.5-12' bgs) - Green-gray f grained SAND, tr silt; FILL; wet; no odor or visible impact	
12' - 16'	2.2'/4' 55%	N/A	0.0	Wet	SP	-		(12-13' bgs) - Loose dark green-gray f grained SAND; FILL; wet; no odor or visible impact	Analytical sample 19WVSB01
					SW			(13-14.3' bgs) - Dark gray-black SAND and GRAVEL, some wood and shell fragments; FILL; slight fuel-like odor but no visible impact	. (12-16)
					S	— 15		(14.3-16' bgs) - Loose dark gray-black f-c grained SAND, tr shell fragments, wet; slight fuel-like odor from 13.3-14.2' bgs but no visible impact	
16' - 20'	0'/4' 0%	N/A	NR	Wet				(16-20' bgs) - No Recovery	

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# **Boring Log**

Boring ID: 19WVSB01

Sheet 2 of 2

Project: Stuyvesant Town Former MGPs E.19th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Not Recorded Depth: 5'

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location: Manhattan, New York

Northing: 206442.489 Easting: 990344.335

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 10.029'

	Start Date: Not Recorded End Date: 5/13/2008						2 Tot	al Depth (ft): 26'	Water Level (ft bgs): 4' Logged by: M. Stepanova, K. Kachel	
		SAM	PLE			æ	<u> </u>			ints
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lith	nologic Description	Comments
20' - 26'	3.7'/4' 92.5%	N/A	0.0	Wet	CH	- 20 - - - 25		some plant mater	t, high plasticity dark green-gray CLAY, ial, tr shell fragments, moist; moderate e odor from 20-23.7' bgs but no visible	Analytical sample 19WVSB01 (20-26)

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**SAMPLE** 

# **Boring Log**

Boring ID: 19WVSB02

Sheet 1 of 2

Project: Stuyvesant Town Former MGPs E.19th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Not Recorded Depth: 5'

Start Date: Not Recorded End Date: 5/14/2008

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location #3 Total Depth (ft): 24'

Location: Manhattan, New York

Northing: 206191.244 Easting: 990599.185

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 12.168'

Water Level (ft bgs): 7'

Logged by: M. Stepanova, K. Kachel

	SAMPLE				ੁ⊋ਂ≥			nts	
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
0' - 1'	N/A	N/A	NR	Moist				(0-4' bgs) - Not Recorded	
1' - 2'	N/A	N/A	NR	Moist	V	-			
2' - 3'	N/A	N/A	NR	Moist	Unknown	-			
3' - 4'	N/A	N/A	NR	Moist		_			
4' - 8'	1'/4' 25%	N/A	0.0	Moist				(4-4.5' bgs) - Dense gray SAND and f grained angular GRAVEL; FILL; dry; no odor or visible impact	
						-5		(4.5-8' bgs) - Dense red-brown f-c grained SAND, brick fragments, little angular Gravel; FILL; moist to wet at 7' bgs; no odor or visible impact	
					GW			5' bgs: END OF PRECLEAR	
	0.71/41	<b>N//</b>		10/11		_			A and the state
8' - 12'	2.7'/4' 67.5%	N/A	0.3	Wet		_		(8-9.5' bgs) - Dense gray SAND and f grained angular GRAVEL; FILL; moist; fuel-like odor from 8.7-10.7' bgs but no visible impact	Analytical sample 19WVSB02 (8-10)
					SP	- 10 - 10		(9.5-13.3' bgs) - Loose green-gray f grained SAND; FILL; wet; no odor, OLM with sheen and staining from 9.5-10.7' bgs	Analytical sample 19WVSB01 (10-12)
12' - 16'	2.1'/4' 52.5%	N/A	NR	Wet		-			
						- - - 15		(13.3-20' bgs) - Moderately dense dark gray f-c grained SAND, little f grained rounded Gravel; FILL; moderate fuel-like odor and staining from 13.3-13.6' bgs, slight fuel-like odor from 13.6-14.1' bgs, and moderate fuel oil-like odor and tr sheen from 16-16.6' bgs	
16' - 20'	0.6'/4' 15%	N/A	0.0	Wet	SW	-			
I	I	1	I	1		11 1	V/////////	3	1

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# **Boring Log**

Boring ID: 19WVSB02

Sheet 2 of 2

Project: Stuyvesant Town Former MGPs E.19th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Not Recorded Depth: 5'

Start Date: Not Recorded End Date: 5/14/2008

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 3 Total Depth (ft): 24'

Location: Manhattan, New York

Northing: 206191.244 Easting: 990599.185 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 12.168'

Water Level (ft bgs): 7'

Logged by: M. Stepanova, K. Kachel

								90 J 1 - 7	
		SAMPLE				<b>₽</b>	Lithology		nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Uscs Depth (ft)		Lithologic Description	Comments
20' - 24'	3.7'/4' 92.5%	N/A	0.0	Wet	CH	- 20		(20-20.2' bgs) - Loose brown f-m grained SAND, pyrite from 20.1-20.2' bgs, wet; no odor or visible impact (20.2-24' bgs) - Soft, high plasticity dark green-gray CLAY, shell fragments; slight H2S-like odor from 20.2-23.7' bgs but no visible impact	Analytical sample 19WVSB0* (23-24)

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**SAMPLE** 

## **Boring Log**

Boring ID: 19WVSB03

Sheet 1 of 1

Project: Stuyvesant Town Former MGPs

E.19th Street Station

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Unknown Depth: 5'

 Contractor: PEC

Operator: R. Baldoze

Drill Rig Type: Truck-Mounted

Method: 4.25" HSA

Location # 4 Total Depth (ft): 12.5'

Location: Manhattan, New York

Northing: 206058.542 Easting: 990828.305

NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 12.152'

Water Level (ft bgs): Unknown

Logged by: E. Vivaudou, K. Kachel

Sample ID	Total	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Commen
	<u> </u>	l ola	🖥	Š					
0' - 1'	N/A	N/A	0.0	Dry				(0-0.3' bgs) - Black-brown SAND; FILL; no odor or visible impact	
1' - 2'	N/A	N/A	0.0	Moist		-		(0.3-1' bgs) - Lt brown m-f grained SAND, some Silt and Gravel; FILL; no odor or visible impact  (1-3' bgs) - Lt brown m-f grained SAND, some Silt, tr	
2' - 3'	N/A	N/A	0.0	Moist	•	-		gravel; FILL; no odor or visible impact	
3' - 4'	N/A	N/A	0.0	Moist	SW	-		(3-4' bgs) - Brown m-f grained SAND, some Gravel, mortar, and brick, wood chunks at 3.5' bgs; FILL; no odor or visible impact	
4' - 5'	N/A	N/A	0.0	Dry				(4-5' bgs) - Brown m-c grained SAND, some Gravel, little brick; FILL; no odor or visible impact	
5' - 7'	N/A	N/A	0.0	Moist		-5		(5-6' bgs) - Brown f-c grained SAND, tr f grained gravel, brick at 5.5' bgs; FILL; moist; no odor or visible impact	Hand augered 5 8.6' bgs
			0.0			-		(6-7' bgs) - Brown f-c grained SAND, tr f grained gravel, rock fragments from 7-7.5' bgs; FILL; moist; no odor or visible impact	
7' - 8'	N/A	N/A	N/A	Moist	N/A			(7-8' bgs) - No Recovery	
8' - 10'	0.6'/2' 30%	8 8 4 3	0.0	Moist	NS C	<u> </u>		(8-8.3' bgs) - Brown f-c grained SAND and f grained GRAVEL; FILL; no odor or visible impact	
		n = 12				-		(8.3-12' bgs) - CONCRETE and red BRICK fragments; FILL; no odor or visible impact 8.6' bgs: END OF PRE-CLEAR	
10' - 12'	0.7'/2' 35%	2 7 8 14 n = 15	0.0	Moist	N/A	- 10			
12' - 12.5'	0.5'/2' 25%	50/0.3'	0.0	Moist		]-		(12-12.4' bgs) - CONCRETE; FILL; no odor or visible impact	
								(12.4-12.5' bgs) - Dark gray CINDERS; FILL; no odor	

but some ash-like material 12.5' bgs: END OF BORING

AECOM 78 Main Street Nyack, NY 10960 Phone: (845) 348-1520 Fax: (845) 348-1190

# **Boring Log**

Boring ID: A4WVSB01

Sheet 1 of 1

Project: Stuyvesant Town Former MGPs

Water Valve Borings

Project #: 01869-164

Client: Consolidated Edison

Pre-Clear Date: Unknown Depth: 5'

Start Date: Unknown End Date: 5/14/2008

Contractor: PEC

Operator: J. Bailey

Drill Rig Type: Truck-Mounted

Method: Direct Push

Location # 1 Total Depth (ft): 20'

Location: Manhattan, New York

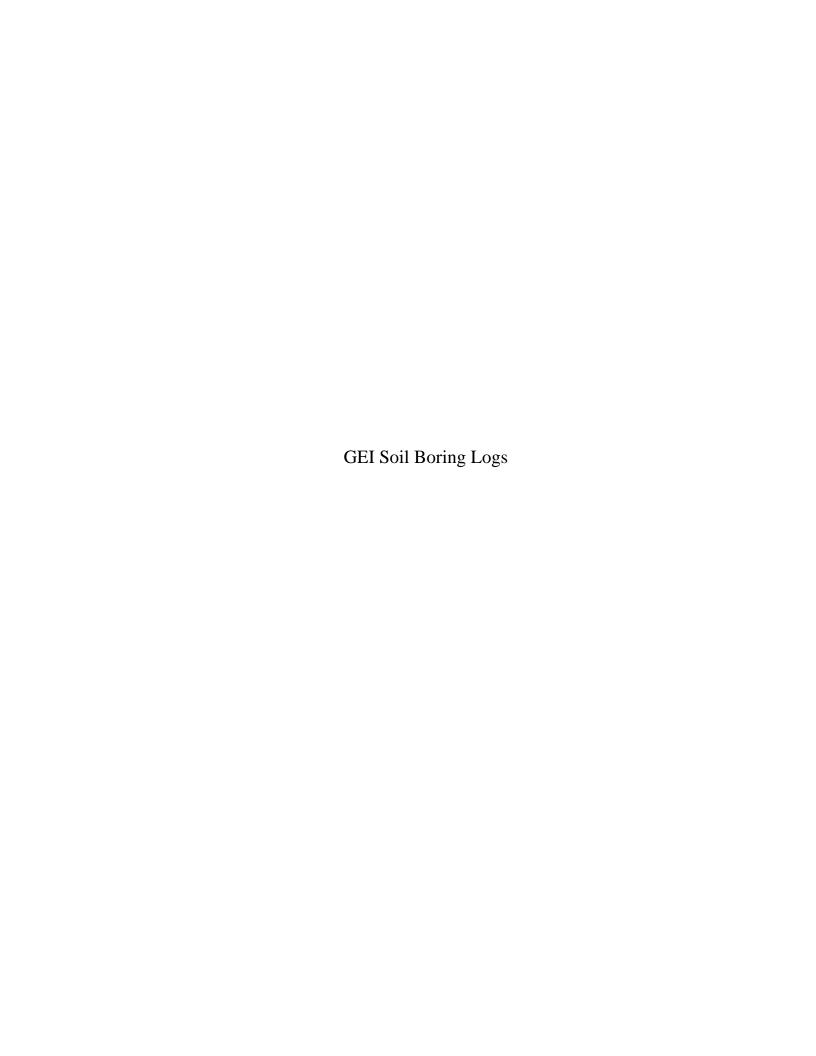
Northing: 206188.21 Easting: 989891.021 NY State Plane - Long Island Lambert

Surface Elevation (ft NAVD88): 15.136'

Water Level (ft bgs): 16'

Logged by: M. Stepanova, K. Kachel

								Logged by: M. Stepanova, K. Kachel	
		SAM	PLE			<b>₽</b>	<u>&gt;</u>		nts
Sample ID	Total Recovery	Blowcounts (per 6")	PID (ppm)	Moisture	nscs	Depth (ft)	Lithology	Lithologic Description	Comments
0' - 1'	N/A	N/A	Unk	Moist				(0-4' bgs) - Not Recorded	
1' - 2'	N/A	N/A	Unk	Moist		-			
2' - 3'	N/A	N/A	Unk	Moist	Unk	-			
3' - 4'	N/A	N/A	Unk	Moist		-			
4' - 5'	2.5'/4' 62.5%	N/A	0.1	Moist		-5		(4-5' bgs) - Loose to m-dense brown f-c grained SAND, tr f grained rounded gravel; FILL; no odor or visible	
5' - 8'								impact 5' bgs: END OF PRECLEAR	
					SW	_		(5-8.5' bgs) - Loose to m-dense brown f-c grained SAND, tr f grained rounded gravel; FILL; no odor but lt staining from 5.5' -5.7'	
8' - 12'	1.3'/4'	N/A	4.8	Moist		_			Analytical
	32.5%				- 07	-		(8.5-8.6' bgs) - Loose tan m-c grained SAND; FILL; wet; no odor or visible impact	sample A4WVSB0 (8-12)
					N/A	<u>-</u> 10		(8.6-12' bgs) - Red BRICK fragments; FILL; dry; no odor or visible impact	
12' - 16'	2.5'/4'	N/A	0.1	Moist	>				
12 - 10	62.5%	1.07	0.1	Wiolot	N/ASW	    -		(12-12.5' bgs) - Dense gray f-c grained angular SAND and f grained angular GRAVEL; FILL; moist; no odor or visible impact	
					SW	-		(12.5-12.9' bgs) - Red BRICK fragments; FILL; wet; no odor or visible impact	
					S	<u> </u>		(12.9-17.3' bgs) - Moderately dense brown f-c grained SAND, tr silt; FILL; wet; no odor or visible impact	
16' - 20'	3.4'/4' 85%	N/A	0.0	Wet		-			Analytical sample
						-			A4WVSB0 (16-20)
					SP			(17.3-18.6' bgs) - Moderately dense brown f grained SAND, tr silt; FILL; wet; no odor or visible impact	
								(18.6-20' bgs) - Dense brown f-c grained SAND, tr f grained rounded gravel and pyrite; FILL; no odor or visible impact 20' bgs: END OF BORING	





#### NOTE:

VISUAL IMPACT COLOR SCHEME IS UNIQUE TO THE BORING LOGS AND IS DIFFERENT FROM VISUAL IMPACT COLOR SCHEME SHOWN WITHIN THE FIGURES AND PLATES OF THE REPORT.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT TOWN FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO. OF NEW YORK, INC.



BORING LOG VISUAL IMPACT COLOR KEY

September 2007



CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: \_\_ Stuyvesant Town RI CITY/STATE:

Manhattan, New York **GEI PROJECT NUMBER:** 060660

PAGE 1 of 4

ST14SB01

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 5.55 LOCATION: Inside Ave C Garage #5 (Btwn Cols 431 & 433) NORTHING: 205125.53 EASTING: 990807.55 TOTAL DEPTH (FT): 39.80 DRILLED BY: Aquifer Drilling & Testing, Inc. / Scott Przybylski DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone LOGGED BY: April Krause DATE START / END: 3/28/2006 - 3/28/2006 DRILLING DETAILS: Direct Push / 54LT Propane Geoprobe WATER LEVEL DEPTHS (FT):

		SAM	PLE IN	NFO	4	<b>,</b> ω			
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
		5.0							0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE; soil-gas point installed (ST14SV01).
	S-1	3.0	26	2					5 - 8.5 SILTY SAND WITH GRAVEL (SM); ~70% sand; fine, ~15% fines, ~15% gravel, wet, brown and blackish gray, FILL, minor ash content, slight black staining.
10NOTES:	S-2	4.0	48						8.5 - 11 SILTY SAND (SM); ~70% sand; medium, ~30% fines, wet, dark brown and black, FILL.

ENVIRONMENTAL

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB01 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 4 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFO** VISUAL IMPACTS STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN **REC** PID FT. **DESCRIPTION** and ID FT. IN. (ppm) NO. 1.8 11 - 14.5 NARROWLY GRADED SAND WITH SILT (SP-SM); ~70% sand; fine, <15% fines, <15% fine gravel, dry, brown and dark brown, FILL, porcelain pieces. S-3 16 4.0 2.7 ST14SB01 14.5 - 16 SILTY CLAY (CL-ML); moist to wet, brown and gray, (12-16)sample collected from bottom 8 inches of recovery. 15 S-4 4.0 24 16 - 18 SILTY CLAY (CL-ML); moist to wet, brown and gray. STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07 18 - 20 CLAYEY ORGANIC SOIL (OL); moderate sulfur-like odor, 3 dry, PEAT, grades to silty fine sand, slight black staining. SLO 20 S-5 34.8 2.5 20 - 24 SILTY SAND (SM); ~75% sand; fine, ~15% silt, <5% 4.0 mica, <5% medium sand, wet, brown and gray.

### NOTES:

**BORING LOG** 

ENVIRONMENTAL

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GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE:

Manhattan, New York **GEI PROJECT NUMBER:** 060660

PAGE 3 of 4

ST14SB01

**BORING LOG** 

		SAM	PLE IN	NFO	_	. س					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL DE:	/ BEDI SCRIP	ROCK FION
- 25	S-6	4.0	34	4.1				ST14SB01 (24-28)	24 - 28 SILT WITH SAND (M	IL); wet	, gray.
	S-7	4.0	48	61.2			<b>1</b>	ST14SB01 (28-32)	28 - 31 SILTY CLAY (CL-ML) wet, gray.	); varve	d, strong petroleum-like odol
- 30 NOTES:							PLO		31 - 33.5 SILTY SAND (SM); gray.	moder	ate petroleum-like odor, wet,
	S-8	4.0	14				PLO				

### NOTES:

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HEADSPACE)

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CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

PAGE 4 of 4

ST14SB01

**BORING LOG** 

DEPTH FT. TYPE and NO. FT. REC IN. PID (ppm) PEN ANALYZED SAMPLE ID SOIL / BEDROCK DESCRIPTION
33.5 - 34.5 CLAYEY SILT (MH); varved, wet, brownish gray.
— 35 34.5 - 36 SILT WITH SAND (ML); moderate petroleum-like odor, wet, little mica, slight gray/black staining.
S-9 3.8 46 26.5 ST14SB01 (36-39.8) 36 - 39.8 SANDY SILT (ML); wet, brownish gray.

Refusal at 39.8 feet. Bottom of borehole at 39.8 feet.

#### NOTES:

HEADSPACE)

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CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR



CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI Manhattan, New York CITY/STATE:

060660

DATE START / END: 3/29/2006 - 3/29/2006

PAGE 1 of 1

ST14SB02

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 5.77 LOCATION: Inside Ave C Garage #5 (Btwn Cols 416 & 418) NORTHING: 205063.18 **EASTING:** 990921.6 TOTAL DEPTH (FT): 3.90 DRILLED BY: Aquifer Drilling & Testing, Inc. / Scott Przybylski DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

**GEI PROJECT NUMBER:** 

LOGGED BY: April Krause DRILLING DETAILS: Direct Push / 54LT Propane Geoprobe

WATER LEVEL DEPTHS (FT):

WATER	LEVEL	DEFII	по (г і	٠,٠		
	SAI	MPLE	INFO	A		
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
- <b>0</b>	S-1	3.9	28.8		ST14SB02 (0-0.2)	0 - 3.9 FILL, MANUAL AND VACTRON CLEARANCE TO 3.9 FT BELOW CONCRETE; soil-gas point installed, but compromised.

Refusal at 3.9 feet. Bottom of borehole at 3.9 feet.

#### NOTES:

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CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

STRI 14TH ST STATION, GPJ GEI CONSULTANTS, GDT 1/4/07

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: \_\_ Stuyvesant Town RI CITY/STATE:

PAGE Manhattan, New York 1 of 8 060660

ST14SB03

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 6.47 LOCATION: Ave C and E 15th St NORTHING: 204923.07 EASTING: 991045.72 TOTAL DEPTH (FT): 85.50

DRILLED BY: Aquifer Drilling & Testing, Inc. / Bernie Cruz DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

**GEI PROJECT NUMBER:** 

DATE START / END: 4/13/2006 - 4/14/2006 LOGGED BY: Ryan McGuire

DRILLING DETAILS: Hollow Stem Auger/Mud Rotary / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

	SAMPLE INFORMATION			ION					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
0 									0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE; soil-gas point installed (ST14SV03).
<b>5</b>	S-1	2.0	0	2-2-3-4					5 - 7 1.5" piece of coarse gravel stuck in tip of spoon caused NO RECOVERY.
_ _ _ _	S-2	2.0	5	2-3-3-3					7 - 9 WIDELY GRADED SAND WITH SILT AND GRAVEL (SW-SM); fine to medium, rounded, max. size 1 in., wet.
_ 10	S-3	2.0	14	1-0-1-0					9 - 10.1 NARROWLY GRADED SAND WITH SILT (SP-SM); ~75% sand; medium, <15% gravel, ~10% fines, wet, light brown.

### NOTES:

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HEADSPACE)

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 2 of 8 060660 **GEI PROJECT NUMBER:** Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN **REC Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. 10.1 - 11 WIDELY GRADED SAND WITH SILT (SW-SM); coarse, wet, black, with organics (wood) and fill material. S-4 2.0 6 1-0-1-1 11 - 13 NARROWLY GRADED SAND WITH SILT (SP-SM); <15% gravel, wet, dark brown. ST14SB03 13 - 15 WIDELY GRADED GRAVEL WITH SILT AND SAND S-5 2.0 18 4-4-6-7 0.7 (13-15)(GW-GM); wet, black. 15 15 - 17.75 WIDELY GRADED SAND WITH SILT AND S-6 2-2-2-3 2.0 6 0.6 GRAVEL (SW-SM); wet, light brown, oyster shells. **S-7** 1-1-1-2 1.3 20 18 17.75 - 19 SANDY LEAN CLAY (CL); dark gray, strips of fabric. S-8 2.0 10 5-5-6-7 1.2 19 - 21 WIDELY GRADED SAND (SW); coarse, red and gray. 20 WOR-S-9 2.0 12 0.6 21 - 22.3 CLAY (CL); dark gray and black. WOR-3-4

### NOTES:

GEI CONSULTANTS.GDT 1/4/07

STRI 14TH ST STATION.GPJ

BORING LOG

ENVIRONMENTAL

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MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 8 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA ODOR **ANALYZED** SOIL / BEDROCK DEPTH **TYPE** SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. and ID FT. IN. (/6 in.) (ppm) NO. 22.3 - 23 NARROWLY GRADED SAND (SP); ~85% sand; medium, <15% gravel. S-10 2.0 12 13-15-0.9 23 - 25 NARROWLY GRADED SAND (SP); ~85% sand; 17-17 medium, <15% gravel, red and gray, quartz. 25 S-11 2.0 20 5-6-4-5 0.9 25 - 25.4 NARROWLY GRADED SAND (SP); ~95% sand; fine, <5% fines, gray. 25.4 - 28.2 CLAYEY SAND (SC); ~85% sand; ~15% fines. S-12 12-12-8-2.0 20 0.6 28.2 - 28.3 CLAYEY SILT (ML); olive. 28.3 - 29.7 WIDELY GRADED SAND (SW); medium, multi-colored. S-13 2.0 18 5-6-5-5 0.7 29.7 - 30.7 CLAY (CL); lensed, olive and brown, lean clay to 30 sand layers, weathered stone, black with mica, schisty at 30.7. 30.7 - 31.3 SILTY SAND (SM); fine. S-14 2.0 20 8-9-10-5 1.2 31.3 - 32.3 SANDY LEAN CLAY (CL); layered, olive and brown. 32.3 - 33 NARROWLY GRADED SAND WITH CLAY (SP-SC); fine, light brown. S-15 2-3-2-5 2.0 18 33 - 33.4 CLAYEY SAND (SC).

### NOTES:

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MLO = MUSTY LIKE ODOR

GEI CONSULTANTS.GDT

STRI 14TH ST STATION GPJ

LOG

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 4 of 8 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN **REC Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. 33.4 - 38.5 NARROWLY GRADED SAND WITH CLAY (SP-SC); fine, brown. 35 S-16 2.0 18 10-9-7-7 7.6 ST14SB03 (35-37)S-17 2.0 16 WOR-WOR-5-5 38.5 - 45 NARROWLY GRADED SAND (SP); ~95% sand; ~5% clay. S-18 WOR-2.0 22 0.5 **WOR-4-4** 40 S-19 2.0 22 3-5-7-6 1.4 S-20 2.0 12 4-4-5-4 3.3

### NOTES:

STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

**BORING LOG** 

ENVIRONMENTAL

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 5 of 8 060660 **GEI PROJECT NUMBER:** Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN REC **Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. 45 45 - 47 NARROWLY GRADED SAND WITH CLAY (SP-SC); S-21 2.0 18 2-2-3-3 2.4 brown, 46.7-47 slight odor. S-22 5-7-9-8 13.0 47 - 49 NARROWLY GRADED SAND WITH CLAY (SP-SC); 2.0 20 layered, brownish gray. S-23 49 - 51 NARROWLY GRADED SAND (SP); fine, brown and 2.0 16 5-5-6-6 9.5 gray, slight odor. 50 S-24 2.0 20 12-11-8-4.4 51 - 54.8 NARROWLY GRADED SAND (SP); lensed, fine, 10 brown, with lenses of black and white medium sand. S-25 2.0 20 4-4-5-6 2.8 PLO 54.8 - 55 NARROWLY GRADED SAND (SP); medium, slight 55 ST14SB03 S-26 0.6 12 7-6-8-20 3.3 petroleum-like odor, gray and reddish orange. (55-57)55 - 56.3 NARROWLY GRADED SAND WITH CLAY (SP-SC); fine, gray, slight odors. 56.3 - 57 WIDELY GRADED SAND (SW); medium coarse,

### NOTES:

STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

**BORING LOG** 

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CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 6 of 8 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** SOIL / BEDROCK DEPTH **TYPE** SAMPLE PEN **REC Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. moderate odors. 57 - 67 WIDELY GRADED SAND (SW); coarse, <15% S-27 2.0 12 12-17-0.6 23-36 rounded stone, multi colored. S-28 2.0 19 30-30-0.4 30-33 60 S-29 2.0 10 15-12-0.2 17-20 S-30 18 15-18-0.2 2.0 20-21 65 S-31 2.0 12 11-13-21-16 S-32 2.0 20 0.3 67 - 70.5 WIDELY GRADED SAND (SW); ~85% sand; medium to coarse, <15% rock fragments, max. size 0.25 in., gray and black, trace quartz.

### NOTES:

STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

BORING LOG

ENVIRONMENTAL

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR

REC = RECOVERY LENGTH OF SAMPLE

HEADSPACE)

IN. = INCHES FT. = FEET PID = PHOTOIONIZATION DETECTOR READING (JAR

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 7 of 8 060660 **GEI PROJECT NUMBER:** Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** SOIL / BEDROCK DEPTH **TYPE** SAMPLE PEN **REC Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. S-33 2.0 15-14-1.1 24 18-20 70 70.5 - 73 WIDELY GRADED SAND (SW); fine to medium, with mica. ST14SB03 S-34 2.0 14 20-20-0.4 20-20 (71-73)S-35 2.0 12 28-26-0 73 - 75 NARROWLY GRADED SAND (SP); fine to medium, 30-19 moist, gray, mica. 75 31-23-S-36 0.2 75 - 80.4 NARROWLY GRADED SAND (SP); fine, moist, 2.0 16 27-21 gray. S-37 2.0 15 24-26-28-30 S-38 2.0 17.5 30-32-35-39

### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET

ppm = PARTS PER MILLION

NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

BORING LOG

STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI Manhattan, New York CITY/STATE:

060660

**GEI PROJECT NUMBER:** 

**PAGE** 8 of 8

SOIL / BEDROCK **DESCRIPTION** 

ST14SB03

**BORING LOG** 

		SAN	IPLE II	NFORMAT	ION				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	
- 80						( ) ( )			
									80.4 - ~65% suban
	S-39	2.0	16	12-19- 19-20					81 - 8 (SP-S max. s
									81.75 sand;
									82.25 ~65%
	S-40	2.0	24	14-17- 21-50/6	0				83 - 84 fine, <
								ST14SB03 (84-86)	
									84.5 - ~75%
– <b>85</b>	S-41	0.5	6	NA	0				84.7 - fine, ~
						•			85 - 8 fine, ~

81 SILTY SAND WITH GRAVEL (SM); low plasticity, sand; fine to medium, ~20% silty fines, ~15% ngular gravel, gray.

31.75 NARROWLY GRADED SAND WITH SILT SM); ~80% sand; ~10% silty fines, ~10% rounded gravel, size 1 in., moist, gray.

- 82.25 NARROWLY GRADED SAND (SP); ~95% fine, <5% fines, gray.

- 83 SILTY SAND WITH GRAVEL (SM); low plasticity, sand; fine, ~20% silty fines, ~15% gravel, gray.

34.5 NARROWLY GRADED SAND (SP); ~95% sand; <5% fines, moist, gray.

84.7 SILTY SAND WITH GRAVEL (SM); low plasticity, sand; ~15% gravel, ~10% silty fines, gray.

85 NARROWLY GRADED SAND (SP); ~85% sand; ~10% gravel, <5% fines, moist, gray, crushed peice of ock at bottom of sample.

85.5 NARROWLY GRADED SAND (SP); ~90% sand; ine, ~10% subangular gravel, max. size 1 in., crushed bedrock at bottom of sample.

Refusal at 85.5 feet.

Bottom of borehole at 85.5 feet.

NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

**GEI PROJECT NUMBER:** 

**PAGE** 1 of 6

ST14SB04

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** NORTHING:

6.99 204808.75 **EASTING:** 990943.98

LOCATION: Ave C and E 14th St ST14MWDD01 TOTAL DEPTH (FT): 57.00

060660

DRILLED BY: Aquifer Drilling & Testing, Inc. / Tony Palomegue DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

LOGGED BY: April Krause DATE START / END: 4/11/2006 - 4/12/2006 DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

		SAM	IPLE II	NFORMAT	ION	_	, σ	က္				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS	
— <b>0</b>		5.0								0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE; soil-gas point installed (ST14SV04).		
									ST14SB04 (2-4)			
- 5	S-1	2.0	3	2-2-2-1	0.5					5 - 7 WIDELY GRADED SAND (SW); fine to medium, moist to wet, brown and black, FILL, cinder and clinker.		
	S-2	2.0	8	4-3-3-3	0.7					7 - 8 WIDELY GRADED SAND (SW); ~85% sand; fine to medium, moist to wet, brown, FILL, ~15% brick and gravel.  8 - 9 SILTY SAND (SM); ~95% sand; fine, ~5% coarse gravel, moist to wet, black, FILL.		
- 10	S-3	2.0	0	WOR- WOR-1-1	0.0			PLO		9 - 11 WIDELY GRADED SAND (SW); ~80% sand; ~20% fine gravel, slight petroleum-like odor, moist, brown, FILL, plastic, hair, in shoe.		

### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET

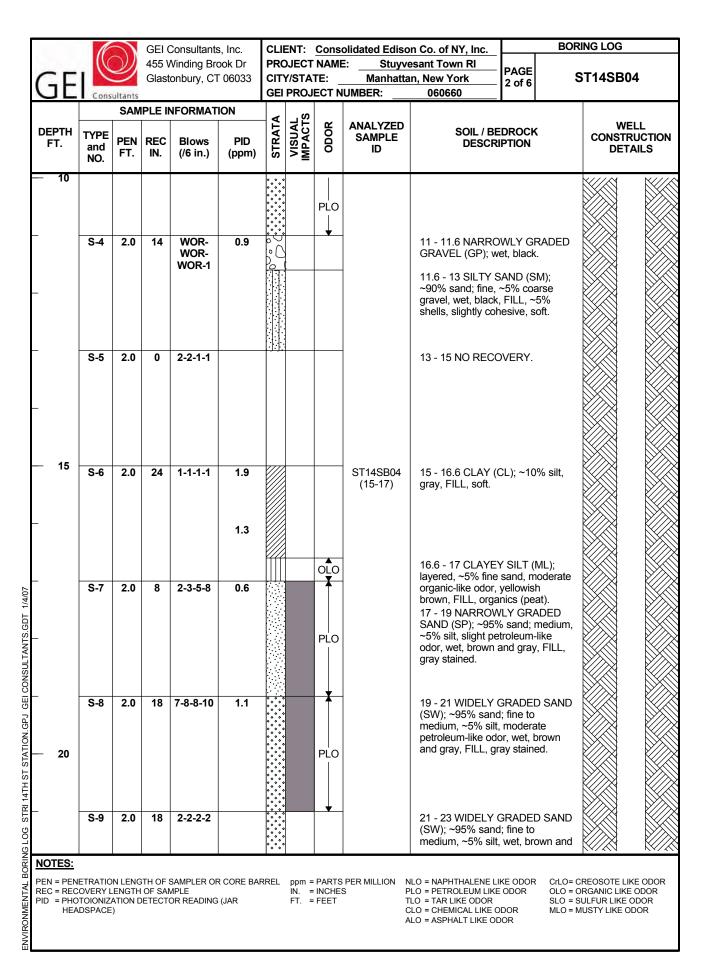
PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR



**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB04 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 6 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. DETAILS and ID FT. IN. (/6 in.) (ppm) NO. gray, FILL, very soft, loose. 23 - 25.4 WIDELY GRADED S-10 2.0 24 8-8-9-10 2.2 SAND (SW); ~95% sand; fine to medium, ~5% silt, wet, brown and gray, FILL, wood pieces. 25 S-11 2.0 18 5-5-6-5 1.7 25.4 - 26.3 CLAY (CL); ~10% silt, reddish brown, FILL, soft to medium 26.3 - 27 CLAYEY SILT (ML); varved, reddish brown and gray, slightly friable. S-12 7-10-13-27 - 28.33 CLAYEY SILT (ML); 2.0 24 varved, wet, reddish brown and 13 gray, very soft. 28.33 - 28.8 CLAYEY SILT (ML); varved, reddish brown and gray, moderately pliable (more clay than above). S-13 2.0 19 8-7-6-7 2.6 28.8 - 29 NARROWLY GRADED SAND (SP); coarse. 29 - 29.7 CLAYEY SILT (ML); varved, reddish brown and gray, 30 moderately pliable (more clay than 27' interval). 29.7 - 31 NARROWLY GRADED SAND (SP); ~95% sand; coarse, ~5% silt, wet. S-14 2.0 24 15-13-5.5 31 - 41 WIDELY GRADED SAND 17-15 (SW); ~95% sand; medium to coarse, ~5% silt, wet, very faint odor. S-15 2.0 2-3-2-5 1.3

### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

HEADSPACE)

PID = PHOTOIONIZATION DETECTOR READING (JAR

ppm = PARTS PER MILLION

IN. = INCHES FT. = FEET

NLO = NAPHTHALENE LIKE ODOR

PLO = PETROLEUM LIKE ODOR

TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

GEI CONSULTANTS.GDT

STRI 14TH ST STATION, GPJ

90

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB04 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 6 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN **REC Blows** PID FT. **DESCRIPTION** and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 35 S-16 2.0 24 15-10-8-8 S-17 2.0 24 12-11-5.4 10-9 S-18 7-5-8-11 2.0 24 1.6 40 S-19 7-7-8-13 1.3 41 - 43 WIDELY GRADED SAND 2.0 17 (SW); ~95% sand; medium to coarse, ~5% silt, wet, very faint odor, varved silty clay lenses along side of spoon (possibly sluff). S-20 2.0 15 9-11-10-3.0 43 - 45 NARROWLY GRADED SAND (SP); ~95% sand; coarse, 9 ~5% silt, wet, brown and gray. NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

MLO = MUSTY LIKE ODOR

HEADSPACE)

STRI 14TH ST STATION.GPJ GEI CONSULTANTS.GDT

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB04 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 5 of 6 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED** WELL DEPTH SOIL / BEDROCK **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 45 45 - 46.3 NARROWLY GRADED S-21 2.0 18 7-5-7-11 6.4 SAND (SP); ~95% sand; coarse, ~5% silt, wet, brown. 46.3 - 47 NARROWLY GRADED SAND (SP); ~95% sand; coarse, NLO ~5% silt, slight naphthalene-like odor, wet, black. S-22 2.0 16 7-9-12-2.7 47 - 49 NARROWLY GRADED 12 SAND (SP); ~95% sand; coarse, ~5% silt, moderate naphthalene-like odor, wet, black, NLO very slight sheen in water in spoon. S-23 49 - 50.6 NARROWLY GRADED 2.0 18 5-6-7-6 3.5 SAND (SP); ~95% sand; coarse, ~5% silt, slight naphthalene-like odor, wet, black to dark gray. NLO 50 6.8 50.6 - 51 SILTY CLAY (CL); gray. S-24 2.0 24 14-15-3.5 51 - 53 NARROWLY GRADED 17-19 SAND (SP); ~80% sand; medium, ~15% mica, ~5% silt, dark gray and white, compact. S-25 2.0 14 7-6-7-ST14SB04 53 - 54.5 WIDELY GRADED 50/1 (53-55)SAND (SW); fine to medium, slight naphthalene-like odor, gray, NLO odor is in tip of spoon. 54.5 - 55 Black and white, SCHIST fragments, angular 55 cobbles, striated. 55 - 57 Drive and wash to 57' to confirm bedrock. NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR

ALO = ASPHALT LIKE ODOR

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STRI 14TH ST STATION.GPJ

LOG

	GEI Consultants, Inc. 455 Winding Brook Dr				CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI						BORING LOG		
GE	Glastonbury, CT 06033											ST14SB04	
DEPTH FT.	TYPE and NO. PEN REC IN. Blows (/6 in.) PID (ppm)				STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BE DESCRI		(	WELL CONSTRUCTION DETAILS	
						W							

Bottom of borehole at 57.0 feet.

#### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR
HEADSPACE)

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HEADSPACE)

PD = PARTS PER MILLION
IN. = INCHES
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 CLIENT: Consolidated Edison Co. of NY, Inc.
PROJECT NAME: Stuyvesant Town RI

CITY/STATE: Manhattan, New York
GEI PROJECT NUMBER: 060660

PAGE 1 of 5

ST14SB05/MWDD02

**BORING LOG** 

GROUND SURFACE ELEVATION (FT):

8.37

LOCATION: E 14th St (Btwn 625 & 635 E 14th St)

NORTHING: 204884.44

EASTING: 990762.08

TOTAL DEPTH (FT): 49.50

DRILLED BY: Aquifer Drilling & Testing, Inc. / Tony Palomegue

LOGGED BY: Serkan Talip

DATE START / END: 4/17/2006 - 4/17/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55
WATER LEVEL DEPTHS (FT):

SAMPLE INFORMATION

TYPE and NO. FT. IN. (/6 in.) PID (ppm) FT. (/6 in.) PID (ppm) FT. IN. (/6 in.) PID (ppm) FT. IN. (/6 in.) PID (ppm) FT. (/6 in.) P

	FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRA	VISU/ IMPAC	ОДО	SAMPLE ID	SOIL / BEDROCK DESCRIPTION	CONSTRUCTION DETAILS
	— <b>0</b>		5.0								0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW BRICK SURFACE; soil-gas point installed (ST14SV05).	
	-											
JSULTANTS.GDT 1/4/07	<b> 5</b>	S-1	2.0	6	1-2-4-4	2.8					5 - 7.7 SILTY SAND WITH GRAVEL (SM); ~60% sand; ~25% gravel, ~15% silty fines, brick fragments, dry, light brown to brown, FILL.	
IG LOG STRI 14TH ST STATION GPJ GEI CONSULTANTS GDT 1/4/07	-	<b>\$-2</b>	2.0	14	2-5-5-7	6.2			PLO		7.7 - 8 Dry, FILL, CRUSHED ROCK. 8 - 9 WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand; fine to medium, <15% silty fines, slight petroleum-like odor,	
G LOG STRI 141	_ 10	S-3	2.0	8	1-1-1-2	4.2	***		•		dry, blackish brown, FILL, black staining. 9 - 11 WIDELY GRADED SAND WITH SILT (SW-SM); ~85% sand; ~10% silty fines, ~5%	

#### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR

HEADSPACE)

ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR

IN. = INCHES FT. = FEET PLO = PETROLEUM LIKE ODOR

TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

CrLO= CREOSOTE LIKE ODOR

ENVIRONMENTAL

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB05/MWDD02 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN **REC Blows** PID FT. **DESCRIPTION** DETAILS and ID FT. IN. (/6 in.) (ppm) NO. gravel, moist to wet, brown, FILL, brick and crushed rock. S-4 2.0 4 2-3-3-3 11 - 13 WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand; ~10% silty fines, moist, brown, FILL. S-5 2.0 7 10-10-7-NA 13 - 17 Rock fragments, FILL, CRUSHED ROCK. 15 S-6 12-10-8-NA 2.0 **S-7** 2-3-5-8 17 - 19 SILTY SAND (SM); ~85% 2.0 7 2.3 sand; ~15% silt, slight naphthalene-like odor, brown, FIĽL. NLO S-8 2.0 12 29-22-16.6 ST14SB05 19 - 19.8 WIDELY GRADED SAND (SW); medium to coarse, 12-15 (19-21)NLO moderate naphthalene-like odor, moist, gray, FILL. 19.8 - 20.5 SILTY SAND WITH 20 GRAVEL (SM); ~55% sand; ~25% gravel, ~20% silt, strong naphthalene-like odor, moist, NLO blackish brown, FILL, wood chips, black staining, FILL-like material. S-9 10-11-2.0 9 20.5 - 21 WIDELY GRADED 13-14 NLO SAND WITH GRAVEL (SW); moist, brown, FILL, fragments of NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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ALO = ASPHALT LIKE ODOR

GEI CONSULTANTS.GDT

STRI 14TH ST STATION GPJ

90

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB05/MWDD02 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL ODOR **ANALYZED** WELL SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID DESCRIPTION FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. sandstone. NLO 21 - 22 SILTY SAND WITH 50.5 GRAVEL (SM); ~70% sand; ~15% gravel with rock fragments, NLO ~15% fines, moderate naphthalene-like odor, gray, FILL. 22 - 23 WIDELY GRADED SAND ST14SB05 S-10 2.0 12 9-9-11-9 28.6 (SW); ~95% sand; medium to (23-25)NLO coarse, ~5% fines, moderate naphthalene-like odor, brown, fragments of sandstone. 23 - 23.7 SILTY SAND (SM); ~75% sand; ~25% fines, NLO moderate naphthalene-like odor, gray, black staining. 23.7 - 25 SILTY SAND WITH 25 S-11 2.0 24 7-5-8-10 113 ST14SB05 GRAVEL (SM); ~65% sand; well rounded, ~20% gravel, ~15% fines, moderate naphthalene-like (25-27)odor, light brown. NLO 25 - 26.6 SILTY SAND (SM); ~75% sand; ~25% fines, moderate naphthalene-like odor, wet, black, petroleum mixed odor, NLO blebs, sheen visible. 26.6 - 27 SILT (ML); low plastic, S-12 9-9-8-7 2.0 14 25.9 ~90% fines; ~10% sand, slight naphthalene-like odor, moist, red and gray, alternating colored layers. NLO 27 - 29 SANDY LEAN CLAY (CL); medium plasticity, ~70% fines; ~30% sand, slight naphthalene-like odor, moist, red and gray, alternating colored layers, pockets of fine sand, veins S-13 2.0 16 4-6-4-7 7.4 of tar. 29 - 30.5 SANDY LEAN CLAY (CL); medium plasticity, ~70% NLO fines; ~30% sand, moderate 30 naphthalene-like odor, moist, red and gray, alternating colored layers. NLO 30.5 - 31 SILTY SAND (SM); ~75% sand; ~25% silty fines, S-14 2.0 8 11-9-10-86 moderate naphthalene-like odor, 10 dry, brown, pieces of rock. 31 - 32.5 WIDELY GRADED NLO SAND WITH GRAVEL (SW); ~85% sand; medium to coarse, ~10% rock fragments, ~5% fines, slight naphthalene-like odor, dry. 32.5 - 33 SANDY LEAN CLAY NLO (CL); medium plasticity, ~30% NLO sand, slight naphthalene-like odor, S-15 2.0 10-9-11dry, red. NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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MLO = MUSTY LIKE ODOR

GEI CONSULTANTS.GDT

14TH ST STATION, GPJ

STRI

9

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB05/MWDD02 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED** WELL DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN **REC** Blows PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 15 33 - 35 WIDELY GRADED SAND (SW); ~85% sand; medium to coarse, ~10% rock fragments, ~5% fines, moderate NLO naphthalene-like odor, dry, brown. 35 S-16 2.0 0 12-11-35 - 37 Slight naphthalene-like 11-13 odor, NO RECOVERY, rock in spoon tip. NLO S-17 2.0 4 24-19-5.1 37 - 39.5 SANDY LEAN CLAY 16-15 (CL); medium plasticity, ~30% sand, red. S-18 2.0 14 20-21-7.5 19-23 39.5 - 42.5 NARROWLY GRADED SAND WITH GRAVEL 40 (SP); ~75% sand; fine, ~20% gravel, ~5% fines, slight naphthalene-like odor, moist, light brown and gray, cohesive, mica. NLO S-19 18-20-2.0 12 22-19 42.5 - 43 SANDY LEAN CLAY WITH GRAVEL (CL); low plasticity, ~70% fines; ~15% gravel, ~15% sand, moist, red, S-20 2.0 16 24-25-18-22 greenish-black rock at tip of spoon. 43 - 44.8 NARROWLY GRADED NLO SAND (SP); ~95% sand; fine, ~5% fines, slight naphthalene-like odor, moist, light brown to black, crushed bedrock at bottom of spoon. NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION IN. = INCHES FT. = FEET

NLO = NAPHTHALENE LIKE ODOR

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

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STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

PAGE 5 of 5

ST14SB05/MWDD02

**BORING LOG** 

GE	Cons	ultants	Oldot	oribury, Or	00000		PROJ	_	UMBER:	060660	5 of 5	,500/MITTB502
DEPTH		SAM	PLE II	NFORMAT	ION	ΨĮ	AL STS	Ä	ANALYZED	SOIL / BEI	DROCK	WELL
FT.	and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	SAMPLE ID	DESCRI	CONSTRUCTION DETAILS	
- <b>45</b>	S-21	2.0	12	NA NA	NA NA				ST14SB05 (48-49)	44.8 - 45 SANDY I WITH GRAVEL (C plasticity, ~70% fir gravel, ~15% sand 45 - 47 CLAYEY S GRAVEL (SC); ~5 ~25% gravel, ~256 undetermined odor 47 - 49 CLAYEY S GRAVEL (SC); ~5 ~25% gravel, ~25% crushed bedrock a spoon.	CL); low nes; ~15% I, moist, gray. SAND WITH 0% sand; fine, % fines, faint rs. SAND WITH 0% sand; fine, % fines,	

Refusal at 49.5 feet. Bottom of borehole at 49.5 feet.

### NOTES:

ENVIRONMENTAL

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI Manhattan, New York CITY/STATE:

**PAGE** 1 of 6

ST14SB06

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 5.48 NORTHING: 204845.63 **EASTING:** 991127.3

TOTAL DEPTH (FT): 58.00

060660

LOCATION: Ave C and E 15th St ST14MWDD03

DRILLED BY: Aquifer Drilling & Testing, Inc. / Bernie Cruz DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

**GEI PROJECT NUMBER:** 

LOGGED BY: DATE START / END: 5/4/2006 - 5/11/2006 **April Krause** 

DRILLING DETAILS: Hollow Stem Auger/Mud Rotary

WATER LEVEL DEPTHS (FT):

		SAM	IPLE IN	NFORMAT	ION	_					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
- 0		5.0								0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE.	
<b>- 5</b>	S-1	2.0	9	2-2-2-5	5.4					5 - 5.9 SILTY SAND WITH GRAVEL (SM); ~30% gravel, brown, FILL.  5.9 - 8.6 SILTY SAND (SM); fine, strong petroleum-like odor, wet, FILL, black stained and oil-like coating.	
	S-2	2.0	12	4-3-50/5		<u></u>		PLO 		8.6 - 9 FILL, PORCELAIN AND	
- - 10	S-3	2.0	12	14-10- 17-39	4.6					WOOD.  9 - 10 SILTY GRAVEL (GM); low plasticity, <5% clay, wet, light gray, FILL, oil-like product sheen.	

### NOTES:

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HEADSPACE)

IN. = INCHES FT. = FEET

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CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB06 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 6 **GEI PROJECT NUMBER:** 060660 SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. DETAILS and ID FT. IN. (/6 in.) (ppm) NO. 10 - 11 Strong petroleum-like odor, wet, black, FILL, organics, PLO wood brick, rock fragments, gravel, petroleum coating and sheen. S-4 2.0 12 12-6-4-11 - 13 WIDELY GRADED SAND 50/5 (SW); wet, brown and gray, FILL, brick and rock fragments bottom 3", slight stain and sheen, faint 13 - 13.4 SANDY ORGANIC S-5 2.0 5 49-50/1 SOIL (OL); wet, gray, FILL. 13.4 - 15 Moderate petroleum-like odor, spoon refusal, likely on solid wood. **PLO** 15 S-6 17 5-25-27-15 - 16.33 WIDELY GRADED 2.0 SAND (SW); mottled, gravel, brick 12 fragments, organics, wet, brown and yellow, FILL, wood. 16.33 - 17 Strong creosote-like odor, wet, FILL, SOILD WOOD. CrLO **S-7** 20-20-7.4 17 - 18 WIDELY GRADED SAND 20 10 48-13 (SW); ~95% sand; medium to coarse, ~5% silt, wet, brown, FILL. 18 - 19 ORGANIC SOIL (OL); wet, FILL, wood. S-8 2.0 4 4-3-1-5 2.5 19 - 20 Wet, FILL, BRICK, GRAVEL, WOOD. 20 20 - 21 SILTY SAND (SM); medium plasticity, fine, ~5% clay, wet, brown and gray, FILL, minor gray/black stained. S-9 17-12-21 - 21.66 SAND (SW); wet, 2.0 18 16-17 FILL, wood, slight sheen in spoon (possible wash). NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL CrLO= CREOSOTE LIKE ODOR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR

ALO = ASPHALT LIKE ODOR

GEI CONSULTANTS.GDT

STRI 14TH ST STATION GPJ

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB06 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 6 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 21.66 - 22 WIDELY GRADED TLO SAND (SW); strong tar-like odor, wet, brown, sheen, tar blebs and staining. 22 - 23 WIDELY GRADED SAND (SW); wet, brown. S-10 2.0 24 12-16-23 - 24.75 WIDELY GRADED 14-12 SAND (SW); strong tar-like odor, wet, brown, tar coating and sheen. TLO ST14SB06-2 (24-25)24.75 - 25.66 NARROWLY 25 GRADED SAND (SP); coarse, S-11 2.0 17 8-12-18-TLO strong tar-like odor, wet, tar 20 saturated. 25.66 - 27 NARROWLY GRADED SAND (SP); fine, <5% gravel, reddish brown, micaceous. S-12 19 17-19-27 - 28.6 CLAY WITH SAND 2.0 33-33 (CL); varved, fine sand, gray and reddish brown, alternating layers, dense (minor tar staining possibly from spoon passing thru tar material above). 28.6 - 29 NARROWLY GRADED SAND (SP); medium, reddish S-13 2.0 8.5 4-5-5-2 brown and purple, micaceous. 29 - 31.6 NARROWLY GRADED SAND WITH GRAVEL (SP); ~75% sand; coarse, ~25% medium gravel, wet, brown. 30 S-14 2.0 14.5 12-15-ST14SB06-2 20-25 (31-33)31.6 - 33 SILT WITH SAND (ML); varved, fine sand, gray and reddish brown, micaceous. S-15 11-11-33 - 35 NARROWLY GRADED 2.0 13 0.5 NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

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GEI CONSULTANTS.GDT

STRI 14TH ST STATION, GPJ

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST14SB06 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 4 of 6 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN **REC Blows** PID FT. **DESCRIPTION** and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 10-14 SAND (SP); varved, fine, wet, red to brown, micaceous. 35 S-16 2.0 18 9-14-32-0.5 ST14SB06-2 35 - 37 NARROWLY GRADED 36 (35-37)SAND (SP); varved, fine, moist to wet, red to brown, micaceous, 0.5-1" thick lenes of gray sandy silt with ~15% clay. S-17 2.0 18 11-13-0.4 37 - 43 NARROWLY GRADED 19-20 SAND (SP); varved, fine, moist, red to brown, micaceous, 0.5-1" thick lenes of gray sandy silt with ~15% clay (more silt than above). S-18 2.0 19 10-14-0.5 14-15 40 S-19 18 5-12-15-2.0 0.7 20 S-20 2.0 12 6-14-16-0.9 43 - 47 NARROWLY GRADED SAND (SP); varved, fine, moist, 16 red to brown, micaceous, thinner lenes of gray sandy silt with ~15% clay (less silt than above).

## NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

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ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR

IN. = INCHES FT. = FEET

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STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI PAGE ST14SB06 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 5 of 6 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL IMPACTS ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION **REC** PEN **Blows** PID FT. **DESCRIPTION** and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 45 S-21 2.0 10 13-10-0.4 12-30 47 - 49 NARROWLY GRADED S-22 20-22-2.0 3 0.8 38-38 SAND (SP); fine, <15% silt, wet, reddish brown and olive gray, micaceous. S-23 16-25-0.9 49 - 53 NARROWLY GRADED 2.0 17 30-29 SAND (SP); layered, fine, <10% silt, wet, reddish brown and olive gray. 50 S-24 2.0 19 25-40-0.7 25-26 0.5 S-25 2.0 16 7-11-15-ST14SB06-2 53 - 56 SILTY SAND (SM); (53-55)varved, fine, wet, brown and olive gray, rock fragments 55-56. 55 S-26 12 9-50/1 1.0 56 - 57.33 SAND WITH GRAVEL S-27 2.0 15 ST14SB06-2 35-5-8-PLO 10 (56-57)(SW); slight petroleum-like odor. NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

STRI 14TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

**BORING LOG** 

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GE	Cons	waltants	455 V	Consultants Winding Bro conbury, C1	ook Dr	PRO CIT	OJECT Y/STA	NAME	E: Stuyve	n Co. of NY, Inc. esant Town RI In, New York 060660	PAGE 6 of 6 ST14SB06			
DEPTH FT.	TYPE and NO.		REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL IMPACTS	ODOR	ANALYZED SAMPLE ID	SOIL / BE DESCRI		CONCIDITON		
_								PLO +	ST14SB06-2 (57-58)	57.33 - 58 SILTY varved, fine, ~15% brown and gray.				

Bottom of borehole at 58.0 feet.

#### NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
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HEADSPACE)

PPN = PARTS PER MILLION
IN. = INCHES
IN. = INCHES
FT. = FEET
TLO = TAR LIKE ODOR
CLO = CHEMICAL LIKE ODOR
ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

**GEI PROJECT NUMBER:** 

PAGE 1 of 5 ST14SB08

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 5.73 NORTHING: 204701.51 **EASTING:** 991046.09 DRILLED BY: Aquifer Drilling & Testing, Inc. / Jerry Heller LOCATION: Ave C and E 14th St ST14MWD05/DD05 TOTAL DEPTH (FT): 51.00

060660

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

DATE START / END: 5/2/2006 - 5/3/2006

Serkan Talip DRILLING DETAILS: Hollow Stem Auger

WATER LEVEL DEPTHS (FT):

LOGGED BY:

WATER	LEVEL	DEPT	HS (FT	):							
		and   PEN   REC   Blows   Pl				4	ုတ္ပ				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
<b>0</b>		5.0								0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE.	
<del></del>	S-1	2.0	7	WOH-2- 1-20				PLO		5 - 6 WIDELY GRADED SAND WITH GRAVEL (SW); ~80% sand; medium to coarse, ~15% subrounded gravel, ~5% fines, brick fragments, dry, brown, FILL. 6 - 7 SILTY SAND (SM); non plastic, ~85% sand; fine, ~15% fines, slight petroleum-like odor, dry, brown to olive, FILL, black staining, piece of wood at end of	
_	S-2	2.0	8	15-5-3-3				NLO		spoon.  7 - 9 WIDELY GRADED SAND WITH GRAVEL (SW); ~70% sand; medium to coarse, ~25% gravel, ~5% fines, brick fragments, slight naphthalene-like odor, wet, light brown to brown, FILL, piece of wood at end of spoon.	
_ 10	S-3	2.0	13	12-5-30- 50/2				CLO		9 - 11 Moderate chemical-like odor, moist, purpleish brown, FILL, pieces of wood (possible purifier material?) through out spoon, possible creosote-like	

# NOTES:

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IN. = INCHES FT. = FEET PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

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ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

BORING LOG STRI 14TH ST STATION.GPJ GEI CONSULTANTS.GDT 1/4/07

	R	$\supset$		Consultants		CLII	ENT:	Cons		n Co. of NY, Inc.	ВС	RING LOG	
CF	T (	رك		Vinding Broonbury, CT			OJECT Y/STA	NAME TE:		esant Town RI nn, New York	PAGE 2 of 5	ST14SB0	8
UE	Cons	ultants		•		GEI	PROJ	ECT N	UMBER:	060660	2015		
DEPTH FT.	TYPE and NO.	PEN FT.		Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BE DESCRI		CONST	ELL RUCTION AILS
— 10 —	S-4	2.0	0	7-4-1-2	9.5			CLO		odor.	)VFRY		
_		2.0	ŭ	7-1-2	3.3					(WASH).			
_	S-5	2.0	10	1-2-2-2	10.6					13 - 14.2 SILT WI low plastic, ~5% g sand, max. size 0 gray, FILL.	ravel, ~25% ´.125 in., moist, :AND (SM); non		
— 15	S-6	2.0	12	1-2-3-3						plastic, ~80% san silty fines, wet, bro 15 - 17.75 NARRO	own, FILL.		
_		2.0	12	1200						GRADED SAND ( sand; fine, ~5% fi and gray, FILL.	(SP); ~95%		
_	S-7	2.0	21	5-7-7-7	28.6					17.75 - 18.5 NAR GRADED SAND ( sand; medium, ~5 brown to gray, FIL 18.5 - 19 NARRO SAND (SP); fine,	(SP); ~95% % fines, wet, .L. WLY GRADED		
	S-8	2.0	0	7-5-5-5						19 - 21 NO RECC (WASH).		late la	
	S-9	2.0	6	6-7-8-12	8.6					21 - 23 SILT WITI low plasticity, ~40 moist to wet, redd	% fine sand,		

ENVIRONMENTAL BORING LOG STRI 14TH ST STATION. GPJ GEI CONSULTANTS.GDT 1/4/07

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI PAGE ST14SB08 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL IMPACTS ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** SAMPLE CONSTRUCTION PEN **REC Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. pieces of wood. S-10 2.0 0 8-12-14-23 - 25 NO RECOVERY (WASH 10 with a piece of 3/4" subrounded shale). 25 25 - 27 SANDY SILT (ML); low S-11 2.0 10 10-10-18.3 plasticity, ~30% fine sand, dry, 15-15 reddish brown to gray. S-12 12 15-8-12-ST14SB08 27 - 29 SANDY SILT (ML); low 2.0 plasticity, ~30% fine sand, wet to (27-29)20 moist, reddish brown to gray. S-13 29 - 31 SANDY SILT (ML); ~30% 2.0 16 6-15-31fine sand, moist, reddish brown to gray. 30 S-14 2.0 10 14-14-31 - 32.8 SANDY SILT (ML); 20-36 ~30% sand, moist, reddish brown to gray. 32.8 - 33 WIDELY GRADED S-15 11-14-2.0 22 1.8 SAND (SW); ~95% sand;

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**BORING LOG** 

STRI 14TH ST STATION.GPJ GEI CONSULTANTS.GDT

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST14SB08 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED** WELL SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN REC Blows PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 18-22 medium to coarse, ~5% fines, moist, olive gray. 33 - 34.5 NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand; medium, ~10% silty fines, moist to wet, gray. 34.5 - 34.7 WIDELY GRADED SAND (SW); ~85% sand; 35 S-16 2.0 16 10-13-ST14SB08 medium to coarse, ~10% gravel, 19-22 (35-37)~5% silty fines, gray. 34.7 - 35 NARROWLY GRADED SAND WITH SILT (SP-SM); ~85% sand; medium, ~10% silty fines, ~5% gravel, dry, gray. 35 - 35.7 NARROWLY GRADED SAND (SP); ~95% sand; medium, ~5% silty fines, gray. 35.7 - 37 WIDELY GRADED S-17 2.0 24 15-17-SAND (SW); ~95% sand; 25-30 medium to coarse, ~5% fines, 37 - 39 NARROWLY GRADED SAND (SP); ~85% sand; medium, ~10% gravel, ~5% fines, olive gray. S-18 12-36-2.0 10 2.7 39 - 40.4 WIDELY GRADED 30-15 SAND (SW); ~80% sand; fine to medium, ~10% subrounded gravel, ~10% silty fines, moist, brown. 40 40.4 - 41 Pieces of rock, some crushed. S-19 9-14-18-41 - 48 WIDELY GRADED SAND 2.0 12 1.1 20 (SW); medium to coarse, slight naphthalene-like odor, moist to wet, olive. NLO S-20 2.0 22 8-8-14-5.8 ST14SB08 (43-45)15 NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

MLO = MUSTY LIKE ODOR

HEADSPACE)

GEI CONSULTANTS.GDT

STRI 14TH ST STATION GPJ

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI PAGE ST14SB08 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 5 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** SAMPLE CONSTRUCTION PEN REC Blows PID FT. **DESCRIPTION** and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 45 S-21 2.0 24 22-17-0.6 26-39 NLO S-22 2.0 21 11-13-0.8 29-33 48 - 48.4 WIDELY GRADED SAND (SW); fine to medium, brown. 48.4 - 48.9 SILT (ML); ~10% fine sand, reddish brown and olive. S-23 8-15-25-0.3 2.0 24 48.9 - 49 SILTY SAND (SM); 33 ~15% silty fines, olive. 49 - 49.5 WIDELY GRADED SAND (SW); medium to coarse, 50 olive. ST14SB08 49.5 - 50 SILT WITH SAND (ML); (50-51)layered, ~20% medium sand, reddish brown, and medium to coarse olive SAND. 50 - 50.8 SILTY SAND (SM); ~20% silt, olive and reddish brown. 50.8 - 51 NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand; medium, ~10% silty fines. Bottom of borehole at 51.0 feet.

## NOTES:

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ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR

in. = Inches PLO = Petroleum like odor Ft. = Feet TLO = TAR LIKE odor

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

STRI 14TH ST STATION, GPJ GEI CONSULTANTS, GDT 1/4/07



CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

PAGE 1 of 4 060660

ST17SB01

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 11.75 NORTHING: 205856.73 **EASTING:** 991042.53 LOCATION: Ave C Loop (Btwn 626 & 628 E 20th St)

TOTAL DEPTH (FT): 35.00

DRILLED BY: Aquifer Drilling and Testing / Tony Palomegue DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

**GEI PROJECT NUMBER:** 

LOGGED BY: Lynn Willey and Ryan McGuire DATE START / END: 3/20/2006 - 3/22/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

		SAM	IPLE II	NFORMAT	ION		. 0			
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
-		5.0							ST17SB01 (0-0.2)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW GROUND SURFACE; soil-gas point installed (ST17SV01).
<b>- 5</b>	S-1	2.0	12	4-12-13- 8	0					5 - 5.9 SAND WITH GRAVEL (SP); ~50% sand; fine, ~25% gravel, dry, brown, FILL, ~25% fill (pieces of glass).  5.9 - 7.3 NARROWLY GRADED SAND (SP); ~70% sand; medium, ~30% brick fragments, dry, FILL, refusal at 7.3', continue in new location on 3/22/06 wit Lynn Willey logging.
-	S-2	2.0	4	8-50/1	0 2.1					7.3 - 9 SILTY SAND (SM); homogeneous, ~70% sand fine to medium, ~15% silt, max. size 1.5 in., damp, black and tan, FILL, ~15% fill (brick, coal, slag, ash).
- - 10	S-3	2.0	12	5-4-7-4	0.9					9 - 11 SILTY SAND (SM); homogeneous, ~80% sand fine to coarse, ~20% silt, dry, brown and tan, FILL, pieces of brick and coarse gravel.

# NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR

HEADSPACE)

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB01 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 2 of 4 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL IMPACTS ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN **REC** Blows PID FT. **DESCRIPTION** and ID IN. (/6 in.) (ppm) NO. S-4 2.0 5 7-3-2-2 11 - 15 SILTY SAND (SM); homogeneous, ~85% sand; fine, ~15% silt, moist, brown, FILL, brick and coarse sand in shoe. S-5 2.0 1 3-4-3-3 15 S-6 2-2-5-2 0.5 15 - 17 SILT (ML); homogeneous, ~10% coarse gravel, 2.0 coarse sand, max. size 0.75 in., wet, brown, FILL. 17 - 19 SILTY SAND (SM); homogeneous, ~80% sand; fine to coarse, ~15% silt, ~5% gravel, wet, black, FILL. **S-7** 3-2-2-2 0.5 2.0 4 S-8 2.0 24 WOR-6-19 - 19.9 SILTY SAND (SM); homogeneous, ~85% sand; fine to coarse, ~15% silt, wet, black, FILL. 2-2 20 19.9 - 20.9 CLAY (CL); ~5% fine sand, ~5% roots, gray, FILL. 20.9 - 21 WIDELY GRADED SAND (SW); WOR-S-9 22 2.0 0.6 homogeneous, ~95% sand; fine to medium, ~5% silt, WOR-2-2 wet, gray and black, FILL, glass. NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL ppm = PARTS PER MILLION NLO = NAPHTHALENE LIKE ODOR CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR

ALO = ASPHALT LIKE ODOR

STRI 17TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

**BORING LOG** 

GF		wiltants	455 \	Consultants Winding Bro tonbury, CT	ook Dr	PRO CIT	OJECT Y/STA	NAME	E: Stuyv	Stuyvesant Town RI phattan, New York 060660  PAGE 3 of 4  ST17SB01		BORING LOG ST17SB01
DEPTH FT.	TYPE and NO.		REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID			BEDROCK CRIPTION
-	S-10	2.0	24	2-2-3-4	1.1			PLO V	ST17SB01 (23.5-25)	moist, FILL.  23 - 23.5 NARRO sand; ~5% silt, <5 wet, black to gray and tin metal.	WLY G % roots , FILL, ~	um plasticity, ~5% fine sand,  RADED SAND (SP); ~85% s, slight petroleum-like odor, -5-10% porcelain fragments ); high plasticity, wet, black,
— <b>25</b>	S-11	2.0	18	WOR- WOR- WOR- WOR	8.2			PLO				lensed, high plasticity, <5% n-like odor, wet, black.
-	S-12	2.0	22	WOR- WOR-2-3	8.2			PLO		petroleum-like odd	or, mois	
14/07 — 30 — 30 — 30 — 30 — 30 — 30 — 30 —	S-13	2.0	22	WOR- WOR-3-4	0			PLO PLO		naphthalene-like of 28.8 - 29 FAT CL tar-like odor, mois around grass and 29 - 30.1 FAT CL petroleum-like odo 30.1 - 31 NARRO	odor, mo AY (CH ot, black, fine sar AY (CH or, mois	); high plasticity, moderate trace black coal tar stained nd. ); high plasticity, moderate
STRI 177TH ST STATION. GPJ GELCONSULTANTS	S-14	2.0	13	6-6-9-7	1.8			•	ST17SB01 (31-33)			ADED SAND (SP); nd; fine, ~5% silt, ~5% mica,
	S-15	2.0	8	2-2-3-3	0					33 - 35 NARROW	/LY GR	ADED SAND (SP); ~95%
REC = REC	COVERY L	ENGTH	OF SA			RREL	IN. =	: PARTS : INCHE: : FEET	S F 1 (	NLO = NAPHTHALENE LI PLO = PETROLEUM LIKE ICO = TAR LIKE ODOR CLO = CHEMICAL LIKE C ALO = ASPHALT LIKE OI	ODOR	R CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB01 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 4 GEI PROJECT NUMBER: 060660 Consultants **SAMPLE INFORMATION** VISUAL IMPACTS STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN REC Blows PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. sand; fine, <5% silt, wet, brown. 35

NOTES:

HEADSPACE)

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
RIN. = INCHES
PID = PHOTOIONIZATION DETECTOR READING (JAR)
PT. = FEET

NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR

Bottom of borehole at 35.0 feet.

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: CITY/STATE:

Stuyvesant Town RI Manhattan, New York 060660 **GEI PROJECT NUMBER:** 

PAGE 1 of 3

ST17SB02

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 9.47 NORTHING: 205788.29 **EASTING:** 991166.65

LOCATION: Ave C Loop (Btwn 628 E 20th & 315 Ave C) TOTAL DEPTH (FT): 31.00

DRILLED BY: Aquifer Drilling and Testing / Tony Palomegue LOGGED BY: April Krause and Lynn Willey

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone DATE START / END: 3/20/2006 - 3/24/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

		SAM	IPLE IN	NFORMAT	ION	STRATA			
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)		ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
- 0		5.0						ST17SB02 (0-0.2)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW GROUND SURFACE; soil-gas point installe (ST17SV02).
								ST17SB02 (2-4)	
- 5	S-1	2.0	18	1-1-2-2	0.0				5 - 5.8 SILTY SAND (SM); ~60% sand; fine, ~40% silt, dry brown, FILL.
									5.8 - 6.4 NARROWLY GRADED SAND (SP); ~100% sand medium, dry, tan, FILL.
	S-2	2.0	16	4-4-3-2	NA				6.4 - 9 NARROWLY GRADED SAND (SP); ~95% sand; fir ~5% silt, dry, brown, FILL, refusal at 9', continue in new location on 3/24/06 with April Krause logging.
	S-3	2.0	9	15-5-3-2	0.6				9 - 11 SILT WITH SAND (ML); ~15% fine sand, coal, moist
	3-3	2.0	3	10-0-0-2	0.0				brown, FILL, gray and black staining.

# NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR

HEADSPACE)

IN. = INCHES FT. = FEET PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB02 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 2 of 3 060660 **GEI PROJECT NUMBER:** Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN REC **Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. S-4 2.0 6 1-3-2-1 11 - 13 SILTY SAND (SM); ~60% sand; fine to medium, ~40% silt, FILL. WOR-2-S-5 2.0 14 NA 13 - 15 SILT (ML); wet, gray and black, FILL, wood, brick. 2-1 15 S-6 12 WOR-1-0.2 15 - 16 SILT (ML); ~40% clay, black and gray, FILL, wood, 2.0 2-3 brick. 16 - 17 SILTY SAND (SM); ~85% sand; fine, ~15% silt, organics, wet, grayish brown and black, FILL. 17 - 19 NARROWLY GRADED SAND WITH SILT (SP-SM); **S-7** 3-7-3-7 0.4 2.0 6 ~85% sand; fine, ~10% silt, ~5% clay, wet, brown and gray, FILL. S-8 2.0 0 4-1-1-1 19 - 21 NO RECOVERY, running sands while drilling. 20 S-9 3-1-1-1 2.0 0 21 - 23 NO RECOVERY, running sands while drilling. NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL CrLO= CREOSOTE LIKE ODOR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR

ALO = ASPHALT LIKE ODOR

STRI 17TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB02 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 3 of 3 060660 **GEI PROJECT NUMBER:** Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** DEPTH SOIL / BEDROCK **TYPE** SAMPLE PEN **REC Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. S-10 2.0 0 6-4-3-4 23 - 25 NO RECOVERY, running sands while drilling. 25 25 - 29 FAT CLAY (CH); high plasticity, ~35% silt, slight S-11 2.0 14 2-2-2-2 3.4 ST17SB02 organic-like odor, wet, black and gray, FILL, metal shards and (25-27)S-12 2.0 2-2-4-5 S-13 2.0 22 7-6-9-11 1.9 29 - 29.9 FAT CLAY (CH); high plasticity, ~35% silt, wet, black and gray, FILL, metal shards and strips, slight undetermined odors. 30 29.9 - 30.4 NARROWLY GRADED SAND (SP); ST17SB02 1.0 homogeneous, fine, wet, reddish brown, gray stained. (30-31)30.4 - 31 NARROWLY GRADED SAND (SP); fine, <5% mica, wet, reddish brown. Bottom of borehole at 31.0 feet.

#### NOTES:

STRI 17TH ST STATION GPJ GEI CONSULTANTS GDT

BORING LOG

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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IN. = INCHES FT. = FEET PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI Manhattan, New York CITY/STATE:

**GEI PROJECT NUMBER:** 

PAGE 060660

ST17SB03/MWDD03

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 11.01 NORTHING: 205666.06 EASTING: 991054.94

LOCATION: Ave C Loop (Btwn 10 & 15 Stuy Oval) TOTAL DEPTH (FT): 53.00

DRILLED BY: Aquifer Drilling and Testing / Tony Palomegue LOGGED BY: Lynn Willey

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone

1 of 5

DATE START / END: 3/23/2006 - 3/23/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

		SAM	IPLE IN	NFORMAT	ION	_					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	STRATA	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS	
- <b>0</b>		5.0						ST17SB03 (0-0.2) ST17SB03 (2-4)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW CONCRETE SURFACE; soil-gas point installed (ST17SV03).		
- 5	S-1	2.0	7	2-3-2-4	0.5				5 - 6.33 FILL, BACKFILL, bentonite and sand.		
									6.33 - 7 Red, FILL, BRICK FRAGMENTS, angular, coarse.		
	S-2	2.0	19	12-11- 13-11	0.7	***************************************		ST17SB03 (8-9)	7 - 7.5 NARROWLY GRADED SAND WITH SILT (SP-SM); ~85% sand; fine, ~10% silt, ~5% gravel, moist, brown to gray, FILL. 7.5 - 9 WIDELY GRADED SAND (SW); ~60% sand; fine to medium, ~20% brick fragments, ~10% coarse gravel, ~5% silt, moist, dark brown to gray, FILL, ~5% ash.		
- 10	S-3	2.0	2	1-1-2-2	0.8	****			9 - 11 WIDELY GRADED SAND (SW); homogeneous, ~95% sand; fine to coarse, ~5% silt, moist, brown to dark brown, FILL.		

# NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB03/MWDD03 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** WELL DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN REC **Blows** PID FT. **DESCRIPTION** and ID **DETAILS** FT. IN. (/6 in.) (ppm) NO. S-4 2.0 18 2-2-3-4 11 - 13 WIDELY GRADED SAND WITH SILT (SW-SM); homogeneous, ~85% sand; fine to medium, ~10% silt, ~5% fine gravel, wet, brown and gray, FILL, mottled. 13 - 15 NO RECOVERY. S-5 2.0 0 1-1-1-2 15 S-6 2.0 2-2-2-2 1.7 15 - 17 SILT (ML); homogeneous, low plasticity, ~10% fine sand, ~5% fine gravel, wet, brown, FILL. **S-7** 3-2-2-2 0.7 17 - 19 SILT (ML); homogeneous, 2.0 medium plasticity, wet, brown, FILL. S-8 2.0 16 2-2-2-2 0.6 19 - 21 NARROWLY GRADED SAND (SP-SM); ~80% sand; fine, ~10% silt, brown and black, FILL, ~10% glass, wood chips, roots, ash. 20 S-9 2.0 5-5-6-1 21 - 23 SILTY SAND (SM); low 7 plasticity, ~70% sand; fine, ~30% silt, wet, dark brown, FILL.

## NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

GEI CONSULTANTS.GDT

STRI 17TH ST STATION GPJ

L06

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB03/MWDD03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 SAMPLE INFORMATION STRATA ODOR **ANALYZED** WELL SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN REC **Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. S-10 2.0 18 6-6-4-3 0.7 23 - 24 GRAVELLY SILT (ML); homogeneous, angular, wet, brown to gray, FILL. 24 - 25 SILTY SAND (SM); ~85% sand; fine, ~15% silt, wet, black, FILL, brick in shoe of spoon. 25 S-11 2.0 14 3-3-4-5 0.6 25 - 25.8 NARROWLY GRADED GRAVEL (GP); homogeneous, ~100% gravel; coarse, angular, wet, black, FILL. 25.8 - 27 WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand; fine to medium, ~10% silt, wet, brown, FILL, red coarse brick fragments in bottom. S-12 12 3-4-5-6 27 - 28 NARROWLY GRADED SAND 2.0 WITH SILT (SP-SM); ~90% sand; fine, ~10% silt, brick fragments, brown, FILL. 28 - 29 SILTY SAND (SM); homogeneous, low plasticity, ~85% sand; fine, ~15% silt, wet, gray. S-13 2.0 18 3-3-3-4 29 - 29.3 CLAY (CH); homogeneous, 4.9 TLO high plasticity, moderate tar-like odor, black. 29.3 - 29.9 SILTY SAND (SM); homogeneous, low plasticity, ~70% 30 sand; fine, ~25% silt, ~5% fine gravel, wet, gray. 29.9 - 31 NARROWLY GRADED SAND (SP); ~95% sand; fine, ~5% silt, wet, brown. S-14 2.0 14 7-7-7-9 31 - 33 NARROWLY GRADED SAND (SP); homogeneous, ~95% sand; fine, ~5% mica, wet, brown. S-15 33 - 37 NARROWLY GRADED SAND 2.0 5-5-9-8 0.6

## NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR

TLO = TAR LIKE ODOR

NLO = NAPHTHALENE LIKE ODOR

CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

GEI CONSULTANTS.GDT

17TH ST STATION, GPJ

STR 90

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB03/MWDD03 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** SAMPLE CONSTRUCTION PEN REC **Blows** PID **DESCRIPTION** FT. and ID **DETAILS** FT. IN. (/6 in.) (ppm) NO. (SP); homogeneous, ~95% sand; fine, ~5% silt, wet, brown. 35 S-16 2.0 16 5-7-6-8 0.5 S-17 2.0 20 5-5-6-7 0.9 37 - 38.2 WIDELY GRADED SAND WITH SILT (SW-SM); homogeneous, ~85% sand; fine to coarse, ~10% silt, ~5% fine gravel, max. size 0.25 in., wet, 38.2 - 39 CLAY WITH SAND (CL); homogeneous, medium plasticity, ~15% fine sand, wet, reddish brown. S-18 4-4-4-4 2.0 18 0.8 39 - 39.5 WIDELY GRADED SAND (SW); homogeneous, ~95% sand; fine to coarse, ~5% silt, wet, brown. 39.5 - 41 SILT (ML); stratified, non plastic, wet, reddish brown, fine sand 40 layers, micaceous silt. S-19 5-5-6-7 41 - 43 SILT (ML); homogeneous, ~5% 2.0 16 0.7 fine sand, mica, wet, brown. S-20 2.0 17 2-2-2-2 0.8 43 - 45 ELASTIC SILT (MH); varved, high plasticity, wet, brown, fine sand layers.

## NOTES:

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MLO = MUSTY LIKE ODOR

17TH ST STATION.GPJ GEI CONSULTANTS.GDT

STR L06

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

PAGE 5 of 5

ST17SB03/MWDD03

**BORING LOG** 

J	Consultants  SAMPLE INFORMATION					GEI	PROJ	ECT NUMBER:	060660		
		SAM	PLE IN	NFORMAT	ION						
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	<b>&lt;</b>	WELL CONSTRUCTION DETAILS
— <b>45</b> _ _	S-21	2.0	22	5-4-4-3	0.8				45 - 46.1 SILT WITH SAND (I varved, low plasticity, ~15% fir wet, reddish brown.  46.1 - 47 SILTY SAND (SM); homogeneous, ~85% sand; fir	fine sand,	
_	S-22	2.0	16	6-6-7-7	0.8				silt, wet, brown.  47 - 47.8 SILTY SAND (SM); ~85% sand; fine, ~15% silt, w	; layered,	
_									with 1/4" layers of gray clay.  47.8 - 49 WIDELY GRADED S (SW); homogeneous, ~95% s to medium, ~5% silt, ~5% mic reddish brown.	SAND sand; fine	
_	S-23	2.0	8	5-4-3-3	1.0				49 - 49.6 SANDY CLAY (CL); plasticity, wet. 49.6 - 51 WIDELY GRADED \$	,	
<b>— 50</b>									(SW); homogeneous, ~95% s to medium, ~5% silt, wet, redobrown.	sand; fine	
	S-24	2.0	19	18-25- 26-16	0.7	7777		ST17SB03 (51-52)	51 - 51.9 NARROWLY GRAD (SP); homogeneous, ~85% sa <5% silt, ~10% mica, wet, bro reddish brown.	sand; fine, rown to	
_									51.9 - 52.4 CLAY (CL); varved plasticity, moist, reddish brown fine sand varves. 52.4 - 53 SILT (ML); non plast moist, reddish brown.	vn to gray,	

Bottom of borehole at 53.0 feet.

# NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL
REC = RECOVERY LENGTH OF SAMPLE
PID = PHOTOIONIZATION DETECTOR READING (JAR)

ppm = PARTS PER MILLION
NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR

HEADSPACE)

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI

Manhattan, New York CITY/STATE: 060660 **GEI PROJECT NUMBER:** 

PAGE 1 of 5

ST17SB04/MWDD04

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 11.49 NORTHING: 205644.67 **EASTING:** 990952.71

TOTAL DEPTH (FT): 51.00

LOCATION: Ave C Loop (Btwn 285 &287 Ave C)

DRILLED BY: Aquifer Drilling and Testing / Tony Palomegue DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone LOGGED BY: Ryan McGuire DATE START / END: 3/21/2006 - 3/21/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

		SAM	IPLE IN	NFORMAT	ION		. თ				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	водо	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
- 0		5.0							ST17SB04 (0-0.2)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW GROUND SURFACE; soil-gas point installed (ST17SV04).	
									ST17SB04 (2-4)		
- 5	S-1	2.0	10	NR	0.0					5 - 6.8 FILL, BACKFILL from soil gas point.	
	S-2	2.0	8	NR	NA					6.8 - 7 NARROWLY GRADED SAND (SP); medium, brown, FILL, with wood particles. 7 - 9 NARROWLY GRADED SAND (SP); ~95% sand; medium, ~5% silt, moist, brown, FILL, with wood particles.	
- - 10	S-3	2.0	0	4-2-1-1						9 - 11 NO RECOVERY.	

# NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR

HEADSPACE)

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB04/MWDD04 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN REC **Blows** PID FT. **DESCRIPTION** DETAILS and ID FT. IN. (/6 in.) (ppm) NO. S-4 2.0 0 11 - 13 NO RECOVERY. S-5 2.0 1-1-1-1 0.0 13 - 15 SILTY SAND (SM); homogeneous, ~80% sand; fine, ~15% silt, <5% brick fragments, wet, gray, FILL, red brick in shoe of spoon. 15 S-6 2.0 WOR-12.3 15 - 17 NARROWLY GRADED **WOR-1-1** SAND WITH SILT (SP-SM); homogeneous, ~90% sand; fine, ~10% silt, brick fragments, wet, gray, FILL, nodule of clay/silt. **S-7** 3-3-4-2 0.2 17 - 17.4 NARROWLY GRADED 20 24 SAND (SP); ~95% sand; fine, ~5% fine gravel, wet, dark gray, FILL. 17.4 - 19 NARROWLY GRADED SAND (SP); ~95% sand; fine, ~5% silt, wet, dark gray, FILL. S-8 2.0 6 3-3-3-4 0.0 19 - 21 NARROWLY GRADED SAND (SP); ~95% sand; fine, ~5% silt, wet, dark gray, FILL, crushed brick and 1 1/2" crushed angular stone. 20 21 - 22.6 NARROWLY GRADED S-9 2.0 10 2-1-1-1 0.0 SAND (SP); fine, wet, gray, FILL. NOTES: CrLO= CREOSOTE LIKE ODOR

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

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PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

IN. = INCHES FT. = FEET

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CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB04/MWDD04 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA VISUAL ODOR **ANALYZED** WELL SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 22.6 - 25 NARROWLY GRADED SAND (SP); fine, wet, gray, FILL, S-10 2.0 WOR-0.0 with pockets of darker sand. WOR-WOR-1 25 S-11 2.0 9 NR 1.7 25 - 26.6 NARROWLY GRADED SAND (SP); fine, wet, gray, FILL. 26.6 - 27 NARROWLY GRADED 22.4 NLO SAND (SP); fine, moderate S-12 8-4-3-ST17SB04 naphthalene-like odor, wet, gray, 2.0 18 497 FILL, black staining, glass pieces. 50/1 (27-29)27 - 28.3 NARROWLY GRADED TLO SAND (SP); fine, moderate tar-like odor, gray, FILL, veins of black stained silt. 28.3 - 29 NARROWLY GRADED SAND (SP); fine, moderate TLO tar-like odor, black, FILL, rounded stone pieces, stained, taffy-like S-13 20 NR 2.0 coal tar, piece of metal, brick and a bolt in tip. 29 - 29.8 NARROWLY GRADED SAND (SP); fine, wet, gray, FILL. 30 29.8 - 30.5 NARROWLY 837 GRADED SAND (SP); fine, gray, FILL, veins of black stained fine TLO sand. 30.5 - 30.7 Moderate tar-like odor, S-14 2.0 12 9-11-10-FILL, metal pieces, steel, felt (2"). 12 30.7 - 31 WIDELY GRADED PLO SAND (SW); medium to coarse, brown, FILL, grading to medium sand with 40% silt and gravel. 31 - 31.8 NARROWLY GRADED GRAVEL (GP); coarse, brick fragments, slight petroleum-like odor, wet, red, FILL. 31.8 - 33 NARROWLY GRADED S-15 2.0 6-9-12-8 6.7 PLO SAND (SP); homogeneous, ~80%

## NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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HEADSPACE)

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ppm = PARTS PER MILLION

IN. = INCHES FT. = FEET

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB04/MWDD04 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA VISUAL ODOR **ANALYZED** WELL DEPTH SOIL / BEDROCK **TYPE** CONSTRUCTION SAMPLE PEN **REC** Blows PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. sand; fine, ~15% mica, ~5% silt, wet, gray, FILL. 33 - 35 NARROWLY GRADED SAND (SP); homogeneous, ~95% sand; fine, ~5% silt, slight PLO petroleum-like odor, wet, gray, FILL, refusal at 35', continue in new location on 3/21/06 with Lynn 35 S-16 2.0 18 5-7-5-9 Willey logging. 35 - 36.1 WIDELY GRADED SAND (SW); homogeneous, NLO ~90% sand; fine to medium, <5% silt, ~5% fine rounded gravel, slight naphthalene-like odor, wet, gray, FILL, small hair-like particles. 36.1 - 37 ELASTIC SILT (MH); varved, low plasticity, ~15% S-17 2.0 13 8-7-7-10 2.6 clayey fines, fine sand, mica, reddish brown, FILL. 37 - 39 ELASTIC SILT (MH); varved, low plasticity, ~15% NLO clayey fines, slight naphthalene-like odor, moist, FILL, striated with fine sand layers. S-18 5-7-9-4 39 - 41 SILT (ML); ~10% fine 2.0 7 NA sand, ~10% mica, slight naphthalene-like odor, wet, reddish brown, FILL, rope with moderate coal tar-like odor in 40 NLO bottom. S-19 41 - 43 ELASTIC SILT (MH); 2.0 5-7-9-11 97.6 homogeneous, medium plasticity, <5% coarse sand, wet, reddish brown, FILL. 4.5 S-20 2.0 11 5-7-6-6 1.3 43 - 45 ELASTIC SILT (MH); homogeneous, medium plasticity, reddish brown to gray, FILL, piece of rope (?), <5% wood particles. NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

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ENVIRONMENTAL

PID = PHOTOIONIZATION DETECTOR READING (JAR

HEADSPACE)

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IN. = INCHES FT. = FEET

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OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR ALO = ASPHALT LIKE ODOR

CrLO= CREOSOTE LIKE ODOR

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE:

Manhattan, New York 060660

**BORING LOG** PAGE ST17SB04/MWDD04 5 of 5

GE	Cons	ultants	Glasi	oribury, Ci	00033		PROJ	_	UMBER:	060660	5 of 5	3B04/MWVBB04
		SAM	IPLE II	NFORMAT	ION	▼	ြုလ					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	VISUAL	ODOR	ANALYZED SAMPLE ID	SOIL / BE DESCRI		WELL CONSTRUCTION DETAILS
— <b>45</b>	S-21	2.0	16	5-4-3-3	2.4					45 - 46.4 SILT (M homogeneous, lov ~10% fine sand, w reddish brown, FIL	v plasticity, vet, brown to	
										46.4 - 47 SILTY S laminated, wet, bro FILL.		
-	S-22	2.0	13	5-7-5-9	1.8					47 - 48.5 ELASTIO homogeneous, me <5% fine sand, we	edium plasticity,	
										48.5 - 49 NARRO SAND (SP); homo wet. brown.		
<b>—</b> 50	S-23	2.0	16	5-6-7-4	2.1				ST17SB04 (49-51)	49 - 50.2 ELASTIC homogeneous, <5 <5% roots, wet, br	% fine sand,	
										50.2 - 51 WIDELY SAND (SW); home to coarse, ~5% sil	ogeneous, fine	

Bottom of borehole at 51.0 feet.

# NOTES:

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PID = PHOTOIONIZATION DETECTOR READING (JAR)

ppm = PARTS PER MILLION
NLO = NAPHTHALENE LIKE ODOR
PLO = PETROLEUM LIKE ODOR
TLO = TAR LIKE ODOR

HEADSPACE)

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI Manhattan, New York CITY/STATE:

PAGE 1 of 5

ST17SB05

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 6.09 NORTHING: 205526.36 EASTING:

LOCATION: E 18th & Ave C (completed as MWS05/D05/DD05)

060660

991381.31 TOTAL DEPTH (FT): 51.00

**GEI PROJECT NUMBER:** 

DRILLED BY: Aquifer Drilling and Testing / Jerry Heller DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone LOGGED BY: April Krause DATE START / END: 4/24/2006 - 4/24/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted DC-50

WATER LEVEL DEPTHS (FT):

		SAM	IPLE IN	NFORMAT	ION	ا ہر ا				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
— <b>0</b>		5.0						ST17SB05 (0-0.2)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW BRICK SURFACE; soil-gas point installed (ST17SV05).	
								ST17SB05 (2-4)		
- 5	S-1	2.0	2	9-26-5- 10	0.2			ST17SB05-2 (5-7)	5 - 7 WIDELY GRADED SAND (SW); brick fragments, wet, brown, FILL, black staining at tip.	Ш
_										
-	<b>S-2</b>	2.0	2	14-18- 10-7	0.2				7 - 11 WIDELY GRADED SAND (SW); brick fragments, wet, brown and gray, FILL, wood.	
- - 10	S-3	2.0	4	6-2-2-6	NA	**** **** **** **** ****				

# NOTES:

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HEADSPACE)

IN. = INCHES FT. = FEET

PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB05 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** CONSTRUCTION SAMPLE PEN REC **Blows** PID FT. **DESCRIPTION** and ID **DETAILS** FT. IN. (/6 in.) (ppm) NO. S-4 2.0 5 9-4-3-2 11 - 13 NARROWLY GRADED GRAVEL (GP); ~70% gravel; fine, ~30% silt, brick fragments, wet, black and gray, FILL. S-5 2.0 6 4-4-3-4 NA 13 - 13.3 FILL, brick and wood. 13.3 - 14 SILTY SAND (SM); fine, brown, FILL. 14 - 15 SANDY SILT (ML); gray and black, FILL, wood. 15 S-6 16 4-2-3-7 NA 15 - 15.9 GRAVEL (GW); ~30% sand, 2.0 silt, brick fragments, FILL, very loose. 15.9 - 20 SANDY SILT (ML); fine sand, <5% coarse sand, wet, brown and gray, FILL, wood. **S-7** 7-4-3-3 1.4 20 6 S-8 2.0 24 3-2-2-1 2.9 20 20 - 21 CLAY (CL); moist to dry, gray, FILL, pliable. S-9 2.0 15 2-2-3-2 NA 21 - 26.5 SILTY CLAY (CL); ~15% organics, wet, gray, FILL, pliable, 1.5" sandstone at 26.5. NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL CrLO= CREOSOTE LIKE ODOR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PLO = PETROLEUM LIKE ODOR PID = PHOTOIONIZATION DETECTOR READING (JAR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR ALO = ASPHALT LIKE ODOR

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BORING LOG

ENVIRONMENTAL

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB05 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA ODOR **ANALYZED** WELL SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION **SAMPLE** PEN REC **Blows** PID **DESCRIPTION** FT. and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. S-10 2.0 24 3-3-4-6 NA 25 S-11 2.0 24 10-10-1.7 ST17SB05 24-22 (25-27)26.5 - 27 WIDELY GRADED SAND NLO (SW); ~95% sand; fine to coarse, ~5% fines, slight naphthalene-like odor, S-12 WOH-4-2.0 ST17SB05 2.0 24 moist, FILL, not cohesive, light brown to (27-29)3-4 olive sand lens. 27 - 29 SILTY CLAY (CL); slight naphthalene-like odor, gray, FILL, NLO porcelain pieces in middle. S-13 24 2-4-23-2.3 29 - 30.5 SILTY CLAY (CL); lensed, 2.0 high plasticity, wet, black and dark gray, FILL, wood and cloth. 30 30.5 - 30.8 SILTY CLAY (CL); lensed, NLO high plasticity, slight naphthalene-like odor, wet, black and dark gray, brown S-14 2.0 4-WOH-6 sandy lenses. WOH-12 30.8 - 31 NARROWLY GRADED SAND (SP); medium, wet, light brown and 31 - 33 WIDELY GRADED SAND (SW); fine to medium, brown. S-15 10-9-10-33 - 37 NARROWLY GRADED SAND 2.0 2.3 NOTES: CrLO= CREOSOTE LIKE ODOR

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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GEI CONSULTANTS.GDT

STRI 17TH ST STATION GPJ

LOG

ENVIRONMENTAL

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IN. = INCHES FT. = FEET

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PLO = PETROLEUM LIKE ODOR

TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR

ALO = ASPHALT LIKE ODOR

OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB05 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** SAMPLE CONSTRUCTION PEN **REC Blows** PID FT. **DESCRIPTION** and **DETAILS** ID FT. IN. (/6 in.) (ppm) NO. 25 (SP); lensed, medium, wet, brown, gray clay lenses. 35 S-16 2.0 24 26-35-19.4 ST17SB05-2 27-10 (35-37)S-17 2.0 18 WOH/3"-24.2 ST17SB05-2 37 - 40.9 WIDELY GRADED SAND 2-3-2 (37-39)(SW); fine to medium, wet, brown. S-18 5-14-9-9 2.0 24 NA 40 40.9 - 45 ELASTIC SILT (MH); ~20% S-19 2.0 24 3-4-9-13 NA clay, wet, reddish brown. S-20 2.0 24 WOH-NA WOH-5-8 NOTES: PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL CrLO= CREOSOTE LIKE ODOR REC = RECOVERY LENGTH OF SAMPLE PID = PHOTOIONIZATION DETECTOR READING (JAR IN. = INCHES FT. = FEET OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR PLO = PETROLEUM LIKE ODOR TLO = TAR LIKE ODOR HEADSPACE) CLO = CHEMICAL LIKE ODOR MLO = MUSTY LIKE ODOR ALO = ASPHALT LIKE ODOR

BORING LOG

STRI 17TH ST STATION.GPJ GEI CONSULTANTS.GDT

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

PAGE 5 of 5

ST17SB05

**BORING LOG** 

GE	Cons	ultants	Olasi	onbury, O	00000		PROJ	ECT NUMBER:	060660 5 of 5	31170500
DEPTH FT.	TYPE and	PEN	REC		PID	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
<del> </del>	NO. S-21	FT. 2.0	IN. 24	(/6 in.) 24-20-	(ppm)	S		15	45 - 46.8 SILT (ML); varved, <20% clay,	AND AND BEING
_				20-20		য়ক			~15% gravel, wet, reddish brown.  46.8 - 48.6 SILTY SAND (SM); fine,	
_	S-22	2.0	17	3-5-7-10	NA				gray, loose.	
_ — 50	S-23	2.0	12	14-20- 20-18	NA			ST17SB05 (49-51)	48.6 - 51 NARROWLY GRADED SAND (SP); medium, olive, silty fine sand lenses.	

Bottom of borehole at 51.0 feet.

# NOTES:

HEADSPACE)

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TLO = TAR LIKE ODOR

CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033 Consultants

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE:

Manhattan, New York **GEI PROJECT NUMBER:** 060660

PAGE 1 of 5

ST17SB06

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 6.41 LOCATION: E 17th and Ave C (compl. as MWS06/D06/DD06) NORTHING: 205369.95 **EASTING:** 991296.5 TOTAL DEPTH (FT): 51.00 DRILLED BY: Aquifer Drilling and Testing / Bernie Cruz DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone LOGGED BY: April Krause DATE START / END: 5/16/2006 - 5/18/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted DK-527

DEPTH FT.	SAMPLE INFORMATION					4				
	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION	WELL CONSTRUCTION DETAILS
_ 5		5.0						ST17SB06 (0-0.2)	0 - 5 FILL, MANUAL AND VACTRON CLEARANCE TO 5 FEET BELOW BRICK SURFACE; soil-gas point installed (ST17SV06).	
								ST17SB06 (2-4)		
	S-1	2.0	8	24-21- 22-6	0.7				5 - 6 NARROWLY GRADED SAND (SP); coarse, brown and white, FILL.  6 - 7 WIDELY GRADED SAND WITH GRAVEL (SW); brick fragments, dry,	
	S-2	2.0	10	1-2-2-1	0.6				FILL, rock and concrete, dense.  7 - 7.4 NARROWLY GRADED SAND (SP); coarse, wet, brown and white, FILL.  7.4 - 9 SILTY SAND (SM); fine, ~25% silt, ~5% coarse sand, wet, gray, FILL, low to medium cohesive.	
	S-3	2.0	0	3-2-2-1					9 - 11 SILTY SAND (SM); fine, brick fragments, wet, grayish brown, FILL, no recovery, logged from shoe.	

## NOTES:

ENVIRONMENTAL

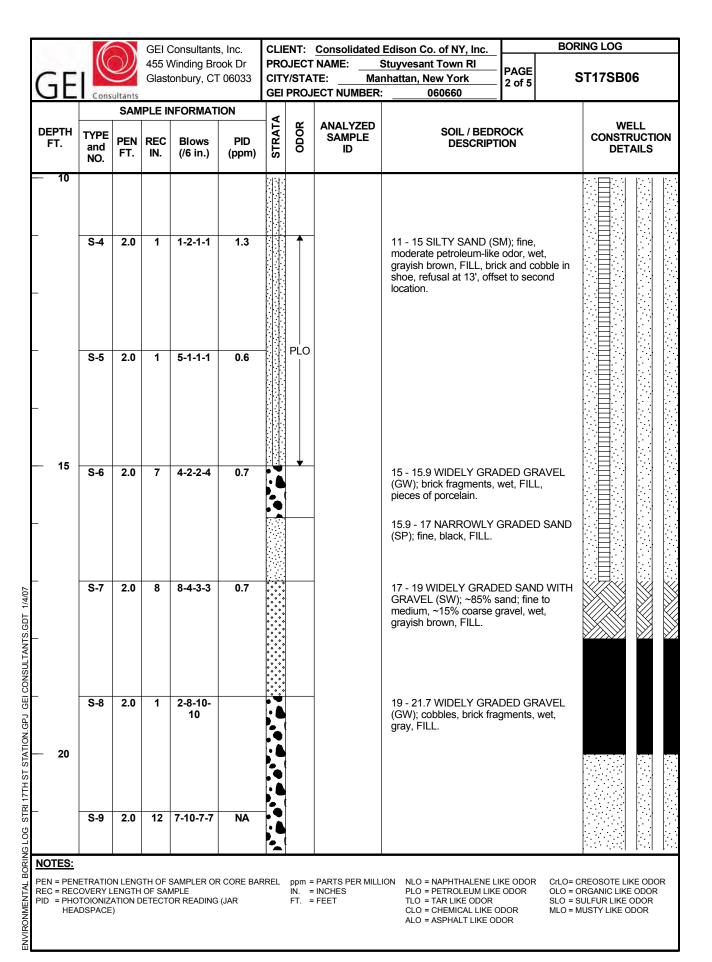
PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

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**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB06 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA ODOR **ANALYZED WELL** SOIL / BEDROCK DEPTH **TYPE** CONSTRUCTION **SAMPLE** PEN REC **Blows** PID **DESCRIPTION** FT. and ID **DETAILS** FT. IN. (/6 in.) (ppm) NO. 21.7 - 23 SILTY SAND (SM); ~85% sand; fine, ~15% silt, mica, wet, black, FILL. S-10 2.0 9-8-6-5 0.6 23 - 26.25 WIDELY GRADED SAND WITH GRAVEL (SW); ~5% cobbles, gray, FILL. 25 S-11 2.0 8 4-8-12-0.7 11 26.25 - 27 WIDELY GRADED SAND (SW); ~95% sand; fine to medium, <5% silt, wet, brown, FILL. S-12 12 2-6-11-ST17SB06 27 - 29 WIDELY GRADED GRAVEL 2.0 WITH SAND (GW); ~15% fine sand, (27-29)cobbles, brown, FILL, porcelain, brick, S-13 2.0 ST17SB06 29 - 32 WIDELY GRADED SAND (SW); 7-9-9-10 0.7 (29-31)~95% sand; fine to medium, <5% silt, wet, brown. 30 S-14 2.0 10 6-10-14-0.7 15 32 - 32.4 WIDELY GRADED SAND (SW); ~95% sand; fine to coarse, <5% silt, brown. 32.4 - 33 WIDELY GRADED SAND WITH SILT (SW-SM); ~90% sand; fine S-15 8-10-10-2.0 0.6 to medium, ~10% silt, brown.

## NOTES:

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CLO = CHEMICAL LIKE ODOR

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STRI 17TH ST STATION GPJ

L06

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST17SB06 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 4 of 5 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA ODOR **ANALYZED WELL** DEPTH SOIL / BEDROCK **TYPE** CONSTRUCTION **SAMPLE** PEN REC **Blows** PID **DESCRIPTION** FT. and ID **DETAILS** FT. IN. (/6 in.) (ppm) NO. 33 - 35.6 NARROWLY GRADED SAND 9 WITH SILT (SP-SM); laminated, ~85% sand; medium, mica, <10% silt, <5% clay, wet, brown, coarse sand lenses. 35 S-16 2.0 24 10-12-0.7 ST17SB06 15-13 (35-36.5)35.6 - 37 NARROWLY GRADED SILTY SAND (SM); varved, fine, mica, moist to ST17SB06 wet, reddish brown, silty clay lenses. (36.5-37)S-17 2.0 11 10-10-8-0.8 37 - 39 NARROWLY GRADED SAND WITH SILT (SP-SM); ~90% sand; medium, <10% silt, wet, brown. S-18 10-10-2.0 24 0.8 39 - 40.5 WIDELY GRADED SAND 13-12 (SW); medium to coarse, wet, brown, coarse sand lenses. 40 40.5 - 41 NARROWLY GRADED SILTY SAND (SM); varved, fine, mica, moist to wet, reddish brown, silty clay lenses. S-19 20 4-3-4-6 2.0 0.8 41 - 41.7 NARROWLY GRADED SAND (SP); medium, brown, coarse sand lenses. 41.7 - 43 SANDY SILT (ML); lensed, medium plasticity, fine sand, reddish brown, gray clay and silty clay lenses. S-20 2.0 18 7-6-6-6 1.2 43 - 48.8 SILTY SAND (SM); laminated, low plasticity, fine, ~10% mica, reddish brown, gray clay laminations. NOTES:

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17TH ST STATION.GPJ

STRI 90

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

IN. = INCHES FT. = FEET

NLO = NAPHTHALENE LIKE ODOR PLO = PETROLEUM LIKE ODOR

TLO = TAR LIKE ODOR CLO = CHEMICAL LIKE ODOR ALO = ASPHALT LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST17SB06 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 5 of 5 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** WELL DEPTH SOIL / BEDROCK CONSTRUCTION DETAILS **TYPE** SAMPLE PEN REC **Blows** PID FT. **DESCRIPTION** and ID FT. IN. (/6 in.) (ppm) NO. 45 S-21 2.0 8 13-10-7-NA

-	S-22	2.0	12	13-12- 11-16	NA			
50 	S-23	2.0	14	9-16-2- 29	NA	ST17SB06 (50-51)	48.8 - 49 NARROWLY GRADED SAND WITH SILT (SP-SM); medium, brown and white. 49 - 51 NARROWLY GRADED SAND WITH SILT (SP-SM); homogeneous, medium sand, <15% rock fragments, brown and olive.	

Bottom of borehole at 51.0 feet.

# NOTES:

HEADSPACE)

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STRI 17TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07



CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI CITY/STATE: Manhattan, New York

**PAGE** 1 of 4

ST19SB-01

**BORING LOG** 

**GROUND SURFACE ELEVATION (FT):** 14.07 NORTHING: 206265.53 **EASTING:** 990554 LOCATION: E 20th St Loop (Btwn 522 & 524 E 20th St) TOTAL DEPTH (FT): 40.00

060660

DATUM VERT. / HORZ.: NAVD 88 / NAD83 NY East Zone DRILLED BY: Aquifer Drilling and Testing / Tony Palomegue LOGGED BY: Ryan McGuire

**GEI PROJECT NUMBER:** 

DATE START / END: 3/17/2006 - 3/17/2006

DRILLING DETAILS: Hollow Stem Auger / Track Mounted CC-55

WATER LEVEL DEPTHS (FT):

		SAM	IPLE I	NFORMAT	ION				
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BEDROCK DESCRIPTION
- 0		6.0						ST19SB01 (0-0.2)	0 - 6 FILL, MANUAL AND VACTRON CLEARANCE TO 6 FEET BELOW CONCRETE SURFACE; soil-gas point installed (ST19SV01).
								ST19SB01 (2-4)	
- 5	S-1	2.0	5	18-24-6- 4	0				6 - 7 FILL, red brick and concrete fragments.
	S-2	2.0	7	5-5-6-3	NA				7 - 9 NARROWLY GRADED SAND WITH GRAVEL (SP); ~55% sand; fine, ~35% brick fragments, ~10% rounded fin to coarse gravel, light brown, FILL.
	S-3	2.0	4	3-2-2-1	0	****			9 - 11 WIDELY GRADED SAND (SW); ~100% sand; fine t medium, moist, brown, FILL.

## NOTES:

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CrLO= CREOSOTE LIKE ODOR OLO = ORGANIC LIKE ODOR SLO = SULFUR LIKE ODOR

MLO = MUSTY LIKE ODOR

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: 455 Winding Brook Dr Stuyvesant Town RI **PAGE** ST19SB-01 Glastonbury, CT 06033 CITY/STATE: Manhattan, New York 2 of 4 **GEI PROJECT NUMBER:** 060660 Consultants SAMPLE INFORMATION STRATA ODOR **ANALYZED** SOIL / BEDROCK DEPTH **TYPE** SAMPLE PEN **REC Blows** PID **DESCRIPTION** FT. and ID FT. IN. (/6 in.) (ppm) NO. S-4 2.0 7 5-3-2-2 0 11 - 12.7 WIDELY GRADED SAND (SW); ~100% sand; fine to medium, moist, brown, FILL. 12.7 - 13 NARROWLY GRADED SAND (SP); fine, moist, black and grav. FILL. 13 - 14 NO RECOVERY, rod dropped from 13' to 14'. ST19SB01 14 - 14.9 CLAYEY SAND WITH GRAVEL (SC); ~50% sand; S-5 2.0 15 1-2-2-2 0.4 (14-16)fine to medium, ~30% clayey fines, ~20% gravel, moist, dark brown, FILL. 15 14.9 - 16 WIDELY GRADED SAND (SW); ~5% gravel, moist, light brown. FILL. S-6 2.0 20 1-1-1-1 0 16 - 16.6 SILTY SAND (SM); ~60% sand; fine, ~40% silt, moist, dark brown, FILL. 16.6 - 18 WIDELY GRADED SAND WITH SILT (SW-SM); ~75% sand; fine to medium, ~20% silt, ~5% gravel, moist, FILL. WOR-18 - 20 WIDELY GRADED SAND WITH SILT (SW-SM); S-7 2.0 4 0 **WOR-1-1** ~90% sand; fine to medium, ~10% silt, moist, brown, FILL. 20 20 - 21.33 SANDY SILT WITH GRAVEL (ML); ~65% fines; S-8 2.0 12 3-2-2-1 0 ~20% fine to medium sand, ~15% rounded fine to coarse gravel, wet, light brown, FILL. 21.33 - 22 SANDY SILT (ML); ~70% fines; ~30% fine sand,

## NOTES:

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STRI 19TH ST STATION.GPJ

LOG

**BORING LOG** GEI Consultants, Inc. CLIENT: Consolidated Edison Co. of NY, Inc. 455 Winding Brook Dr PROJECT NAME: Stuyvesant Town RI **PAGE** ST19SB-01 Glastonbury, CT 06033 Manhattan, New York CITY/STATE: 3 of 4 **GEI PROJECT NUMBER:** 060660 Consultants **SAMPLE INFORMATION** STRATA ODOR **ANALYZED** SOIL / BEDROCK DEPTH **TYPE** SAMPLE PEN **REC** Blows PID **DESCRIPTION** FT. and ID FT. IN. (/6 in.) (ppm) NO. wet, brown, FILL. S-9 2.0 1-3-5-2 NA 22 - 26 CLAYEY SILT (ML); low plasticity, slight organic-like 6 odor, wet, black, FILL, wood and concrete fragments. OLO S-10 2.0 2 3-1-1-1 NA 25 S-11 2.0 7 1-1-3-3 NA 26 - 28 CLAYEY SILT (MH); high plasticity, slight organic-like odor, wet, black to gray, FILL. OLO S-12 4 1-1-1-4 0 28 - 30 SILTY SAND WITH GRAVEL (SM); coarse gravel, 2.0 slight organic-like odor, black, FILL, red brick stuck in tip. OLO 30 S-13 2.0 4 5-32-8-6 30 - 32 SILT (ML); black, FILL, with weathered rock fragments. S-14 2.0 24 18-22-0 32 - 33.2 GRAVEL WITH SILT AND SAND (GP-GM); ~50% 26-19 gravel; fine, ~40% sand, ~10% silt, wet, black to gray, FILL. NOTES:

PEN = PENETRATION LENGTH OF SAMPLER OR CORE BARREL

REC = RECOVERY LENGTH OF SAMPLE

STRI 19TH ST STATION. GPJ GEI CONSULTANTS. GDT 1/4/07

BORING LOG

ENVIRONMENTAL

PID = PHOTOIONIZATION DETECTOR READING (JAR HEADSPACE)

ppm = PARTS PER MILLION

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GEI Consultants, Inc. 455 Winding Brook Dr Glastonbury, CT 06033

CLIENT: Consolidated Edison Co. of NY, Inc. PROJECT NAME: Stuyvesant Town RI
CITY/STATE: Manhattan, New York

PAGE 4 of 4

ST19SB-01

**BORING LOG** 

	Cons	ultants				GEI	PROJ	ECT NUMBER:	060660	
		SAN	IPLE II	NFORMAT	ION					
DEPTH FT.	TYPE and NO.	PEN FT.	REC IN.	Blows (/6 in.)	PID (ppm)	STRATA	ODOR	ANALYZED SAMPLE ID	SOIL / BED DESCRIP	
						• • • • • • • • • • • • • • • • • • • •			33.2 - 34 SAND (SW); dry, gray, gravel.	FILL, pockets of coarse
_	S-15	2.0	12	11-12- 13-8	0				34 - 35 SAND (SW); dry, gray, FI	LL, with wood pieces.
— 3 <b>5</b>							1		35 - 40 NARROWLY GRADED S organic-like odor, wet.	SAND (SP); coarse, slight
	S-16	2.0	8	6-8-7-11						
							OLO			
_	S-17	2.0	8	9-8-6-7				ST19SB01 (38-40)		
<b>— 40</b>							<b></b>		Bottom of borehole at 40.0 feet.	

NOTES:

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HA AL	ALEY & DRIC	& H					TEST	BORING REPORT  Boring No.	14GH	001	
Proj Clie Con		Conso	lidated	Edisc	on Co.	of N	ew York I	nley & Nicol Environmental, Inc.   Start Februar	2 y 19, 2		
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish Februar Driller R. Gause/F			
Туре	Э			~		G	-	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falc			ıy
Insid	de Dia	meter (i	n.)	_	1.	.50	_	Bit Type: - Elevation 4.3	1 hattan 1	Boro	mah
Ham	nmer V	Veight (	lb.)	_		-	-	Drill Mud: - Datum Mar Casing: - Location See P		3010	<u>u</u> <sub>B</sub> ı.
Ham	nmer F	all (in.)		-		-	-	Hoist/Hammer: N 0 E 20			
	_	9 (÷		Ë		pol		Gravel Sand		d Te	st
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Densit	isual-Manual Identification and Description    Output	Dilatancy	Plasticity	Strength
- 0 -		G1	0.0	>				-CONCRETE-		Δ.	
-	0.0	0	4.0		0.6 1.5	SW/ SM	mps = 1 in.	d SAND with silt and gravel (SW/SM), no odor, moist, 5 10 15 25 25 26			
.	0.0 4.7				2.0	SW/ SM	Brown, we	Il-graded SAND with silt and gravel (SW/SM), no odor, 10 15 15 20 20 20			1-
-	5.4				2.5	SW/	= 3 in.			-	
-		G2 48	4.0		5.0	SIMI		silty SAND (SM), slight petroleum-like odor, moist, mps =			
- 5 -	6.0		0.0		5.0	SM	Hand Excavation/Vac-Truck Exploration at 5.0 ft.  own, sandy SILT with gravel (SM), mps = 1.25 in., no ery slight naphthalene-like odor, moist at bottom, wet at top.  -FILL-			_	
- 10 -		G3 0	8.0 12.0	NO WELL INSTALLED			No Recove	ry			TRANSPORTER AND ADDRESS OF THE PARTY OF THE
	4.2	G4 12	12.0 16.0	N ON		ML	Gray to browet	own sandy SILT (ML), mps = 0.5 in., no structure, no odor, -FILL-			
- 15 -	7.0 25.5	G5 24	16.0 18.8		17.0	ML ML	in. Black, sand	bove, except occasional wood fragments, moist, mps = 0.08  y SILT (ML), mps = 0.25 in., no structure, naphthalene-like  5 5 15 75			_
							fragments	, 40% red brick debris, occasional wood fragments and root			
					18.8			-FILL- brick at 18.8 ft. OF EXPLORATION AT 18.8 FT.			
<u> </u>				<u>                                     </u>			DOTTOM				<u> </u>
			er Leve Elapse			th (ft.)	) to:	Sample Identification   Well Diagram   Summary    O Open End Red   III   Riser Pipe   Overburden (lin. ft.)	10 0		
•	7/04	Time NA	Time (I	hr.) B	ottom Casing NA	Botto	m Water	O Open End Rod T Thin Wall Tube U Undisturbed Sample  O Open End Rod Screen Filter Sand Cuttings  O Overburden (lin. ft.) Rock Cored (lin. ft.) Samples G5	-		
		:						S Split Spoon G Geoprobe  G Geoprobe  G Geoprobe  G Geoprobe  G Grout Concrete Bentonite Seal	01		
Fie	ld Test	s:		Dilata Tough	nnéss:	1 -1	ow. M-Med	ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	V-Verv	<u>Hig</u> h	
1SP	T = Sar	npler blo	ws per 6	in.	<sup>2</sup> Ma:	ximum	particle size	(mm) is determined by direct observation within the limitations of sampler size (in mill isual-manual methods of the USCS as practiced by Haley & Aldrich, I	meters).		

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G!DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

HA AL	LEY o	& H					TEST BORING REPORT	F	ile	No	- 294	455·	-011	1001			
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	Gra	% Fine		San	ıd		Dilatancy	Toughness a	Plasticity a	t qtodout0
							Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.  Sample "14GH001-00" collected from 0-0.2 ft. Sample "14GH001-07" collected from 5.0-7.0 ft. Sample "14GH001-19" collected from 17.0-18.7 ft.								<u>I</u>	<u>a</u>	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29465\_29462\_29463\GINT LOGS\29455-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

HAL ALD	EY & RICI	X H				ı	TEST	BORING REPO	RT		E	30	rir	ng	No	), 1	4G	H0	02	
Project Client Contra	t	Conso	lidated	Ediso	on Co.	of N	ew York I	Plants Within Stuyvesant To Inc. enley & Nicol Environment			Sh Sta	eet	: N	o. J		2 ary		200		
			Са	asing	San	npler	Barrel	Drilling Equipmen	and Procedures						nith	-	۷,	20	U <del>-1</del>	
Туре				-	(	3	-	Rig Make & Model: Simo	o Earth Probe 200 ATV		<b>⊣&amp;</b>	ΑF	Re	o.P.	Fa	lce/	Ά.	Mu	rph	у
Inside	Dian	neter (	in.)	-	1.	50	-	Bit Type: - Drill Mud: -				va tun	tio n	n	4 M	.44 anh	atta	n B	oro	ugh
Hamm	ner W	/eight (	lb.)	-		-	-	Casing: -					ion		See				-	_
Hamm	ner F	all (in.)		-		-	-	Hoist/Hammer:					N E	0 40						
	Ē	No. in.)		ram		loqu	V	Visual-Manual Identification	and Description	-	T		$\neg$			l	F	_	Tes	st_
Depth (f	PID (ppr	Sample & Rec. (	Sample Depth (f	Well Diag	NAME, max. particle size <sup>2</sup> ,	on)	% Coarse	% Fine	% Coarse	% Mediur	% Fine	% Fines	Dilatancy	Toughnes	Plasticity	Strenoth				
- 0		G1	0.0					-CONCRET	TE-		Ŧ									F
	455	18	4.0			SM			, mps = 4 in., brick fragme	nts, 1	0	10	15	20	15	30				
							12 x 8 in.	boulder at 1.0 ft.							The second secon					
		G2 28		, 1	0	10	15	20	15	30										
- 5 7	2.0			exploration at 5.0 ft.		Ī			- [	15	85		_		Ī <sup></sup>					
-				æ			moist to w	vet, 0.5 in. piece of brick at 8.0							MALANDA MALANDA CONT. TO STATE OF THE PROPERTY OF THE PARTY OF THE PAR					
-		G3 25	8.0 12.0	INSTALLI		ML	Similar to	G2, except with gravel, mps = -FILL-	0.25 in., wet			1,5	5	5	15	60				
Visual-Manual Identification and Description   Sand   Field   Substitution   Su																				
	, ,													_						
'	0.0				/		5	5	15	50	25									
					14.0	ML	moist, 50%	% 0.06 in. particles of red brick		1	†	15	5	5	15	60	- 1	-		1-
- 15 -					15.5	- Company	Similar to		h wood and few scallon she											
.   (	0.0		16.0				1	FILL-		1	+	_	_		-	10				1
		- -	20.0			SM	moist, with	th 50% red brick, mps = 0.80 is salty SAND (SM), mps=0.08	n.	·			10	20	60	10				
								-LACUSTRI	NE-		-			-	Manhampton fallen fannen					
							Note: Acet	eteate liner jammed in barrel sar			-			***************************************	CONTRACTOR CONTRACTOR					
					20.0		11010. 1100	mor jammou m barger sar	···b··											
	Т	Wa	er Leve			th /#1	\ to:	Sample Identification	Well Diagram					nma						_
Date	e	Time	Elapse Time (h	hr∖B	ottom		m Motor	O Open End Rod	Screen	Over				,	,		0.0			
2/27/0	04	NA	NA	010	Casing NA	of Ho 8.0	vie	T Thin Wall Tube U Undisturbed Sample	Filter Sand Cuttings	Rock Sam			be	(IIn	. ft.) G8		-			
21211		1474	11/7		1171	o.U	7.0	S Split Spoon G Geoprobe	Grout Concrete	Borin			,	14	GH		2			
Field	Tests	s:		Dilata	ancy: hness:		l Rapid, S-SI .ow, M-Me	Slow, N-None Plas	Bentonite Seal   sticity: N-Nonplastic, L-Lo Strength: N-None, L-Lo	ow, M-I	VIe	diu	m,	H- H-H	Hig ligh	h	م/.\	rv F	liah	
				rougi	111000.	L-L kimum							11.						11411	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

ĘĮ/	ALEY	&						E	Bor	in	g N	014	4GF	1002	;		
AI	DRIC						TEST BORING REPORT	F	ile She	No et.l	294 No.	155 2	-01: 2 o	l f 2	2		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	ith	S Symbol	Visual-Manual Identification and Description	1	ave	se se	Sar	d			Toughness a		
	PID	San	Sar	Well	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	S %	% Fine	%	W %	% Fine	% F	Dilatancy	Toug	Plasticity	Strength
- 20 - - -	223	G6 15	20.0 24.0			ML	Brown, SILT with sand (ML), mps=0.08 in., no structure, strong naphthalene-like odor, dry					10	90				
- - 25 -	273	G7 -	24.0 27.0			ML	Similar to G6  Note: Acetate liner jammed in barrel sample.		ATTACA NA PARA PARA PARA PARA PARA PARA PARA			10	90				
		G8 -	27.0 30.0	:		ML	Similar to G6 -GLACIAL LACUSTRINE- Note: Acetate liner jammed in barrel sample.					10	90				
- 30 -					30.0		BOTTOM OF EXPLORATION AT 30.0 FT.  Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.  Sample "14GH002-00FP" collected from 0-0.2 ft. Sample "14GH002-02" collected from 0.0-2.0 ft. Sample "14GH002-04" collected from 2.0-4.0 ft. Sample "14GH002-07" collected from 5.0-7.0 ft. Sample "14GH002-14" collected from 12.0-14.0 ft. Sample "14GH002-30" collected from 28.0-30.0 ft.										
				2			size (mm) is determined by direct observation within the limitations of sampler							401			

CON ED\_T83\_P61 USCSLIB4.GLB USCSTB+CORE4.GDT G.IDATA\29\29455\_29463\GINT LOGS\29455-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

H/ AL	ALEY o	%z H					TEST	BORING REPORT  Boring No.14GH00	13
Pro Clie Cor		Conso	lidated	Edisc	on Co.	of N	ew York Ir	enley & Nicol Environmental, Inc. Start February 24, 200	4
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish March 2, 2004 Driller K. Kegal	
Тур	e			-	(	3	-	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falce/J. O'Bri	ien
Insid	de Dia	meter (	in.)	_	1.	50	-	Bit Type: - Elevation 4.54 Drill Mud: - Datum Manhattan Boi	rough
Han	nmer V	Veight (	(lb.)	-		-	-	Casing: - Location See Plan	
Han	nmer F	all (in.)		-		-	-	Hoist/Hammer: N 0 E 60	
ť.)	Ê	S E	<u>;</u>	Iram		Symbol	V	Gravel Sand Field T   Sual-Manual Identification and Description   المجالة   Gravel Sand   Field T	rest
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy		Visual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size, addr., moisture, optional descriptions, geologic interpretation)	Plasticity Strength
- 0 -		G1	0.0		0.6			-CONCRETE-	
-	1.1	16	4.0		2.0	SM		ty SAND with gravel (SM), no odor, moist to wet, bricks, agments, mps = 5 in.	-
-			-			GP	Section of I water flow	broken clay tile pipe, encountered at 2 in. below grade, light intially noted, then stopped.	
-		G2 28	4.0		4.5		copper wire	orly-graded gravel with SAND (GP), brick pieces, porcelain, e, no odor, wet, mps = 5 in.	
- 5 -		20	8.0			SM SM	Bottom of l	silty SAND (SM), slight organic odor, wet, mps = 0.25 in.  Hand Excavation/Vac-Truck Exploration at 5.0 ft.	
-				_				en, silty SAND (SM), white ceramic pieces, no structure, dry, ent-like odor	
-	1.0	G3 18	8.0 12.0	NO WELL INSTALLED		SM	Dark brown odor	rn, silty SAND with gravel (SM), no structure, wet, musty-like 5 20 15 25 15 20 -FILL-	***************************************
- 10 <del>-</del> - -	7.0	G4 26	12.0 16.0	NO WEI	14.0	SM	Gray, silty	SAND (SM), slightly bonded, wet, organic odor, trace brick 5 25 40 30	MARIONA MARIONA (All and an annual annua
- 15 -	1.0	G5 32	16.0 20.0		14.0	SM	Brown, silt	ty SAND (SM), slighty bonded, moist, slight musty odor -FILL-	
- 20 -		Wa	er Leve					Sample Identification Well Diagram Summary	
Da	ate	Time	Elapse Time (l	ed nr.) Bo	Depottom Casing	th (ft. Botto of Ho	m Water	O Open End Rod Riser Pipe Screen T Thin Wall Tube Riser Pipe Screen Rock Cored (lin. ft.) 23.0 Filter Sand Rock Cored (lin. ft.)	
3/2	2/04	NA	0		-	12.0		U Undisturbed Sample Cuttings Samples G6	
								G Geoprobe Concrete Bentonite Seal Boring No. 14GH003	
	eld Test				nnéss:	L-L	ow. M-Med	ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Ory Strength: N-None, L-Low, M-Medium, H-High, V-Very High	gh
'SP	T = Sar		ws per 6 te: So					(mm) is determined by direct observation within the limitations of sampler size (in millimeters).	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\GINTLOGS\29455-011.GPJ

HALEY &		TEST DODING DEPOST	1						1003			_
ALDRICH		TEST BORING REPORT					455 2		1 f 2			
Depth (ft.) PID (ppm) Sample No. & Rec. (in.) Sample Depth (ft.)	Well Diagram Depth (ft.) USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size, structure, odor, moisture, optional descriptions, geologic interpretation)	4	vel	ge e	Sar	ηd		Ę	Toughness a	Plasticity all	t qtoudto
20 G6 20.0 23 23.0	23.0 ML	-FILL-			5	5	35	55				
		Refusal at 23.0 ft. BOTTOM OF EXPLORATION AT 23.0 FT.  Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.  Sample "14GH003-00" collected from 0-0.2 ft. Sample "14GH003-08" collected from 6.0-8.0 ft. Sample "14GH003-15" collected from 13.0-15.0 ft. Sample "14GH003-23" collected from 21.0-23.0 ft.										

CON ED\_TB3\_PG1 'USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

'SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

HALEY ALDRIC	& H					TEST BORING REPORT		E	 3o	rir	ng	No	o.1	4G	НО	04	
Project Client Contracto	Conso	lidated	Ediso	on Co.	of N	ured Gas Plants Within Stuyvesant Town 14th Street Station ew York Inc. g, Inc./ Fenley & Nicol Environmental, Inc.	3	Sh Sta	eet art	N	o. Fe		f 2 ary	23,			
Type Inside Dia	meter (		asing -		npler G	Barrel Drilling Equipment and Procedures  - Rig Make & Model: Simco Earth Probe 200 ATV Bit Type: -	] 	Ori ⊣8 Ele	kA I eva	M Re	. Si	nith Fa	n/ K	25, . K /A.	egal Mu	rph	
Hammer I	Neight ∈	(lb.)	- -		- -	Drill Mud: - Casing: - Hoist/Hammer:	l	_0	tur cat	ion N E		See		n	n Be		
Depth (ft.) PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation		g	-ine	% Coarse	% Medium		% Fines	Dilatancy	Toughness	Plasticity	
- 0	G1 26	0.0 4.0	-CONCRETE- Brown, silty SAND with gravel (SM), brick pieces, mps = 4 in., no odor, moist.	1	0	10	20	20	15	25							
14.7	G2 26	Dark gray, silty SAND (SM), mps=0.5 in, moist, slight petroleum-li odor, brick and concrete pieces.	ke 5	5	5	20		25	20				_				
- 5 - 4.4		Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. Dark gray to black, silty SAND (OL/OH), mps=0.08 in., no structure organic odor, wet.  Dark gray, SILT with sand (OL/OH), inps = 0.08 in., no structure,					40	40									
- 10 -	G3 24			1			10	90		######################################							
-	G4 0	12.0 16.0	NO WELL INSTALLED			No Recovery				WANTED AND A STATE OF THE STATE							
- 15 -	G5 0	16.0 20.0				No Recovery -FILL-	нетеритериция наружная колофила образоватующих по техня по техня п										
20	101	ton!		<b>1</b> 0		Comple Identification   W. II D.											
Date 2/25/04	Time NA	ter Lev Elapse Time (I	ed_ hr.) B of (	Dep ottom Casing NA	th (ft. Botto of Ho 8.0	Screen  T Thin Wall Tube  5.0  U Undisturbed Sample S Split Spoon G Geoprobe  S Grout Concrete Bentonite Seal	Over Rock Sam Borin	g C	urde Core es No	ed	(lin	ft. ft. G	7 100	-			
Field Tes	mpler blo	ws per 6	3 in.	hness: Ma	L-L ximum	apid, S-Slow, N-None Plasticity: N-Nonplastic, L-Lov bw, M-Medium, H-High Dry Strength: N-None, L-Low particle size (mm) is determined by direct observation within the limitation based on visual-manual methods of the USCS as practiced	M-M ns of s	<u>1ec</u>	diur nple	m, ers	H-H	ligh (in n	<u>nillin</u>	nete	ry H	ligh	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA/29/29455\_29462\_29463/GINT LOGS/29455-011.GPJ

HA AL	LEY & DRIC	Ϋ́					TEST BORING REPORT	F	ile	No	29	455	-01			-
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	1	ave	Se	Sai	ηd		Toughness a	Plasticity a	Γ
<u> </u>	188	G6 28	20.0 26.0	-		ML	Gray, SILT with sand (ML), mps = 0.08 in., no structure, no odor, moist					$\vdash$	95	_	<u> </u>	
							NOTE: Drill action indicates strata change at 24.0 ft. overdrove sampler to 26.0 ft.									
					24.0		-FILL- Clear, light brown, free-phase product with naphthalene-like odor				_	_				
25 -	4026				25.0	ML	Brown, SILT with sand (ML), mps = 0.08 in., no structure, strong	<u>.</u>	L -	-	-	10	90	 _		
	1760	<b>G</b> 7	26.0		t t	ML	naphthalene-like odor, soil saturated with free-phase product from 25.0 ft. to 25.5 ft.						85			
		28	30.0			MIL	Similar to above, soil saturated with free-phrase product, naphthalene-like odor at 27.0 and 28.0 ft.									
					AVVVPR TO THE TOTAL PROPERTY OF THE TOTAL PR		-GLACIAL LACUSTRINE-									
30 -					30.0		BOTTOM OF EXPLORATION AT 30 FT.									
							Notes: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.									
ав в основном размента в селения в с			The depoted is constructed as a second				Sample "14GH004-00" collected from 0-0.2 ft. Sample "14GH004-07" collected from 5.0-7.0 ft. Sample "14GH004-12" collected from 10.0-12.0 ft. Sample "14GH004-26" collected from 24.0-26.0 ft. Sample "14GH004-30" collected from 28.0-30.0 ft.		,							
											- Andrew Control of the Control of t					
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				WATER TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE TO												
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CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

HALEY ALDRI	CH					TEST	BORING REPORT  Boring No.14GH	1005	5
Project Client Contract	Consc	lidated	Ediso	n Co.	of N	ew York I	enley & Nicol Environmental, Inc. Start February 13,		
		Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  Finish March 1, 20 DrillerM. Smith/ K. Ke		
Туре					G		Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falce/A. N		hy
Inside Di	ameter (	Sampler Barrel Drilling Equipment and Sampler Bit Type:  Set (in.)  Set (					Manhatan	. D.	1
Hammer			_		-	_	1 1: 0 7:	1 DO1	Jugn
Hammer		1	_		-	-	NO.		
	<u>o</u> ; ⊕		E		PQ	,	Gravel Sand Fi	eld Te	est
Depth (ft.) PID (ppm)	Sample No. & Rec. (in.)	атрlе lepth (ft.	ell Diagra	epth t.)	SCS Syml	(Densit	Visual-Manual Identification and Description  ty/consistency, color, GROUP NAME, max. particle size, odor, moisture, optional descriptions, geologic interpretation)	Toughness	Strength
0 -			3	۵€	ž	structure, c			T to
	G1 22	1		0.6	SM		vn, silty SAND and gravel (SM), moist, 10% brick pieces, 2 x 10 15 10 25 20 20 e of Tar-Like Material, mps = 3 in.		
5 - 4.0	G2 33	1	LLED		SM SM	Brown, sil	ay, silty SAND with gravel (SM), trace brick, moist, no 5 10 15 20 25 25		
0.8	31	12.0	LL INSTALLED	9.5	ML	mps = 0.2		- N	1 -
			NO WELL	12.0		in.	-FILL-		
0.0	G4	12.0 16.0		12.0	SM	0.5 in.	black, silty SAND (SM), no structure, no odor, wet mps = 5 10 15 30 40 hple slid out of acetate liner	N	1
15 - 453	G5	16.0 20.0			Ity SAND (SM), slightly bonded, slight petroleum-like odor, s = 0.13 in.  -FILL- etate liner jammed in barrel sample				
20	Wa	ter Lev	el Dat	a			Sample Identification   Well Diagram   Summary		
Date	Time	Elapse Time (I	ed Bo	Dep	th (ft. Botto	m Water	O Open End Rod III Riser Pipe Screen Overburden (lin. ft.) 26.5		
3/1/04	NA	NA	OI C	Dasing NA	of Ho	vie -	U Undisturbed Sample S Split Spoon Concrete S Split Spoon S Samples S S SAMPLES S S SAMPLES S S S S S S S S S S S S S S S S S S S		
Field Te	sts:		Dilata	ncy:	R-F	Rapid, S-SI	G Geoprobe Bentonite Seal   Bentonite Seal   Seal		—
			Tough	<u>ıness:</u>	L-L	ow, M-Me	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Ver e (mm) is determined by direct observation within the limitations of sampler size (in millimeters		<u>h</u>

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

H	ALEY &	& H			<u></u>		TEST BORING REPORT	1					4 <b>G</b> F	<b>1005</b>	;		
				Τ_	T	_		Ls		et l		2		f 2	eld	Too	.+
(#)	(md	le No (in.)	(ft.)	agran		Symbol	Visual-Manual Identification and Description			_			Š				
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs (	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20	1134	G6 -	20.0 24.0			SM	Brown, silty SAND (SM), slightly bonded, strong naphthalene-like odor, dry.					60	40				
-							-FILL-										
- - - 25 -	1607	G7 -	24.0 26.5		26.0 26.5	SM	Brown, silty SAND (SM), slightly bonded, moist, strong naphthalene-like odor.  Brown, silty SAND (SM), no structure, trace brick, naphthalene-like odor, mps=0.25 in.  -FILL-  Refusal at 26.5 ft. BOTTOM OF EXPLORATION AT 26.5 FT.  Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.  Sample "14GH005-00" collected from 0-0.2 ft. Sample "14GH005-07" collected from 5.0-7.0 ft.		10	15	35	15	40 25				
							Sample "14GH005-18" collected from 16.0-18.0 ft. Sample "14GH005-27" collected from 25.0-26.5 ft.										

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G::DATA/29/28455\_29462\_29463/GINT L0GS/29455-011.GPJ Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soll identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

H Al	ALEY LDRIC	& .H					TEST	вог	RING R	EPO	RT					Во	ri	ng	No	o.1	4G	H0	06	
Clie	oject ent ntracto	Conso	lidated	Edisc	n Co.	of N	ew York I	nc.	Within Stuyv				eet Station	1	St		t N	o. Fe	ebru	f 2 iary	12,	, 200		
			C	asing	Sar	npler	Barrel		Drilling Ed	quipment	and F	Proced	lures		1							egal		
Тур	е			-		G	-	Rig M	∕lake & Mod	lel: Simc	o Eart	h Probe	e 200 ATV		Н	&A	Re	p.P	. Fa	ilce				
Insi	de Dia	ımeter (	in.)	_	1	.50	_	,	ype: -							eva atur		n	4 M	.41 anh	atta	n B	orou	ıøh
Har	nmer \	Weight (	(lb.)	-		-	_	1	Mud: - ng: -									1		Pla				
Har	nmer l	Fall (in.)	)	-		-	-	3	/Hammer:									0	0					
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	£	S Symbol			Manual Ider			,		2	Coarse D	leve Le		San	ıd	% Fines	Dilatancy	Toughness a	Tes	
Dep	PID	Sar & R	Sar	Well	Depth (ft.)	nscs			oisture, option						0%	% Fine	) %	№ 1	% ₽	₩ F	Dilat	Toug	Plasticity	Strength
- 0 -		G1	0.0		0.7				-0	CONCRET	E-													
ŀ		0	4.0		0.7		Boulder in	nmediate	ely under slab	o, mps =	10 in.													
-	0.0					sw	Brown, we 40% brick		ed SAND with	h gravel (S	SW), m	ioist to	wet, no odo	or,	5	10	20	25	35	5				
- - 5 -	1.6	G2 40	4.0		3.9	SM		Hand E	excavation/Va								15	25	35	25				
-									.5 ft. east of o	-FILL-														
- - - 10 -	3.9	G3 48	8.0 12.0	WELL INSTALLED		SM	petroleum-	-like or o	y, silty SANI organic odor, ft., mps = 1.	black stai				ces	5	10	15	25	25	20				
-	1.7	G4 36	12.0 16.0	NO WE		SM	Dark gray odor, mps	, silty S <sub>2</sub> = 0.75	AND with gra 5 in., brick ar	avel (SM), nd wood p -FILL-	, moist, ieces.	, light p	etroleum-li	ke	5	15	10	20	30	20				
- 15 - - -	83.1	G5 16	16.0 20.0		16.0	SM	Similar to naphthalen		except black/s dor	staining, A	Ash-Lik	e Matei	rial,							The second secon				
					20.0																			
- 20 -	1	Wa	ter Lev	el Dat				Sa	mple Identil	fication	V	Vell Dia	agram				Sur	nm	ary					_
	ate 8/04	Time	Elaps Time (	hr ∫ B	Dep ottom Casing		om Water	O T U	Open End R Thin Wall Tu Undisturbed	ıbe		Scre	r Sand	Ro	erb ck ( mpl	Cor				)	21.0			
3/	0/ <b>04</b>	10:30	"	PARTITION OF PERSONS AND PERSO	-	-	'	S	Split Spoon	, cample	4 4	Grou		Bor				14		100	)6			_
	eld Tes			Dilata Tougl	าทess:	: L-L	Rapid, S-Si ow, M-Me	dium. I	H-Hiah	Drv	Streno	Bent N-Non oth: N-l	tonite Seal Iplastic, L- None, L-L	Low, N	/-М -Ме	ediu	ım, m.	H-	-Hig Hial	jh n. V	/-Ve	ry F	ligh	
SF	-	mpler blo <b>No</b>							s determined manual me													S).		

CON ED\_TB3\_PG1 USCSUB4.GLB USCSTB+CORE4.GDT 6\DATA/29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

H	ALEY o	& H					TEST BORING REPORT	F	ile	No	- 294	ļ55.	-011				
£	л Э	No. in.)	<u>:</u> ;	ram		loqu	Visual-Manual Identification and Description	Gra	vel		Sar	d			ield	Tes	t
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20 -		G6 4	20.0 21.0		21.0	SM	Similar to above -FILL-										
Ī					21.0		Refusal at 21.0 ft. BOTTOM OF EXPLORATION AT 21.0 FT.										
				-		***************************************	Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.										
						Application and the second and the s	Sample "14GH006-00" collected from 0-0.2 ft. Sample "14GH006-07" collected from 5.0-7.0 ft. Sample "14GH006-15" collected from 13.0-15.0 ft. Sample "14GH006-20" collected from 18.0-20.0 ft.										
														1			
					минимальная положений межений положений положений положений положений положений положений положений положений п												
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													Mayor de la company				

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINTLOGS\29455-011\GPJ Apr.12\05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

Client Contractor  Type Inside Diamet Hammer Weig Hammer Fall  0 Jamble N 3.0	Aqui  eter (ir	idated fer Dr Ca	Edisc	on Co. And Sam	of N	ew York Ir	Penley & Nicol Environmental, Inc.    Drilling Equipment and Procedures   Finish February 23, 2     Driller M. Smith / K. Keg     Rig Make & Model: Simco Earth Probe 200 ATV     Bit Type: -     Elevation   4.22     Drill Mud: -   Casing: -   Location See Plan     N 0	004 gal lurphy
Hammer Weight (tr.) Hammer Fall  Obbth (tr.) Obstacle Diameter (tr.)  O	& Rec. (in.)	Sample (ft.)	-	1.	50 -	Barrel - - - -	Drilling Equipment and Procedures  Rig Make & Model: Simco Earth Probe 200 ATV  Bit Type: - Drill Mud: - Casing: -  Hoiet/Hammer:  Driller M. Smith/ K. Keg H&A Rep.P. Falce/A. M  Elevation 4.22 Datum Manhattan  Location See Plan N 0	gal Iurphy
Hammer Weight (tr.) Hammer Fall  Obbth (tr.) Obstacle Diameter (tr.)  O	& Rec. (in.)	Sample Gobth (ft.)	Well Diagram	1.	<b>5</b> 0	- - -	Rig Make & Model: Simco Earth Probe 200 ATV  Bit Type: - Elevation 4.22  Drill Mud: - Datum Manhattan  Casing: - Location See Plan  N 0	lurphy
Hammer Weight (tr.) Hammer Fall  Obbth (tr.) Obstacle Diameter (tr.)  O	& Rec. (in.)	Sample Gobth (ft.)	Well Diagram		-	-	Drill Mud: -  Casing: -  Location See Plan  N 0	Borough
Hammer Fall Opentin (tr.) O 3.0 Sample No.	& Rec. (in.)	Sample O Depth (ft.)	Well Diagram	Depth ft.)	Symbol	-	Casing: - Location See Plan	
O Depth (ft.)  O Sample No.	& Rec. (in.)	0.0	Well Diagram	Depth ft.)	Symbol	-	Hoist/Hammer:	
5 - 2.4		0.0	Well Diagram	Jepth ft.)	Symbol		E 140	
5 - 2.4		0.0	Well Diag	Jepth ft.)	ਨੂੰ	V		ld Test
5 - 2.4	G1			<b>□</b> •	uscs s	(Density	Visual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size <sup>2</sup> ;  bdor, moisture, optional descriptions, geologic interpretation)	Plasticity Strength
5 - 2.4		4.0	1	0.7		-	-CONCRETE-	
5 - 2.4				2.0	sw		ell-graded SAND with gravel (SW), brick and concrete pieces, 5 10 25 30 25 5, no odor, moist.	
5 - 2.4				2.0	SM		silty SAND with gravel (SM), mps = 3 in., no odor, moist, 10 15 15 20 15 25 concrete pieces.	
	G2 48	4.0 8.0		5.0	SM	Brown, silt	ty SAND (SM), brick and concrete pieces, mps=1 in., no 5 15 25 30 25	
				3.0	SM	Brown, silt	Hand Excavation/Vac-Truck Exploration at 5.0 ft.  ty SAND (SM) with gravel, mps = 1.25 in., no structure, no to 6 ft. then moist.	
10 -	G3	8.0 12.0	NO WELL INSTALLED		SM		above, except mps = 1.5 in., moist.  5   5   10   10   45   25   tate liner jammed in sample barrel	
	G4 30	12.0 15.0	ON		SM	Material in	above, except mps = 2 in. Black silty SAND with Oil-Like a sampler tip, probable residual product, strong e-like odor.	
15 - 598				15.0	SM		OF EXPLORATION AT 15.0 FT.	
						and concre		
						Sample "14	4GH007-00" collected from 0-0.2 ft. 4GH007-07" collected from 5.0-7.0 ft. 4GH007-15" collected from 13.0-15.0 ft.	
	10/-1		10.0		-			
	ime	er Levi Elapsi Fime (l	ed B	Dep	th (ft.) Botto	m Water	Sample Identification     Well Diagram     Summary       O Open End Rod     ☐ Riser Pipe     ☐ Overburden (lin. ft.) 15.0       T Thin Wall Tube     ☐ Filter Sand     Rock Cored (lin. ft.) -	
2/26/04 N	NA	NA	101 C	Dasing NA	of Ho 8.0	oie	T Thin Wall Tube U Undisturbed Sample S Split Spoon  Filter Sand Cuttings Grout Grout Concrete  Filter Sand Samples G4  Boring No. 14GH007	
Field Tests:			Dilata	ncv.	R-P	Ranid S-SI	G Geoprobe Sentonite Seal Senting No. 14311007  ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	
<sup>1</sup> SPT = Sample			Tough	ness:	L-L	ow, M-Med	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very (mm) is determined by direct observation within the limitations of sampler size (in millimeters)	High

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29455-011.GPJ

H. Ai	ALEY ( DRIC	& H					TEST	воі	RING REPO	RT				Вс	ri	ng	No	o,1	4G	H0	80	
Clie	ject ent ntracto	Conso	lidated	l Edis	son Co.	of N	lew York I	nc.	Within Stuyvesant T  & Nicol Environmen				Sh	nee art	t N	lo. Fe		f 1 iary	, 20 , 26.			
			С	asing	Sar	npler	Barrel		Drilling Equipmer	nt and I	Procedures		1 ' ''	nist ille				-	ζ. K			
Тур	е			_		G	-	Rig I	Make & Model: Sim	co Eart	th Probe 200 ATV		4							-	rph	у
		meter ( Veight	- 1	-	1	.50	-	Drill	Type: - Mud: -				Da	eva atur	m					n B	oroi	ugł
1		all (in.)	` 1	-		-	-	1	ing: - st/Hammer:				LC	oca	N E	[ 0   16		Pla	an			
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Densit	ty/consi	Manual Identificatio	NAME	., max. particle size²	,	% Coarse	Fine	Coarse	Sar Wedium %	T	Fines		Toughness a	Plasticity a	Π
- 0 -	<u>a</u>			We		ns	structure, o	odor, m	noisture, optional descr		geologic interpreta	tion)	%	%	%	%	%	%	Diig	Tor	Pla	1
_	1.7	G1 17	0.0 4.0		0.6	SW- SM	Brown, we	ell-grad	-CONCRE led SAND with silt and		(SW/SM), no odor,	dry.	10	10	15	20	25	20				
-	2.7				2.5	sw	Gray-brow		Il-graded SAND with g = 2 in.	ravel (S	SW), slight petroleur	n-like	10	15	15	25	30	5				_
- 5 -		G2 48	4.0 8.0		4.2	SM			side of hole, mps = 10 Excavation/Vac-Truck		tion at 4.2 ft.	i		15	5	10	40	30	The second secon			_
-	34.58			ED E		SM	Brown to g		ilty SAND with gravel r, moist	(SM), n	mps = 0.25 in., no										AN ENGLISHMENT AND THE PROPERTY OF THE PROPERT	
_		G3	8.0 11.0	STALLI					except brown. med in sample barrel.					15	5	10	40	30				
- 10 -				NO WELL INSTALLED	11.0		rectate in	ici jailii	-FILL-													
-				X	11.0		ŧ		ick at 11.0 ft. KPLORATION AT 11.	0 FT.												
							Note: Bore and concre		ackfilled with drill cutt hed.	ings and	l sand upon complet	ion										
		**************************************		ende para de la companya de la comp			Sample "I-	4GH00	8-00" collected from 0 8-06" collected from 4 8-11" collected from 9	.0-6.0 f							STREET, STREET					
																						and the second s
			ter Le			oth (ft.	) to:		ample Identification	V	Vell Diagram Riser Pipe						ary					
D	ate	Time	Time	(br 🔚	Bottom f Casing	Botto	om Water	┥ '	Open End Rod Thin Wall Tube		Screen Filter Sand	Ro	ck (	Cor			n. ft. n. ft.	)	-			
								S	Undisturbed Sample Split Spoon Geoprobe	a * a	Grout Concrete	Bor	mpl ing		).	14	G  GF		)8	**		
	eld Tes		l	Tou	tancy:	: L-L	Rapid, S-SI ow, M-Me	low, N	I-None Pla H-High Dry	Strend	Bentonite Seal N-Nonplastic, L-L gth: N-None, L-L time within the limit	w, M	-Me	diu	m,	H-	High	n, \	V-Ve	ry F		
	ı - Sai	mpler blo <b>No</b>							is determined by direct											<u>ای).</u>		_

Boring No.14GH009 TEST BORING REPORT File No29455-011 Former Con Edison Manufactured Gas Plants Within Stuyvesant Town 14th Street Station Project Sheet No. 1 of 1 Client Consolidated Edison Co. of New York Inc. February 10, 2004 Aquifer Drilling And Testing, Inc./ Fenley & Nicol Environmental, Inc. Start Contractor February 27, 2004 Finish Casing Sampler Barrel **Drilling Equipment and Procedures** Driller M. Smith/ K. Kegal H&A Rep.P. Falce/A. Murphy Rig Make & Model: Simco Earth Probe 200 ATV G Type 4.10 Manhattan Borough Bit Type: Elevation Inside Diameter (in.) 1.50 Datum Drill Mud: -Hammer Weight (lb. Location See Plan Casing:  $N_0$ Hammer Fall (in.) Hoist/Hammer: -E 180 Gravel Sand Field Test (in.) Well Diagram JSCS Symbol Visual-Manual Identification and Description Sample Depth (ft.) (mdd) % Medium Coarse Foughness Coarse Sample I & Rec. (i Rec. % Fines Plasticity Dilatancy Depth ( Fine % Fine Depth (ft.) (Density/consistency, color, GROUP NAME, max. particle size<sup>2</sup>, PID ( structure, odor, moisture, optional descriptions, geologic interpretation) % % % G1 -CONCRETE-0.0 4.0 Dark gray, well-graded SAND with gravel (SW), mps = 4 in., no odor, 1.0 SW 10 20 30 20 15 5 2.3 5 10 20 30 30 5 <u>SP</u> 1.5 moist, brick fragments. SM Gray, poorly-graded SAND (SP), mps = 5 in., slight petroleum-like 10 15 20 30 15 10 odor, moist. Gray to brown, silty SAND with gravel (SM), mps = 5 in., no odor. 4.2 0.0 G2 27 4.0 SP Bottom of Hand Excavation/Vac-Truck Exploration at 4.2 ft. on boulder 10 15 10 60 5 8.0 Brown to gray, poorly-graded SAND with gravel (SP), mps=0.50 in., 5 no structure, no odor, moist, 15 20 15 45 5 Similar to above, except mps = 1.25 in., gravel is mica based rock. WELL INSTALLED 8.0 SP Similar to above. 15 20 15 45 5 12.0 10 5 15 75 SP 9 Similar to above. 3.0 G4 12.0 Similar to above, except dark gray in macro core tip with slight 5 15 75 naphthalene-like odor in sampler tip. 15.0 -FILL-15.0 15 Refusal at 15.0 ft. BOTTOM OF EXPLORATION AT 15.0 FT. Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched. Sample "14GH009-00" collected from 0-0.2 ft. Sample "14GH009-02FP" collected from 1.0-1.5 ft. Sample "14GH009-07" collected from 5.0-7.0 ft. Sample "14GH009-15" collected from 13.0-15.0 ft. Well Diagram Water Level Data Sample Identification Summary Depth (ft.) to: Riser Pipe Elapsed Open End Rod Overburden (lin. ft.) 15.0 Date Time Bottom | Bottom Screen Time (hr.) Water Thin Wall Tube Rock Cored (lin. ft.) f Casing of Hole Filter Sand Cuttings 2/12/04 13:30 U Undisturbed Sample Samples G4 0.25 4.2 3.5 Grout 2/12/04 13:45 0.5 3.25 4.2 S Split Spoon 14GH009 Boring No. Concrete 14:00 G 2/12/04 0.75 4.2 3.1 Geoprobe Bentonite Seal R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Dilatancy: Field Tests: Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High 6 in. 2 Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters). <sup>1</sup>SPT = Sampler blows per 6 in.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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H./ Al	LEY o	& H					TEST	BORING REPORT  Boring No.14GH	)10
Proj Clie Cor		Consc	olidated	Edisc	on Co.	of N	ew York I	Plants Within Stuyvesant Town 14th Street Station Inc. Sheet No. 1 of 2 Start March 17, 200 Finish March 17, 200	
			Ca	asing	Sar	npler	Barrel	Drilling Equipment and Procedures  Driller J. Hodge/K. Kegal	
Тур	Э			-		_	-	Rig Make & Model: Simco Earth Probe 200 ATV  H&A Rep.P. Falce	
Insid	de Dia	meter (	in.)	-		-	_	Bit Type: - Elevation 7.61 Drill Mud: - Datum Manhattan F	Borough
1		Veight	. 1	-		-	-	Casing: - Location See Plan	
Han	imer F	all (in.	T-1-	-   _		-	-	Hoist/Hammer: E 200  Gravel   Sand   Field	d Test
(±	pm)	e No	(#)	agran		Symbol	V		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	uscs s		Visual-Manual Identification and Description  ty/consistency, color, GROUP NAME, max. particle size², odor, moisture, optional descriptions, geologic interpretation)	Plasticity Strength
- 0 <i>-</i> - -	0.0	G1 0	0.0		0.3 0.6	 _SP SM	\in., Clinke	-CONCRETE- prown, poorly-graded SAND (SP), no odor, moist, mps = .012 / 10   15   25   35   30   5     er-Like Material and brick fragments wn, silty SAND with gravel (SM), no odor, moist, 15-20%   s = 5 in.	
- 5 - -	0.5	G2 38	4.0 8.0	0		SM		Hand Excavation/Vac-Truck Exploration at 5.0 ft.  10 15 20 25 20 lty SAND with gravel (SM), no odor, moist, mps = 0.5 in.	
- - 10 -		G3 36	8.0 12.0	NO WELL INSTALLED		SM	Same as ab	bove, wet. 5 10 15 20 25 20	
-	0.3	G4	12.0		12.0	ML	Gray to rec	ed-brown, sandy SILT (ML), no odor, wet.	
-		14	14.0					-FILL-	
- - 15 -	0.3	G5 12	14.0 16.0			ML	Gray sandy	ly SILT (ML), no odor, wet.	and the second s
		G6 0	16.0 18.0				No Recove	ery. Problem with discreet sampler.	THE RESIDENCE OF THE PARTY OF T
	114	G7 4	18.0 19.0		18.0 19.0	SM		r, silty SAND with gravel (SM), wet, naphthalene-like odor, nortar fragments in sampler tip, mps = 2 in.	
							Refusal at	-FILL- 19.0 ft.	
1		Wa	ter Lev	el Dat	~~			Sample Identification Well Diagram Summary	· ' ·
Da	ate	Time	Elaps Time (	hr ∖ Bo	ottom		m was	O Open End Rod Riser Pipe Overburden (lin. ft.) 19.0	
3/17	7/04	14:00	0	of C	Casing -	of Ho	8	U Undisturbed Sample Scrout S Split Spoon	
Fie	ld Test	s:		Dilata	incy:	R-F	Rapid, S-SI	G Geoprobe . Bentonite Seal   Bentonite	
		npler blo	ows per (	Tough	ness: <sup>2</sup> Ma	L-L ximum	ow, M-Med	edium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very le (mm) is determined by direct observation within the limitations of sampler size (in millimeters).	High
L		No	te: So	il ide	ntifica	tion	based on v	visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	

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			1	1	}	ı		Ls	he	et l		2		f 2			
Depth (ft.)	(mdd	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram		Symbol	Visual-Manual Identification and Description		avel	şe	Sar Linip		es		ield ssau		
Dept	PID (ppm)	Samp & Red	Samp	Well D	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
							BOTTOM OF EXPLORATION AT 19.0 FT.										<u> </u>
							Note: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.										
							Changed to discreet sampler at 12 ft.										
							Sample "14GH010-00" collected from 0-0.2 ft. Sample "14GH010-02" collected from 0-2.0 ft. Sample "14GH010-04" collected from 2.0-4.0 ft. Sample "14GH010-08" collected from 6.0-8.0 ft. Sample "14GH010-16" collected from 14.0-16.0 ft. Sample "14GH010-19" collected from 18.0-19.0 ft.										
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**Boring No.14GH011 TEST BORING REPORT** File No29455-011 Former Con Edison Manufactured Gas Plants Within Stuyvesant Town 14th Street Station Project Consolidated Edison Co. of New York Inc. Sheet No. 1 of 2 Client March 16, 2004 Aquifer Drilling And Testing, Inc./ Fenley & Nicol Environmental, Inc. Start Contractor March 17, 2004 Finish Sampler Barrel **Drilling Equipment and Procedures** Casing Driller M. Mede/K. Kegel Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.A. Murphy/P. Falce Type G Bit Type: Elevation 6.75 Manhattan Borough Inside Diameter (in.) 1.50 Datum Drill Mud: -Hammer Weight (lb.) Location See Plan Casing:  $N_{0}$ Hammer Fall (in.) Hoist/Hammer: -Gravel Sand Field Test Sample No. & Rec. (in.) Symbol Vell Diagram Sample Depth (ft.) Visual-Manual Identification and Description Depth (ft.) PID (ppm) % Medium % Coarse % Fine Toughness Coarse % Fines Dilatancy **Plasticity** Fine Depth (ft.) JSCS 8 (Density/consistency, color, GROUP NAME, max. particle size<sup>2</sup>, structure, odor, moisture, optional descriptions, geologic interpretation) % % G1 0.0 -ASPHALT-0.5 4.0 Gray to brown, poorly graded SAND with silt and gravel (SP-SM), mps 10 10 20 50 10 SM 3 in., no structure, no odor, dry 2.0 SM Brown, silty SAND with gravel (SM), mps 3.5 in., no structure, no 10 10 20 30 30 odor, 20% red brick debris 4.0 G2 18 8.0 5 5.1 Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. 10 15 5 15 35 20 SM Brown silty SAND with gravel (SM), no odor, moist, brick fragments, mps = 0.25 in.5.1 10 15 15 25 30 5 Gray, silty SAND with gravel (SM), no odor, moist, mps = 1.0 in., SM WELL INSTALLED possible weathered cobbles 8.0 G3 12 5.2 12.0 Brown to gray, silty SAND (SM), no odor, wet 20 25 30 20 10 11.5 Gray, silty SAND with gravel (SM), no odor, wet, weathered cobbles, G4 12.0 ash, brick fragments, mps = 0.25 in. 14.0 0.0  $\overline{\mathsf{ML}}$ Gray, SILT with gravel (ML), wet, no odor, mps = 0.25, brick 5 5 10 80 14.0 16.0 fragments 15 16.0 SM Gray, silty SAND (SM), no odor, wet, mps = .015 in., brick fragments 30 40 30 G6 16.0 18.0 18.0 No Recovery G7 20.0 Water Level Data Well Diagram Sample Identification Summary Depth (ft.) to: Riser Pipe Elapsed Open End Rod Overburden (lin. ft.) 21.0 Date Time Bottom Bottom Screen Time (hr.) Water Thin Wall Tube Rock Cored (lin. ft.) Т of Casing of Hole Filter Sand Cuttings Undisturbed Sample Samples 3/17/04 10:20 G8 Grout s Split Spoon 14GH011 Boring No. Concrete Geoprobe Bentonite Seal R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Field Tests: Dilatancy: Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Me Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

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SPT = Sampler blows per 6 in.

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						Ι_		Gra				ınd		1	ield	Toc	<u>-</u>
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	th	USCS Symbol	Visual-Manual Identification and Description	g		٥	Ι.	=	% Fines		Toughness		
20 -		San & R	San Dep	Well	Depth (ft.)	nsc	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	+	+-	+-	+	+-	+		Toug	Plasticity	
20 -	9.2	G8 6	20.0 21.0		21.0	SM	Black, silty SAND with gravel (SM), black staining, sheen, weathered petroleum-like odor, wet	5	10	15	5 20	30	20				_
							-FILL-										
							Refusal at 21 ft. BOTTOM OF EXPLORATION AT 21.0 FT.			-							ı
							Notes: Borehole back filled with drill cuttings and sand upon completion and concrete patched.			***************************************							
							Changed to discreet sampler at 12 ft.								1		
							Sample "14GH011-00" collected from 0-0.2 ft. Sample "14GH011-08" collected from 6.0-8.0 ft. Sample "14GH011-16" collected from 14.0-16.0 ft. Sample "14GH011-21" collected from 20.0-21.0 ft.										1
							Sample "14GH011-21" collected from 20.0-21.0 ft.										
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<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

Ai	LEY & DRIC	% H ≡					TEST	BORING REPORT  Boring No.14GH	1012
Proj Clie Con		Consc	olidat	ed Ed	ison Co	o. of N	lew York I	enley & Nicol Environmental, Inc. Start March 14, 20	
				Casir	ng Sa	mpler	Barrel	Drilling Equipment and Procedures Finish March 16, 20 Driller J. Meyers/K. Kep	
Туре	9			-		G	-	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falce	
Insid	de Dia	meter (	(in.)	-		1.50	-	Bit Type: - Elevation 5,94 Drill Mud: - Datum Manhattan	Boro
Ham	nmer V	Veight	(lb.)	-	***************************************	-	-	Casing: Location See Plan	
Ham	nmer F	all (in.)	)	-		-		Hoist/Hammer: Royal N 0 E 240	
(;)	£	S (-	1	( <u>.</u>	5	Symbol	\		eld Te ဖွ
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample	Deptn (ft.)	Depth	USCS Syl	(Densit	Visual-Manual Identification and Description  ty/consistency, color, GROUP NAME, max. particle size, odor, moisture, optional descriptions, geologic interpretation)	l oughness Plasticity
0 -	0.1	G1	0.0	0	0.3	5		COBBLESTONES	
	0.1 0.3	-	4.0	0	-	SP SP	Light brov	wn, poorly-graded SAND (SP), moist, no odor, mps = .125	
					And the same of	or	Light brov	wn, poorly-graded SAND with gravel (SP), moist, no odor, and brick, mps = 10 in.	
5 -	0.0	G2 14	4.0		5.0	) SM	Rottom of	Hand Excavation/Vac-Truck Exploration at 5.0 ft. 5 15 15 25 40 15	
	0.0					SIM	Brown, sil	Ity SAND with gravel (SM), no odor, moist, mps = 1 in.	
	0.0				3	SM		0 ppm y SAND with gravel (SM), weathered cobbles/boulders, no st mps = 1.2 in.	
10 -	0.0	G3 20	8.0			SM		y SAND with gravel (SM), weathered cobbles/boulders, no , mps = 1.0 in.  -FILL-	
		G4 0	12. 14.	0			No Recov	rery, rock fragments in tip of sampler	
15 -	0.3	G5 5	14. 16.	1		SM	Gray, silty organic od	y SAND with gravel (SM), weathered cobbles/boulders, slight   5   10   15   30   30   lor, wet	
	8.5	G6 5	16. 17.	1	17.0	SM	Same as al	bove, naphthalene-like odor 5 10 10 15 30 30	
					Add at an and address of the address			I OF EXPLORATION AT 17.0 FT.	
								orehole backfilled with drill cuttings and sand upon completion.  ones were then placed back into position.	
<u>1</u>		Wa	ter L	evel [	Data	1		Sample Identification Well Diagram Summary	
Da	ate	Time		psed		pth (ft.		O Open End Rod Riser Pipe Overburden (lin. ft.) 17.0	
2	(10.1	10.50			of Casin		ole vvater	T Thin Wall Tube	
3/16	6/04	10:30		0	-	-	8	U Undisturbed Sample G6 S Split Spoon Gootet Concrete Bentonite Seal	
Fie	eld Test	ts:	J		atancy:	R-F	Rapid, S-S	Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	, Lilar
1SP	T = Sar	mpler blo		er 6 in.		aximun	n particle siz	edium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Ven te (mm) is determined by direct observation within the limitations of sampler size (in millimeters visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	y 1719f 1),

HA AL	LEY & DRIC	₹ H					TEST BORING REPORT	F	ile	No	29	455	-01	1012 1 f 2			
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	ave	1	Sar	nd		F	Toughness e	Plasticity a	
							Changed to discreet sampler at 12 ft.  Sample "14GH012-00" collected from 0-0.2 ft.  Sample "14GH012-04" collected from 2.0-4.0 ft.  Sample "14GH012-07" collected from 5.0-7.0 ft.  Sample "14GH012-17" collected from 16.0-17.0 ft.  Sample "14GH012-17" collected from 16.0-17.0 ft.										

Consolic Aquif	idated E ifer Drill Cas HS n.) 4 1/	dison C ing And ing Sa A 14	mpler S 3/8 140 30    one N	lew York Ing, Inc.  Barrel  (Densit	Plants Within Stuyvesant Town 14th Street Station nc.  Drilling Equipment and Procedures  Rig Make & Model: CME 75 Truck Mounted  Bit Type: - Drill Mud: - Casing: - Hoist/Hammer: - Automatic Hammer  //sual-Manual Identification and Description  //consistency, color, GROUP NAME, max. particle size <sup>2</sup> ,	S   S   S   S   F   C   C   C   C   C   C   C   C   C	lev Datu Loca	et N h er J. Re atio	Ka Kaep.A on	1 o Mar Mar imer M	f 2 ch ch nice lurp .19 anh	l6, 2 l8, 2 k/L hy/l atta	Ad B. T	
eight (lb	Sample Charlet (ft.)	A 14 Mell Diagram Updel O.	S 3/8 140 30   loguks SOSI   l	- - - - (Densit	Rig Make & Model: CME 75 Truck Mounted Bit Type: - Drill Mud: - Casing: - Hoist/Hammer: - Automatic Hammer  (isual-Manual Identification and Description	E C L	Drille 1&A Elev Datu .oca	atio	Ka ep.A on	Men. Men. Men. Men. Men. Men. Men. Men.	lurp .19 anh Pla	k/L hy/l atta n	Ad B. T n Bo	lams Farborou
eight (lb	Sample (d. c. d. c	Weil Diagram Weil Diagram O.	3/8 140 30   loquids SOSN 3	(Densit	Bit Type: - Drill Mud: - Casing: - Hoist/Hammer: - Automatic Hammer  //sual-Manual Identification and Description	H E C L	lev Datu Loca	atio	n Sar	M See	.19 anh Pla	hy/latta	B. T	Carbo Orou
eight (lb	Sample G	Well Diagram Oppth	30   logue & SOSN   30   30   30   30   30   30   30   3	(Densit	Drill Mud: - Casing: - Hoist/Hammer: - Automatic Hammer  /isual-Manual Identification and Description	L G	oca rave	m atio	n Sar	See	Pla	n F	ield	
eight (lb	Sample G	Well Diagram Oppth	30   logue & SOSN   30   30   30   30   30   30   30   3	(Densit	Casing: - Hoist/Hammer: - Automatic Hammer  //isual-Manual Identification and Description	G	oca	atio	Sar	See	Pla	n	ield	
ıll (in.)	Sample Depth (ft.)	۵ O.	30 IOSCS Symbol	(Densit	Hoist/Hammer: - Automatic Hammer  /isual-Manual Identification and Description	G	rave	l se	Sar	nd		F		Tes
		۵ O.	USCS Symbol	(Densit	isual-Manual Identification and Description		$\top$	se	_					Tes
Sample Nc & Rec. (in.		۵ O.	3	(Densit	·		$\top$	se	_					
Sample & Rec.		۵ O.	3		y/consistency, color, GROUP NAME, max. particle size <sup>2</sup> ,	6	g a	1 -			10	>	8	
S S S		۵ O.	3			1 (	Fine	Coa	Medium	Fine	Fines	Dilatancy	Toughness	Plasticity
	99 99 111111111111111111111111111111111	4			dor, moisture, optional descriptions, geologic interpretation	on) 8	8 8	%	%	%	%	Dila	Tou	Plas
	4 9 ///////////////////////////////////	4 00 ///////	SP		-CONCRETE-			146						$\equiv$
				structure,	orly-graded SAND with gravel (SP), mps = 3 in., no no odor, no PID readings due to snow, moist to wet at top used to cut through sidewalk, dry below, 5% red brick del		110	) 10	40	35				
S1	5.0 7.0	5.	SP- SM	Loose, ligh = 0.5 in.,	it brown/brown, poorly-graded SAND with silt (SP-SM), r occasional lense of gray crushed stone with mica flakes,	nps	5	10	15	60	10		and the second s	
S2	7.0	<b>#</b>	SP-		above, except with some mica flakes in black fine grained									
-	9.0		SM	soil.	-FILL-									
ŀ		<b>∄</b> ∷ 9.					'							
S3	9.0 11.0		SM				5	10	15	50	20			
	11.0		SM			and the state of t								
E	13.0 15.0		SM			'n	5		10	50	35			
	15.0 17.0		SM	Similar to	above									
1	17.0 19.0		SM	Similar to	above									
	19.0 21.0		SM					-						
Wate	er Level	1			Sample Identification   Well Diagram			Su	nm	ary				
ине		D - 44		m	O Open End Rod Screen				•			27		
		of Casin	g of Ho	ole vvater	T Thin Wall Tube			red	(lir			-		
NA	0	25.0	27.	0 9.4	S Split Spoop				1 4 3			2/	—	
		llate = -		300id 0 0'	G Geoprobe Concrete  Bentonite Seal				14	GF	[01	)2/ 3		
	T	oughnes	s: L-l	_ow, M-Me			ediu	ım,	H-	Higi	ı, V	<u>'-Ve</u>	<u>у Н</u>	igh
S S S S S S S S S S S S S S S S S S S	SS2 SS3 SS3 SS4 SS5 SS5 SS6 SS6 Wattrame	7.0	S1	7.0	S1   S.0   S.0	ST. 5.0   S.0   S.0   S.0   S.0   S.0   S.0   S.0   S.0   Loose, light brown/brown, poorly-graded SAND with silt (SP-SM), r. = 0.5 in., occasional lense of gray crushed stone with mica flakes, stratified brown/light brown color, no odor, moist.  SZ 7.0   S.0   S.0	St. 5.0   Sp. SM   Sp. SM   Sp. SM   Similar to above except with a 5 in. pocket of fine to medium grained soil with brown and dark brown mottling, mps = 0.5 in., brown with gray mottling, no odor, wet -FILL-  SM   Similar to above except with some mical flakes in black fine grained soil.   Sm. Similar to above except with some mical flakes in black fine grained soil.   FILL-    SM   Similar to above except with some mical flakes in black fine grained soil.   FILL-    SM   Similar to above except with a 5 in. pocket of fine to medium grained soil with brown and dark brown mottling, mps = 0.5 in.    SM   Similar to above except with a 5 in. pocket of fine to medium grained soil with gray mottling, no odor, wet -FILL-    SM   Similar to above except with a 5 in. pocket of black stained SM soil with gray mottling, no odor, wet -FILL-    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    SM   Similar to above except a 2 in. pocket of black stained SM soil with a strong naphthalene-like odor.    S	St.   S.0   S.0   S.M   S.M   Loose, light brown/brown, poorly-graded SAND with sitt (SP-SM), mps = 0.5 in., occasional lense of gray crushed stone with mica flakes, stratified brown/light brown color, no odor, moist.  SP   S.M   Similar to above, except with some mica flakes in black fine grained soil.	St. 5.0   Sp.	St. 5.0 S. Sp. Shottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. S. Sh. S. Sh. S. Sh. S. Sh. S. Sh. Sh.	St. 5.0   S.D.   S.D.	St. 5.0   S.0   S.P.   S.M   Loose, light brown/brown, poorly-graded SAND with silt (SP-SM), mps   0.5   10   15   60   10	St.	St. 5.0

H. Al	ALEY & DRIC	% H					TEST BORING REPORT	F	ile	No	29	1، 455	<b>4GF</b> -01	WS0 1013 1 f 2	3		Manage A
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	1	Eine	l ge	Medium Sar	ηd		F	Toughness a	Plasticity a	Π
(1) Depth (1)	(mdd) GIA	Sample N Sample N Sample N	21.0 22.8 25.0 27.0	Well Diagra	20.3 20.5 22.2 22.8 25.0 26.8 27.0	SM	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)    Black stained soil with naphthalene-like odor   Very loose, gray brown, silty SAND (SM), mps = 0.25 in., contained black stained silty sand with naphthalene-like odor, Tar-Like Material in tip of spoon, brown oily sheen from stained soil. Trace wood fibers in   Tar-Like Material in spoon.   Tar-Like Material in tip of spoon, black stained soil and oily sheen.   Black stained fine grain soil silty SAND (SM), mps = 1.0 in. brick fragments, 1.0 in. in tip of spoon.   FILL-	% Coarse	% Fine	%		60	%	Dilatancy	Toughness Toughness	Plasticity	
																	**************************************

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA\29\29455\_29462\_29463\GINT LOGS\29455-011 AQUIFER.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

14MWS02/ 14GH013

HALEY ALDRIC	& H					TEST BORING REPORT		В	ori	ng	N	o.1	4G	H0	14	Province
Project Client Contracto	Consc	lidated	Ediso	n Co.	of N	ured Gas Plants Within Stuyvesant Town 14th Street Station ew York Inc. g, Inc./ Fenley & Nicol Environmental, Inc.	S	hee tarl	et N		1 c Ma	of 2 irch	9, 2			
		Ca	asing	San	npler	Barrel Drilling Equipment and Procedures	1 .	nis rille				ch s/K			4	
Туре			_	(	G	Rig Make & Model: Simco Earth Probe 200 ATV	Н	&A	R	ep.S	. В	rous	sea	ı/Ρ.		
Inside Dia	ameter (	in.)	-	1.	50	Bit Type: - Drill Mud: -		iev atu	atio	on	Ň	5.68 Ianh	atta	n B	oroi	ugh
Hammer '	Weight	(lb.)	-		-	Casing: -	-		itio	n 10		Pla				_
Hammer	Fall (in.)	<u> </u>	-		-	- Hoist/Hammer:			F	<u> 26</u>		,				
£ E	o (ii	<u></u>	Iram		Symbol	Visual-Manual Identification and Description	-	ave		Sar	-			ield %	,	st_
Depth (ft.) PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Syl	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0.0	G1	0.0		0.5		-COBBLESTONES-			Ī							
- 0.0	-	4.0			SP SP	Light brown, poorly-graded SAND (SP), moist, no odor, mps = .025 in.	10	15	2 21	50 20	45 30	1 - 1				
_					GI .	Light brown, poorly-graded SAND with gravel (SP), moist, no odor, cobbles, brick, mps = 3 in.				20		3				
- 5 -	G2 0	4.0		5.0		Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft.		-						. —		-
-						•										
-			ED.			No recovery, brick and rock fragments in tip of sampler				THOUSAND THE PARTY AND ADDRESS						
- 10 -	G3 18	8.0 12.0	NO WELL INSTALLED		SM	Dark gray, silty SAND (SM), no odor, mps = 0.05 in., wet $-FILL-$			20	30	30	20				
			z	12.0		Note: Change to discreet sampler										
- 0.3	G4 12	12.0 14.0			ML	Gray, silty with SAND (ML), wet, slight organic odor, mps = 0.05 in.	-	† -	1-	1-	10	90		-		_
<b>L</b>	`~	17.0				-FILL-										
0.3	G5 18	14.0 16.0		14.0 15.0	SM	Brown to dark gray, silty SAND (SM), wet slight organic odor, mps = 0.25 in., shells and ash			20	30	30					
					OL/ OH	-FILL- Gray to black, organic SILT (OL/OH), wet, slight organic odor, mps =	4					100				
- 0.1	G6 14	16.0 18.0		:	OL/ OH	0.05 in. Gray to black, organic SILT (OL/OH), slight organic odor, wet, shell pieces, mps = $0.1$ in.						100				
	G7 0	18.0 20.0				No Recovery -ORGANIC DEPOSIT-										
20		<u> </u>		20.0					1							
		ter Lev	1		th (ft.	to: O Open End Rod Riser Pipe C	verb			mm (lin			20			
Date	Time	Time (	nr ∖ Bo	ottom Casing	Botto	m Screen	ock			•			30			
3/12/04	09:45	0		-	-	6 U Undisturbed Sample Grout	amp				G	12				
		- Andrews	малалариринала			C Calif Cason	oring	No	э.	14	GI	H01	4			
Field Tes	sts:		Dilata Tough			apid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, bw, M-Medium, H-High Dry Strength: N-None, L-Low,	M-M	edi	um	, Н	-Hiç	gh h \		n, L	liah	
		ws per 6				particle size (mm) is determined by direct observation within the limitations									<u> </u>	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\(\)DATA\(\)2\(\)2\9452\_29462\_29463\(\)GINT LOGS\(\)2\(\)955\_011.GPU Apr 12, 05

HALEY & ALDRICH							TEST BORING REPORT				<b>Boring No14GH014</b> File No29455-011										
								Sheet No. 2 of 2													
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	Coarse	Sa mijooly %		% Fines		Toughness a	Plasticity a	t				
20 -	0.5	G8	20.0			SM	Gray, silty SAND (SM), wet, slight organic odor, mps = 0.05 in.			H	F	_	40				Ė				
	35.5	18	22.0		21.0	ML	-GLACIAL LACUSTRINE- Dark gray, SILT (ML), wet, naphthalene-like odor, mps = 0.05 in.	Ļ.	ļ.,	-	-	· <del> </del>	100				_				
	12 9.0	G9 20	22.0 24.0			ML	Gray to brown, SILT (ML), naphthalene-like odor, mps = 0.05 in.						100								
25 -	10	G10 18	24.0 26.0	annerer men mineral d'annerer des centres des		ML	Brown, SILT (ML), wet (loose), naphthalene-like odor, mps = $0.05$ in.						100								
	65					ML	Same as above						100								
	27	G12 20	28.0 30.0			ML	Same as above, with few black stained lenses				***************************************		100								
20					30.0		-GLACIAL LACUSTRINE-								:						
30 -					-		BOTTOM OF EXPLORATION AT 30.0 FT.														
					OPPRESENTATION OF THE PROPERTY		Notes: Borehole backfilled with drill cuttings and sand upon completion. Cobble stones were then placed back into position.														
							Sample "14GH014-00" collected from 0-0.2 ft. Sample "14GH014-10" collected from 8.0-10.0 ft. Sample "14GH014-18" collected from 16.0-18.0 ft. Sample "14GH014-28" collected from 26.0-28.0 ft.														
											***************************************										
										Andreas de la company de la co											
								anne market manual designations of the formation of the f													
											stambalistic formation in the formation of the formation										
										on working and the second and the second											
	:											***************************************									

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GINT\LOGS\29455-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

ALDRIC	H	BORING REPORT  Boring No.14MV 14PH	Boring No.14MWD01/ 14PH001															
Project Client Contracto	Conso	Start February 25, 2																
		Ca	sing	San	npler	Barrel	Drilling Equipment and Procedures Finish March 16, 26 Driller R. Gause/L. Ada											
Туре		Н	SA	!	S	-		H&A Rep.A. Murphy/B. Tarbel										
Inside Dia	ameter (	in.) 4	1/14	1 1 1	3/8	_	Bit Type: - Elevation 5.53 Drill Much Manhattan	Boros										
Hammer	Weight (	(lb.)	-	1	Drill Mud: -  Casing: -  Datum Mannatian  Location See Plan		-											
Hammer	Fall (in.)		-	3	80	-	Hoist/Hammer: - Automatic Hammer											
Depth (ft.) PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	/isual-Manual Identification and Description	loughness ger	1												
	Sam & Re	Sam Dept	Well	Depth (ft.)	nscs	(Densit structure, o	y/consistency, color, GROUP NAME, max. particle size, odor, moisture, optional descriptions, geologic interpretation)	l oughne: Plasticity										
0			Δ Δ Δ	0.5	SP	SOD Brown no	orly-graded SAND with gravel (SP), mps = 1 in., no 5 10 10 15 50		and discountered									
			Δ Δ Δ Δ Δ Δ	2.0	SF		no odor, dry.											
			Δ Δ Δ	2.0	SP		black, poorly-graded SAND with gravel (SP), mps = 2 in., no 5 5 5 10 30 50 no odor, dry, 10% Cinder-Like Material and coal, 5% brick											
				3.0	SP	Yellow to	light brown, poorly-graded SAND with gravel (SP), mps = 2 5 10 20 30 35 Lecture, no odor, dry.	_ -										
- 5 -	G1 7	5.0 7.0		5.0	SM	Very loose	Hand Excavation/Vac-Truck Exploration at 5.0 ft. e, brown, silty SAND (SM), mps 0.5 in., no structure, no 5% brick particles, occasional crushed concrete pocket 2 in.											
	G2 9	7.0 9.0			SM	Similar to	above, except without concrete pocket -FILL-											
- 10 -	G3 6	9.0		9.7		odor, mois	e, brown, poorly-graded SAND with gravel (SP), no structure,											
	G4 4	11.0 13.0		12.0		no odor, w	/ct.											
				13.0	CL		black, silty CLAY (CL), mps = 0.5 in., frequent pockets of rese sand, frequent wood fibers and chips, no odor.	ММ										
	G5 18	13.0 15.0	100	13.0	CL	Very soft, consisting		ММ										
- 15 -	G6 12	15.0 17.0			CL	Similar to	aboveGLACIAL LACUSTRINE-											
	G7 16	17.0 19.0			CL	Similar to	above.											
	G8 11	19.0 21.0			CL		, lean CLAY (CL), mps = 0.1 in., occasional 3 in. pocket of vn fine grained soil with 25% organics from 19.3 to 19.6 ft.	мм										
20 -	Wa	ter Leve	el Da				Sample Identification   Well Diagram   Summary											
Date	Time	Elapse Time (h	nr ∫ B	Dep ottom Casing		M Water	O Open End Rod  T Thin Wall Tube  Riser Pipe Screen Screen Rock Cored (lin. ft.) 31  Rock Cored (lin. ft.) -											
3/16/04	NA	0		9.0	11.(		U Undisturbed Sample S Supplies Supplie											
Field Te			Dilata	nov"		Panid S C	G Geoprobe   Soling No. 14PH001	-										
FIDIA IO	ຣເຣ.			incy: hness:		tapid, 5-5i .ow, M-Me		v Hiah										

H/ Al	ALEY & DRIC	Š H	,			<u></u>	TEST BORING REPORT	Boring No14MWD01/ 14PH001 File No29455-011 Sheet No. 2 of 2									
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	ও Coarse	% Fine	ģ	Sar Wedium %		% Fines	Dilatancy	Toughness a	Plasticity al	
20 -		G9 24	21.0 23.0			CL	Similar to above, except no organics -GLACIAL LACUSTRINE-										
		GI0 15	23.0 25.0		23.0	мн	Stiff, gray, elastic SILT with sand (MH), mps = 0.25 in. occasional brick piece, no odor wet.			-	15	15	70		·		_
25 -		G11	25.0 27.0			МН	Similar to aboveGLACIAL LACUSTRINE-										
		G12	27.0 29.0			МН	Similar to above.										
30 -		G13	29.0 31.0			мн	Similar to above.										
					34.5		BOTTOM OF EXPLORATION AT 34.5 FT.		,								
							Notes: Drill cuttings placed in drums. Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report I4MWD01" for complete well details.								- The second		
							Sample "14PH001-00" collected from 0-0.2 ft. Sample "14PH001-02" collected from 0-2.0 ft. Sample "14PH001-04" collected from 2.0-4.0 ft. Sample "14PH001-07" collected from 5.0-7.0 ft. Sample "14PH001-15FP" collected from 13.0-15.0 ft. Sample "14PH001-31" collected from 29.0-31.0 ft.										
							Note: Due to weather conditions no PID readings were obtained at this location.										
													The state of the s				
2122							e size (mm) is determined by direct observation within the limitations of sampler anual methods of the USCS as practiced by Haley & Aldrich, Inc.	E	30ı	ing	No	).			VD0 100		

H./ AI	ALEY o	& H					TEST	ВС	ORING F	REPO	RT					В	or	in	g N	lo.	14	PH	00:	2	
Pro Clie Cor		Consc	lidate	d Edis	on Co	of N	ured Gas I ew York I ntal, Inc.		s Within Stuy	yvesant To	wn 14	Ith Stre	eet Sta	tion	S	he tar	et I t		1 M		2 h 9,				
			C	Casing	Sar	npler	Barrel	T	Drilling E	Equipment	and P	roced	ures			inis rille		М.			i 10 K. K				
Тур	e			-		G	-	Rig	g Make & Mo	odel: Simo	o Earth	Probe	200 A	ATV										Falc	æ
Insid	de Dia	meter (	in.) - 1.50 - Bit Type: - Drill Mud: -														/ati Jm			5.1 Mai	3 ihat	tan	Boı	roug	gh
Han	nmer \	Veight :	(lb.)	-		-	-	1	asing: -						- ⊨=		atio		Se	e F	lan				_
Han	nmer F	all (in.)		-		-	-	Ho	oist/Hammer:																
<u>.</u>	(u	No.	) G	ram		Symbol	\	Visua	al-Manual Ide	entification	and D	escrip	tion			ave	-+-		and F	-		$\overline{}$	eld T	est	_
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Syr	(Densit	ity/cor	nsistency, colo moisture, opti	r, GROUP	NAME,	max. p	article		Coarse	% Fine	/o r m c	% Coarse	% Medium	Fine %	% rilles	Juana ley	seaulonoi	Plasticity	Strength
- 0 -		GI	0.0	-	0.6	1			-CO	OBBLESTO	NES-				+	+	+	$\dagger$	+	+		+		+	
	0.2	-	4.0		0.6	SM			AND with grav			or, mps	s = 4 i	n.,	10	1:	5 1	5 1	5 3	0 1	5	+	+	+	
_		G2 6	4.0		5.0		30-40% bi	rick																	
- 5 -			0.0		5.0				d Excavation/V						- -	+-	-	-	+	+-	- -	+-	- -		_
-						SP	Brown, po sampler	oorly-	graded SAND	with gravel	(SP), v	vood fib	oers in	tip of	10	1	5 1	5 3	0 2	5 5			-		
							sampler			-FILL-															
				l a																			İ		
-		G3	8.0	NO WELL INSTALLED			Obstructio	on at 8	8 ft. wood							١,									
-		0	12.0	NST			Push throu	ugh o	bstruction to 12	2 ft. with po	int.														
- 10 -				TT I				_		_									***************************************	-					
				) WE																					
-				ž																					
-		G4	12.0	-			No Recove	ery															***************************************		
-		0	16.0																						
																İ									
– 15 <i>–</i>																									
-		G5	16.0	-																	***************************************				
_	19.3	1	18.0	1						5 a 4 5 1 11															
	0.2					ML			silt with SANI ers, brick piece		ght petro	oleum-l	ike or	organic			11	0 1	יווט	0 7	וי				
	0.3	G6 18	18.0 20.0			ML	Gray, sand	dy SI	LT (ML), wet,	slight ash-l	ike odo	r, mps	= 0.05	in.		*		1	2	5 6	5				
-		10	20.0							-FILL-						-				-					
- 20 -	<del></del>	1	<u> </u>		20.0											_		-	_		<u> </u>	1			_
_			ter Le Elap	has	Der	th (ft.	) to:		Sample Iden  Open End			ell Dia Risei	gram r Pipe		Overb				nai		20	`			
D	ate	Time	Time	(hr.) E	Bottom Casing	Botto of Ho	m Water		•			Scree	en Sand		ock Rock			,		,	3(	,			
3/1	0/04	10:15	0		0	0	7	- L	J Undisturbe	ed Sample	0 9 6	Cutti	ngs	1	Samp			٠,		311					
								8			\$ 5	Conc	rete		oring	N	ο.	1	4P	HC	02				
Fie	eld Tes	ts:	1		ancy:		Rapid, S-S	Slow,	N-None	Plas	ticity: I	N-Nong	onite S plastic	, L-Low	, M-M	ed	iun	٦, <sub>۱</sub>		igh	\/ \	/~-	. نال		
¹SP	T = Sa	mpler blo		6 in.		ximum		ze (mn	n, H-High n) is determine i <b>al-manual m</b>	d by direct of	<u>bservat</u>	tion with	nin the		s of sa	ımp	oler	siz	e (ir	mil	lime	ters	).	411	_
L		INO	<u>.e. 3</u>	<u>vii 106</u>	zritiilC	auUII	vaseu ON	visu	armanuai M	ietiious ol	LITE U	JUJ a	o prac	.uvea D	y ⊓d	c y	Ot.	~16	at IC	1	HU.				

ALDRICH				TEST BORING REPORT	File No 29455-0 Sheet No. 2							11					
Depth (ft.) PID (ppm) Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram Depth	(ff.) USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	Gra	evel kine %		Sar	ηd		F	Toughness @	Plasticity a				
20 0.9 G7 24	20.0 22.0	S 0	ML	Gray to red/brown, sandy SILT (ML), wet, slight organic-like odor, mps = 0.5 in.	6	6	6	6	0	6	۵	ř	<u>a</u>				
0.6 G8 20	22.0 24.0		ML	Red/brown, sandy SILT (ML), wet, slight organic-like odor, mps = 0.05 in.				***************************************									
G9 0	24.0 26.0	ender entrebende eine eine mit die determen die deur des erne ein deur		No Recovery. Sampler plug malfunctioned allowing silt/slurry into sampler. Driller could not recover sample.								***************************************					
0.4 G10 22	26.0 28.0		ML	Red/brown, sandy SILT (ML), wet, slight organic-like odor, mps = 0.05 in., moist													
0.8 G11	28.0		ML	Same as above, moist, no odor -GLACIAL LACUSTRINE-					***************************************								
				Notes: Borehole backfilled with drill cuttings and sand upon completion. Cobblestones were then placed back into position.  Changed to discreet sampler at 16 ft.  Sample "14PH002-00" collected from 0-0.2 ft.  Sample "14PH002-07" collected from 5.0-7.0 ft.  Sample "14PH002-20" collected from 18.0-20.0 ft.  Sample "14PH002-30" collected from 28.0-30.0 ft.													

	LEY o	& H ≡					TEST	BORING REPORT  Boring No.14PH	1003						
Proj Clie Con		Consc	lidated	Edisc	on Co.	of N	ctured Gas Plants Within Stuyvesant Town 14th Street Station New York Inc. Sheet No. 1 of Start Marc								
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  Finish March 9, 20 DrillerM. Ryan/K. Keg							
Турє	 e					<del></del> -	_	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falce	C.						
Insid	le Dia	meter (	in.)	_	1.	50	_	Bit Type: - Elevation 5.12 Drill Mud: - Datum Manhattan	Poroug						
Ham	ımer V	Veight	(lb.)	_		_	-	Drill Mud: -  Casing: -  Datum Mannattan Location See Plan	Doroug						
Ham	mer F	all (in.)		-		_	-	Hoist/Hammer:							
		9 (÷		E	1	<u>pg</u>	,		eld Test						
٦ (ft.	mdd	ole N	ole h (ft.	jagra	_	Symbol	V	Visual-Manual Identification and Description  by Substituting Street Str	ness ity						
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs		Visual-Manual Identification and Description  ty/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , odor, moisture, optional descriptions, geologic interpretation)	Toughness Plasticity						
0	0.4	G1	0.0		0.5			-COBBLESTONES-							
}	U. <del>T</del>	-	4.0		1.5	SM	Light brow	wn, silty SAND (SM), no odor, dry, mps = 0.25 in.							
	0.0				1.0	SP- SM		porly-graded SAND with silt and gravel (SP-SM), 25% brick, 10 15 15 25 25 10 in., no odor, moist							
5 ~	0.8	G2 20	4.0	D	5.0	SM	Layered by	Hand Excavation/Vac-Truck Exploration at 5.0 ft. rown to orange to gray silty SAND (SM), moist, no odor, ments, mps = 0.75 inFILL-							
10 -		G3 0	8.0 12.0	NO WELL INSTALLED			No Recove pieces.	ery. Sampler contained washed-in soils, with brick and coal							
	0.3	G4 10	12.0 16.0	Ż		SM	Layered bi	rown to black, silty SAND with gravel SM, wet, no odor -FILL							
	0.8						Gray to wh	hite ash, solid 1 in. thick layer in sampler, wet no odor							
15 -	1.3														
			:			SM	Black silty	SAND with gravel (SM), wet, no odor, with brick pieces. 5 15 10 20 30 20							
		G5 0	16.0 20.0			And a second sec	No recover	ery - sampler wet with 1.5 in. piece or slag in tip -FILL-							
20 —															
	1		ter Lev	1		th (ft.	) to:	Sample Identification Well Diagram Summary  Riser Pipe Overburden (lin. #)							
Da		Time	Time (I	hr.) B	ottom Casing	Botto of Ho	Water	T Thin Wall Tube  Screen  Filter Sand  Rock Cored (lin. ft.)							
3/9	/04	14:15	0		-	-	7	U Undisturbed Sample S Split Spoon G Geoprobe  Cuttings Grout Samples G7  Boring No. 14PH003							
Fie	ld Tes	s:		Dilata				low, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	, <b>L</b> IIAL						
100	T = Sar	noler blo	ws per 6		<u>iness:</u> Ma:	L-L ximum	<u>.ow, IVI-IVIO</u> particle size	edium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very e (mm) is determined by direct observation within the limitations of sampler size (in millimeters	y High a).						

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\:DATA\\29\29455\_29462\_29463\GINT LOGS\\29455-011 FENLEY.GPJ

H	ALEY &						В	or	in	g N	lo1	4PH	1003				
A	DRIC						TEST BORING REPORT						-01 2 o	1 f 2	<u>}</u>		
	(i	No. T.)	t.	ram		Symbol	· Visual-Manual Identification and Description	Gra	ve	4_	Sa	ηd		F	ield	Tes	it
Depth (ft.)	(mdd) c	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	SS Syr	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20 -	OP C			We	æ.			-	-	+-	+-	+	-	Dila	Tou	Plas	Stre
	0.3	G6 48	20.0 24.0			SM	Gray to brown silty SAND with gravel (SM), no odor, wet -GLACIAL LACUSTRINE-	5	15	20	25	25	15				
	0.4				22.0	L				<u> </u> _		L.	_				
	0.4					ML	Brown, sandy SILT (ML), wet, no odor				10	15	75				
	0.3																
- 25 -		G7 36	24.0 27.0			ML	Brown, sandy SILT (ML), no odor, moist										
							-GLACIAL LACUSTRINE-										
					27.0												
							Refusal at 27.0 ft. BOTTOM OF EXPLORATION AT 27.0 FT.										
	:						Notes: Borehole backfilled with drill cuttings and sand upon completion. Cobblestones were then placed back into position.										
					and the second s		Sample "14PH003-00" collected from 0-0.2 ft. Sample "14PH003-07" collected from 5.0-7.0 ft.										
							Sample "14PH003-16" collected from 14.0-16.0 ft. Sample "14PH003-27" collected from 25.0-27.0 ft.										
					Andrews Andrews (Andrews)												
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CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA29/29455\_29462;GINTLOGS/29455-011 FENLEY.GPJ

Apr 12, 05

¹SPT = Sampler blows per 6 in. ²Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

14PH003

HA AL	LEY DRIC	& H						TEST	во	RING REPO	RT				Во	rii	ng	No	ე.1	4N	IW:	S0	1
Proj Clie Con		Conso	lida		lison C	o.	of No	w York I		Within Stuyvesant To	wn 14	th Street Station		Sh St	nee art	t N	lo. Fe	55-( 1 o ebru	of 1 Jary	25			-
				Casir	ng S	am	pler	Barrel		Drilling Equipment	t and P	rocedures		Į.	nisl ille			Mar ause		,			
ype	<del></del>			HSA	_		3	-	Rig	Make & Model: CMI	 3 75 Tr	uck Mounted		ŧ				1. M					
•		meter (	in \	4 1/1		1 3			Bit T	⁻ype: ₋				ş .		atio	'n		.64	ļ natta			
		Weight	1	4 1/1	.4	14		-	i	Mud: -					atur	m tior					ın B	orc	_
		Fall (in.)	1	-	***************************************	30		-	Cas	ing: - st/Hammer: - Auton	andin II.				Jua	liUi	1	See	Pla	an			
Iaii	IIIICI I	,				اد			HOIS	SVHAIIIII - AUIOII	latic Ha			Gra	avel	т-	Sar	-d	Г		Field	l Tc	
( <u>`</u>	Ê	Sample No. & Rec. (in.)		Depth (ft.)	5		Symbol	\	/isual-	Manual Identification	and D	Description			T	_					S		
Deptn (π.)	PID (ppm)	mple tec.	mple.	g g			SSS	(Densit	tv/cons	istency, color, GROUP	NAME.	max, particle size <sup>2</sup> .		Coarse	% Fine	Coarse	% Medium	% Fine	Fines	tanc	Toughness	Discticity	
Det	吕	Sar	Sar	Depth (ft.)	Depth	<b>E</b>	nscs			noisture, optional descri				%	% F	%	%	% F	% F	Dilatancy	Toug	100	
) -				Δ	<b>a</b> 0	.5				-SOD-						F	=	F					
				۵	4		SP			raded SAND with grave				5	10	15	20	50					
				4	Δ			structure, Cinder-Lil		r, dry, 5% brick debris, erial	3% 0ys	ster snells and 5%									-		
										-FILL-													
										-LILL-													
			-																				
5 -					5	.0		Rotton of	Hand	Excavation/Vac-Truck E	(vploret	ion at 5 0 ft		_		<del> </del>	-		<del> </del> -		<del> </del>	F	
																	-						
								See Test E 5.0 to 19.0		Report 14MWD01/14PF	1001 for	soil descriptions fr	om										
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										ngs placed in drums. In mpletion. Refer to "Ob													
					19	.0		Report 14	MWS0	1" for complete well det	ails.					L							
			-					воттом	OF E	XPLORATION AT 19.0	FT.												
!		\/\/a	ter l	l _evel [	Data				S	ample Identification	l w	/ell Diagram		l .	1	Sui	<u> </u>	nary	<u></u>	1		1	
_	at a		T	apsed	D		th (ft.)		0	Open End Rod		Riser Pipe	Ove	erb				າ. ft.		19			
D	ate	Time	1	e (hr	Botto of Casi		Botto of Ho		1	Thin Wall Tube		Screen Filter Sand						າ. ft.		-			
				į	. 540	31	<u> </u>		U	Undisturbed Sample	6,96	Cuttings	Sar										
									S	Split Spoon	å å	Grout Concrete	Bor	ing	No	— ).	14	ΜV	WS	01			
	eld Tes	te:	<u></u>	ווח	latancy		R-B	apid, S-S	G low N	Geoprobe I-None Plas	sticity	Bentonite Seal N-Nonplastic, L-L		_			. Н	-Hir	<u>dr</u>				
				To	<u>ughne</u>	ss:	L-L	ow, M-Me	edium,	H-High Dry	Strengt	th: N-None, L-Lo	w. M-	<u>-Ме</u>	diu	ım,	H-	Hig	h, \			Hig	L
SP	T = Sa	mpler blo		oer 6 in		Max	ximum	particle siz	e (mm)	is determined by direct in the second	observa	tion within the limita	tions o	f sa	mpl	ler s	size	(in r	milli	mete		_	ly —

H Ai	ALEY o	& H						TEST	во	RING REPO	RT				Bo	ri	ng	No	<b>5.1</b>	4M	W	002	!
Clie	oject ent ntracto	Conso	lida	ted E	Ediso	n Co.	of N	ured Gas lew York Ing, Inc.		Within Stuyvesant T	own 14	4th Street Station		SI	nee art	t N	lo. N		f 2 ch 2	23, 2			
				Cas	ing	San	npler	Barrel	To the same of the	Drilling Equipmer	t and F	Procedures			nisl rille					25, 2 ′. Cl			ne
Тур	e			HS	SA		S	_	Rig I	Make & Model: CM	E LC -	60 ATV Mounted						. Fa				Рчь	110
'		meter (	in.)	4 1.	/14	1	3/8	_	1	ype: -					eva		n	6 M	.39	atta	n R	oroi	ıoh
Han	nmer V	Veight	(lb.)	_			40	-	1	Mud: - ng: -					atur oca		า	See			11 15		-611
Han	nmer F	all (in.)		_		3	80	-	1	st/Hammer: - Auto	natic H	ammer											
		<u>9</u> (2)	Π		E	1	Бб	<u> </u>	<i>.</i>	N.A				Gra	avel	<del>1 -</del>	Sar	ıd		F	ield	Tes	it
ξ.	mdc	Se N	e e	ر <del>ا</del>	iagra		Symbol	`	visuai-	Manual Identificatio	1 and L	Description		Coarse	a	Coarse	Medium	O)	S	ıcy	ness	<u>.≥</u> .	₽
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample	ebt	Well Diagram	Depth (ft.)	nscs			istency, color, GROUP noisture, optional descr				Co %	% Fine	% Co	% Me	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
-0-	<u> </u>	ഗം	(O)		3		Ď	otradiaro,	0001, 11			goologio interpreta		8	%	6	6~	6	6		Ĕ	۵	S
	0.0			٥	a 6	0.5	SP	Light broy	vn. poo	-COBBLEST orly-graded SAND (SP)		or, moist, mps = 0.0	)12		5	30	35	25	5				—
ŀ	0.0			4	4	1.0	SM	\in.		SAND with gravel (S			1	10	15	15	20	20	20				-
-								in., 30-40			M), no (	odor, moist, mps =	4										
										-FILL-													1
			ļ			4.0																	
-						4.0				n mortared brick.				-	-	1-	-				-		-
- 5 -	-							Bottom of Augered t		Excavation/Vac-Truck I refusal.	∃xplorat	tion at 4.0 ft.											
								geres								-							
			}																				
ŀ					Ш			See Test I from 4.0 t		Reports 14GH011 and 1 ft.	4GH012	2 for soil description	18			-							
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_		Wa		<u>eve</u>			th (ft.	.) to:		ample Identification	V V	/ell Diagram Riser Pipe						ary		14 -			
D	ate	Time	1	apse ie (hi	- \ Bo	ottom	Botto	om Motor	0 T	Open End Rod Thin Wall Tube		Screen					-	ι. π. ι. ft.		34.5			
			1	•	or C	Casing	of Ho	DIE	U	Undisturbed Sample	996	Filter Sand Cuttings		mp		eu	/181	ı. IL. -	,	-			
									s	Split Spoon	- 1	Grout Concrete	Bor			).	141	ΜV	۷D	02			-
	+	4	_	-	)ilo4-	ne."		Popid C C	G	Geoprobe	oticit:::	Bentonite Seal											
	eld Tes			T	ough	ncy: ness:	: L-L	Rapid, S-S	edium,	H-High Dry	Streng	N-Nonplastic, L-L th: N-None, L-Lo	w, M	-Me	diu	m,	H-	Higi	n, \			ligh	
L SF	- i = Sai	mpier blo <b>No</b>								is determined by direct											15).		

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G;DATA\29\29455\_29462\_29463\GNT L0GS\29455-011 AQUIFER.GPJ

I	<u>I</u> AL	EY & RICI	<b>4</b>						E	Bor	ing	y N	014	MV	VD0	2		
	AUDI	RICI	I =					TEST BORING REPORT	F	ile	oM	294 No	155- 2	011	F 2			
	$\int_{-2}^{2}$		9 (;		E		pol	Visual Na College Miles and Decident	Gra	ave		San	d		F	ield	Tes	t
Denth (ft.)		rio (ppini)	ple N	ple th (ft.	Well Diagram	ج	USCS Symbol	Visual-Manual Identification and Description	% Coarse	_ 	% Coarse	% Medium	Je	Sec	ncy	Toughness	city	£,
- 20	- 1	2	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well	Depth (ft.)	nsce	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	ن %	% Fine	ٽ %	% W	% Fine	% Fines	Dilatancy	Toug	Plasticity	Strength
- 25	5							BOTTOM OF EXPLORATION AT 34.5 FT.  Notes: Drill cuttings placed in drums. Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 14MWD02" for complete well details.										

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GD7 G:\DATA\\29\29455\_29462\_29463\GINT LOGS\\29455-011 AQUIFER.GPJ

Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

14MWD02

H Ai	ALEY C DRIC	& H =					TEST	воі	RING REI	POR	<b>T</b>					Во	ri	ng	No	o.1	7C	Y0(	01	
Clie	ent ent otracto	Consc	lidated	Edis	on Co.	of N	ew York I	nc.	within Stuyvesai			th Street	Station		Sł St		t N	o. F		f 1 uary	/ 4, 11,			
			С	asing	San	npler	Barrel		Drilling Equip	ment a	and P	rocedure	es							-	/B.			
Тур	е		I	HSA		S	-	l	Make & Model:	Davey	Drill	DK 527	ATV Mo	unted									Klei	
Insi	de Dia	meter (	in.) ،	4.25	1	3/8	_	Bit T	ype: <sub>-</sub> Mud: -							eva atur		n	M M	0.0 anh	9 atta	n Be	orou	ıgh
1		Weight	` 1	-		40	-	Casi							Lo	cat	tior	1	See	Pl	an			
Han	nmer I	all (in.)	)	-   _	3	30   _	-	Hois	t/Hammer: Rop	e Cathe	ead/S	afety Han	nmer		Gra	avel	_	Sar	,d			أماط	Ton	_
(H.)	(mc	e No	(£ e	ıgram		Symbol	٧	/isual-l	Manual Identific	cation a	and D	escriptic	ก					, ,,,,	T				Tes	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	uscs s			stency, color, GR oisture, optional c					on)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strenath
0 -	0.0				0.5	-			-COBBL															_
-					2.0	SP			own, poorly-gradeno odor, moist; ap					= 2	5	5	10	60	20					
_	0.0				2.0	SP							n., no		5	10	5	<u>6</u> 0	15	5				_
	1   S1   S0																							
Ī	Structure, no odor, moist; approximately 5% brick.   4.0   -FILL-   5   5   60   15   5   5   5   5   5   5   5   5																							
- 5 -	Structure, no odor, moist; approximately 5% brick.   SP   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approximately 5% oyster shells and   Similar to above, except no brick; approxi																							
F	structure, no odor, moist; approximately 5% brick.  -FILL-  SP Similar to above, except no brick; approximately 5% oyster shells and glass.  SM Solution of Hand Excavation/Vac-Truck Exploration at 5.4 ft. NOTE: Drove spoon 30" at 5ft. Dense, red-brown, silty SAND (SM), mps = 1 in., no odor, moist,																							
-					7.5		approxima	tely 105	% brick and morta Layer of mortar a	ar. Som	e blac	k staining	visible in											
-	0.9	S2 13	7.5 9.0	ALLED		SM	Loose, bro odor, mois	wn to y	yellow-brown, silt t, approximately 5	y SANE 5% brick	(SM	), mps =	l in., no			5	10	10	45	30				_
-	0.6	S3 2	9.0 11.0	NO WELL INSTALLED	9.0	SM	Very loose	, browi	ar Coal-Like Mate n, silty SAND (SM % brick pieces at	M), mps		5 in., no o	dor, wet,			5	5	_ 10	55	25				_
- 10 - -				(O WEI	11.0				-F	ALL-														
							·		TPLORATION AT					4										
							Cobblestor Sample "1"	nes were 7CY001	packfilled with dril e then placed back 1-00" collected fro 1-02" collected fro	c into po om 0 - 0	sition .2 ft.		n completi	on.										
							Sample "1"	7C <b>Y</b> 001	1-04" collected fro 1-11" collected fro	om 2.0 -	4.0 f													
																						***************************************		
																				-	1			
		Wa	ter Lev	el Da	ta			Sa	imple Identificat	tion	W	ell Diagra	am İ		.	, 	Sur	ηm	ary	1				
D	ate	Time	Flans	ed	Dep	th (ft.	) to:	0	Open End Rod			Riser Pi		Ove	erbi					) 1	1.0			
			Time (	nr.) of	Casing			Т	Thin Wall Tube		• • •	Filter Sa		Roc			ed	(lin		•	-			
2/11	/2004	NA	NA		9.0	11.6	9.0	U S	Undisturbed Sar Split Spoon	mpie		Grout Concret	F	San Bori				17	S: CY		1			
Fie	eld Tes	ts:		Dilata	ancv:	R-F	Rapid, S-SI	G ow. N-	Geoprobe -None	Plastic	city: 1	Bentoni N-Nonpla	te Seal											
<u> </u>		npler blo	ws per	Toug	<u>hnéss:</u>	L-L	ow, M-Me	dium.		Dry St	trengt	h: N-Nor	ne, L-Lov	v. M-	Me	diur	'n.	H-I	Higi	1, V	'-Ve neter	ry H s).	igh	
		No	te: Sc	il ide					-manual metho															_

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT GNDATA/29/29455\_29462\_29463/GINT LOGS/29462-011 AQUIFER.GPJ

H. Al	ALEY O	& H					TEST	ВС	DRING	REPC	RT						В	ori	ng	N	0.1	7C	Y0(	)2	
Pro Clie Cor		Consc	lidated	Ediso	on Co.	of N	lew York I	Inc.		uyvesant T		l 7th	Street S	Station		S		t	lo. Fe	l o ebru	f 1 iary	19, 25,			
			C	asing	San	npler	Barrel		Drilling	g Equipme	nt and	Pro	ocedures	8		1						/M.			
Тур	е		I	HSA		S	-	1		Model: Mo		-47 t	truck mo	unted					_			/P.			
Insi	de Dia	meter (	in.) 4	4.25	1	3/8	-		tType: C ill Mud: N	utting Head						1	leva atu	atic	n	1 M	8.6 lanh	9 iatta	n Be	orou	ıgh
Han	nmer \	Weight	(lb.)	-	1	40	-	1	minda. 14 asing: -	one								atio	n	See	Pla	n			
Han	nmer F	all (in.)	)	-	3	30	-	Ho	oist/Hamme	er: Wire W	inch	Safe	ety Hamı	ner											
ټ	ш)	S C	<u> </u>	Iram		Symbol	\	Visua	al-Manual I	dentification	n and	De	scription	1		H	ave	1	Sar	_				Tes	ţ
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy				olor, GROUF ptional desc					on)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 0 -	0.0		0.0			SM	Dark brow	wn, si	ity SAND (S	SM), inps =	4 in., r	no o	dor, mois	t.			F	Ŧ							
-			5.0		1.0	SM	h			<u>TOPSO</u>	I <u>L-</u>					<u>.</u>	╁-	┨-	-						. <b></b> .
-	Brown, silty SAND (SM), mps = 10 in., no odor, moist.  Approximately 15% brick, less than 5% Coal-Like Material. No observable staining or PID readings.  -FILL-																								
	observable staining or PID readings.																								
ľ	-FILL-																								
ŀ	-5 - 0.0 S1 5.0 SM Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. 25 35 40																								
- 5 -	-FILL-  SM Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. Medium dense, brown, silty SAND (SM), mps = 0.1 in., no odor,																								
	SM Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft.																								
	S1 5.0 SM Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft.  10 7.0 Medium dense, brown, silty SAND (SM), mps = 0.1 in., no odor, moist, Brick and asphalt pieces in spoon tip.																								
-	0.1	S2	7.0		7.0	SM	Dense, bro	own,	silty SAND	(SM), no od	or, mo	ist, ı	mps = 0.	1 in.					25	40	35				
-		9	9.0	TEL			NOTE: Appieces.	pprox	kimately 75%	of sample of	ontains	s bri	ick and co	ncrete											
	0.1			NO WELL INSTALLED	9.0		•			EILI							1								
	0.1	S3 6	9.0 11.0	Ž		SM				<u>-FILL-</u> / SAND witl	gravel	1 (SN	M), mps=	-1.37 in.,	1	5	10	20	30	10	25				
- 10 -			11.0	VEL						dry, mps = e asphalt piec		% bi	rick, and	concrete.										ĺ	
1	0.0	D.4	11.0	ON ON	11.0	CM		-	-		ŕ		,												
		S4 2	11.0 13.0			SM	Similar to	abov	e.																
ŀ	0.0	S5	13.0		13.0	SM	Medium de	dense,	brown, silty	SAND with	gravel	1 (SN	M), no str	ucture, n	0	5	10	15	15	20	35				
ŀ		4	15.0				odor, dry.	. App	proximately :	50% red brid	k.														
45					15.0					-FILL															
- 15 -		S6 0	15.0 15.8				No Recove		refusal at 1 <i>6</i>	5.5 ft due to	an obst	mucti	 ion			-		1					_		_
ŀ			1		16.5		NOID. A	lugui	Terusur ut 10	7.5 11 due 10	an 000t	ituct													
							BOTTOM	1 OF I	EXPLORAT	ION AT 16.	5 FT.														
									ole backfille	d with drill o	uttings	and	l sand upo	n											
							completion																		
										ected from 0 ected from 9															
		14/-	tor! :	(al De	+			<del></del>	Cometa III		<del></del>	\A/-'	I Die												
	-1-		ter Lev Elaps	ed	Dep	th (ft.			Sample Ide Open En		Ш	]	l Diagra Riser Pip		01/			<u>Sur</u> ten			) 1	6.5			
	ate	Time	Time (	⊾. √B	ottom Casing	Botto of Ho	om Water	į					Screen Filter Sar	nd				red	•		, -	-			
		-1	OT EN	1				] L		bed Sample	Fo. p. 3	777	Cuttings Grout		Sar	np	les		-	S	6				
								S			0 A		Concrete		Bor	ing	No	٥.	17	C?	700	2			
Fie	eld Tes	ts:	I	Dilata			Rapid, S-SI	Slow,	N-None	Pla		: N-	Bentonite Nonplas	tic, L-Lo											
¹SP	T = Saı	mpler blo		6 in.	<sup>2</sup> Ma	ximum		ze (mn	n) is determi	ned by direct	observ	vatio		ne limitati	ons o	f sa	mpl	ler s	size	(in r	nillin	neter	ry H s).	igh	
		No	te: Sc	<u>iil ide</u>	<u>ntifica</u>	ation	based on t	visu	al-manual	methods of	of the	USC	CS as p	racticed	by l	Hal	ey	<u>&amp; /</u>	<u> Mark</u>	ich	<u>, In</u>	c.			

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:IDATA\29\29455\_29462\_29463\GINT LOGS\29462-011 AQUIFER.GPJ

H./	ALEY DRIC	& H					TEST	во	RING F	REPOI	RT					В	>ri	ng	N	э,1	7C	Y0(	03	
Pro Clie Cor		Consc	olidated	Ediso	on Co.	of N	ew York I	nc.	within Stuy Nicol Enviro			th Stree	t Station		SI		et N	lo. F	ebr	f 2 uary	y 5,	200 , 200		
			С	asing	Sar	npler	Barrel		Drilling E	quipment	and F	Procedu	es		1							, 200 Me		
Тур	е		I	-ISA		S		1	Make & Mo		ile B-4	7 truck n	nounted		Н	&A	Re	p.A	. N	lurp	hy/	P. F	alce	e
Insid	de Dia	meter (	in.) 4	4.25	1	3/8	-		ype: Cutt Mud: None						1	leva atu	atio m	n	1 M	7.1 anh	9 iatta	n B	oroı	ugh
Han	nmer \	Veight	(lb.)	-	1	40	-	Casi		<i>5</i>					⊢		tior	n		Pla				<u> </u>
Han	nmer l	Fall (in.)	)	-	] 3	30	-	Hois	t/Hammer:	Winch/D	ownho	le hamm	er											
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Ę.	Symbol S			Manual Ide			•			% Coarse	ave e	se	Sar Wedium %		nes		Toughness @	Tes	
	PID	Sam & Re	Sarr	Well	Depth (ft.)	nscs			istency, color noisture, optic						ა გ	% Fine	ٽ %	W %	% Fine	% Fines	Dilatancy	Toug	Plasticity	Strength
- 0 <i>-</i>	0.0					SP		no odoi	raded SAND r, dry. Appro e.					,	20	20	10	50						
5 -	1.7	C1	5.0		5.0	SM			except 25% b nica, approxir						The second secon	-	10	20	20	25				
		S1 11	5.0 7.0			SIVI		Hand I	Excavation/V	ac-Truck E -FILL-	xplorat	ion at 4.0	ft.			3	10	30	20	35				
					7.0				lty SAND (Si	M), mps =	1.37 in	n., dry, n	o odor. Gr	eater										
ŀ	1.7	S2	7.0		7.0	SP-			nd concrete. dark brown,		led SA	ND with	gravel		5	15	15	25	30	10		-		-
-		13	9.0	STALLEI	9.0	SM	(SP-SM), concrete.	mps =	1.37 in., dry	, no odor.	Greate	er than 50	% brick ar	nd		,								
- 10 -	1.9	S3 8	9.0 11.0	NO WELL INSTALLED	11.0	SM		rick fol	rown, silty S. llowed by 2"															
_	1.7	S4 6	11.0 13.0	N	11.0	SM			vn, silty SAN % brick and o			.37 in., n	o odor, dr	у			25	25	25	25				
					13.0					-FILL-														
_		\$5 0	13.0 15.0				No recove	ry - pu	shed brick pie	ece in tip.														
					15.0																			
15 -	1.8	\$6 8	15.0 17.0		15.0	SM			rown, silty Sa Approximate			(SM), mp	s = 1.37 i	n.,	10	10	15	<u>2</u> 5	20	20				
			-		17.0																			1
		S7 12	17.0 19.0			SM	Same as at	ove.		-FILL-														
	2.1	12	19.0		18.0	SM	Medium de	ense, g	ray to black s		(SM),	mps = 0	.1 in., wet	,	-	-	10	20	30	40		$\dashv$		
-	1.8		19.0			SM	organic od	•	sent. xcept loose															
- 20 -		12	21.0			SIVI	Saule as at	ove, e	veelt 10086															
20		Wa	ter Lev	- 1				Sa	ample Ident	ification		/ell Diag					Sur	mm	ary				_	
D	ate	Time	Elaps Time (	hr ∖ B	ottom	th (ft.	m Mater	0	Open End F	1		Riser I Screer						•			31.0			
2/26	/2004	11:00	0	01	Casing 15.0	of Ho	ne	T U	Thin Wall T Undisturbe	1	• q å	Filter S Cutting		Ro- Sai				(lin	n. ft. S1	′	-			
2120	, 2004	11.00			13.0			S G	Split Spoor Geoprobe	·	• • • • • •	Grout Concre Bentor	ete nite Seal	Bor	ing	No	٥.		'C'	<b>70</b> 0	)3			
Fie	eld Tes	ts:		Dilata	hness:	L-L	Rapid, S-S ow M-Me	dium.	H-Hiah	Drv :	Strena	N-Nonpl	astic, L-L	w. M	-Me	ediu	ım.	H-	Hia	ĥ. ∖	/-Ve	rv F	liah	
<sup>1</sup> SP	T = Sa	mpler blo		6 in.	<sup>2</sup> Ma	ximum	particle size	e (mm)	is determined	d by direct c	bserva	tion withir	n the limita	tions o	f sa	mp	ler s	size	(in r	nillin	nete	rs).		

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:IDATA\29\29455\_29462\_29463\GINT LOGS\29462-071 AQUIFER.GPJ

	ΗA	LEY	Šę.		·				E	or	in	g N	01	7CY	7003			
	AL	DRIC						TEST BORING REPORT						-01 2 o	1 of 2	<u>:</u>		
1	T.)	ш (ш	No. (in.)	f.)	Iram		Symbol	Visual-Manual Identification and Description	Gra	ive		Saı	ηd		F	ield	Tes	t
7 17	Deptn (π.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
	20 +	<u>а</u>	ഗ <i>×</i> 8	SO	3	Ω£	5	-GLACIAL LACUSTRINE-	%	%	%	6	6	8	۵	To	ä	St
$\mathbf{I}$		1.7	<b>S</b> 9	21.0		ne e constante de la constante	SM	Loose, gray, silty SAND (SM), mps = 0.25 in., slight organic odor,	5	5	20	20	20	30				
ŀ			18	23.0				wet.										
$\mathbf{I}$			S10	23.0				No recovery; spoon wet.										
ŀ			0	25.0														
-2	25 -	1.9	S11 15	25.0			SM	Medium dense, gray, silty SAND with gravel (SM), mps = 0.25 in.,	5	15	15	20	30	15				
-			13	27.0				wet. Brick and concrete pieces present.					1					
ŀ		1.8	S12 13	27.0 29.0		27.0	SM	Same as above.										
-				25.0		29.0												
-		1.8	S13 18	29.0 31.0		29.0	SM	Same as above, except loose.										
-3	30 -					31.0		-GLACIAL LACUSTRINE-					-					
ľ								BOTTOM OF EXPLORATION AT 31.0 FT.			-							
								NOTES: Borehole backfilled with drill cuttings and sand upon completion.										
								Sample "17CY003-00" collected from 0-0.2 ft. Sample "17CY003-02" collected from 0.0-2.0 ft.										
						Octobrilla Service Ser		Sample "17CY003-04" collected from 2.0-4.0 ft. Sample "17CY003-011" collected from 9.0-11.0 ft.		,								
								Sample "17CY003-17" collected from 15.0-17.0 ft. Sample "17CY003-23" collected from 21.0-23.0 ft. Sample "17CY003-31" collected from 29.0-31.0 ft.										
								Sample 17C1003-31 confected from 29.0-31.0 ft.										
																		1
													}					

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA\29\29455\_29462\_29463\GNT LOGS\29462-011 AQUIFER.GPJ

Apr 12, 05

'SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17CY003

Boring No.17CY004 TEST BORING REPORT File No29462-011 Project Former Con Edison Manufactured Gas Plants within Stuyvesant Town 17th Street Station Client Consolidated Edison Co. of New York Inc. Sheet No. 1 of 2 February 4, 2004 Contractor Aquifer Drilling & Testing, Inc./Fenley & Nicol Environmental, Inc. Start February 13, 2004 Finish Casing Sampler Barrel **Drilling Equipment and Procedures** Driller D. Gregorio/ M. Mayer Rig Make & Model: CME 75 Truck mounted H&A Rep.A. Murphy/W. Graham Type **HSA** S Bit Type: Cutting Head Elevation 10.41 Manhattan Borough Inside Diameter (in.) 3.25 1 3/8 Drill Mud: None Datum Hammer Weight (lb. 140 Location See Plan Casing: Hammer Fall (in.) Hoist/Hammer: Winch/Automatic Hammer 30 Field Test Gravel Sand Symbol Sample No. & Rec. (in.) Well Diagram Sample Depth (ft.) PID (ppm) Visual-Manual Identification and Description Depth (ft.) Medium Toughness % Coarse Coarse Dilatancy % Fines Fine % Fine Plasticity Strength Depth (ft.) USCS ( (Density/consistency, color, GROUP NAME, max. particle size2, structure, odor, moisture, optional descriptions, geologic interpretation) % % % 0.0 SP Brown, poorly-graded SAND with gravel (SP), mps = 2 in., no 10 10 50 30 structure, no odor, moist. 5 5.5 0.0S1 5.5 Bottom of Hand Excavation/Vac-Truck Exploration at 5.5 ft. 10 10 15 30 20 15 10 Medium dense, light brown silty SAND with gravel (SM), mps = 1.37 7.0 in., no structure, no odor. 7.0 0.0 SP 10 10 20 45 10 5 S2 7.0 -FILL-NO WELL INSTALLED 9.0 Loose, dark brown, poorly-graded SAND and gravel (SP), mps = 1.37 in., no structure, no odor. 9.0 0.0-FILL-S3 9.0 SM Same as S1. 11.0 10 11.0 0.0 11.0 SP Same as S2 except Moderately wet. 13.0 13.0 0.0 SP S5 13.0 Same as S2 except Medium dense. 15.0 15.0 15 -1.7 S6 5 15.0 SP Same as S2. 17.0 17.0 0.2 17.0 SP S7 5 Same as S2, except Medium dense. 19.0 19.0 0.0 19.0 Same as S2 except Dense, 10 % red brick fragments. 21.0 Water Level Data Well Diagram Sample Identification Summary Depth (ft.) to: Riser Pipe Elapsed Overburden (lin. ft.) 31.0 Open End Rod Date Time Bottom Bottom Screen Time (hr.) Water Thin Wall Tube Rock Cored (lin. ft.) Casing of Hole Filter Sand Cuttings 2/13/2004 NA 11.0 U Undisturbed Sample Samples NA 13.0 11.0 S13 Grout S Split Spoon 17CY004 Boring No. Concrete G Geoprobe Bentonite Seal R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Field Tests: Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Wedium, H-High 6 in. 2 Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters). Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High SPT = Sampler blows per 6 in.

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Apr 12, 05

G:IDATA\29\29455 29462 29463\GINT LOGS\29462-011 AQUIFER.GPJ

USCSTB+CORE4.GDT

P.G.

CON ED TB3

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A	DKIC		1	·	1	,	TEST BORING REPORT						-01 2 o	1 f 2	) ,		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	ď	Sar Wedium %	% Fine	% Fines		Toughness 🚊	Plasticity a	
- 20 - - -	0.6	S9 10	21.0 23.0			SP	Same as S2, except Medium denseFILL-										
-	0.0	S10 10	23.0 25.0		23.0	SP	Same as S2, except Medium dense.										
- <b>2</b> 5 -	0.0	S11 12	25.0 27.0		25.0	SP	Same as S2, except very dense, 20% red brick fragments, naphthalene-like odor, thin section of Tin-Like Material at approximately 26.5 ft., black staining from 26.0-26.5 ft.	***************************************									White the second second second second second second second second second second second second second second se
-	2.7	S12 13	27.0 29.0		27.0	SP- SM	Loose, dark brown, poorly-graded SAND, mps = 0.13 in., no structure, slight naphthalene-like odor.	-	_		80	15	5				-
-30 -	0.0	S13 5	29.0 31.0		29.0	SP- SM	Same as S12FILL-		***************************************								
					31.0		BOTTOM OF EXPLORATION AT 31.0 FT.  NOTES: Borehole backfilled with drill cuttings and sand upon completion.  Sample "17CY004-00" collected from 0-0.2 ft. Sample "17CY004-11" collected from 9.0-11.0 ft. Sample "17CY004-17" collected from 15.0-17.0 ft. Sample "17CY004-30" collected from 29.0-30.0 ft.										

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17CY004

Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

G:\DATA\29\29455\_29462\_29463\GINT LOGS\29462-011.GPJ USCSTB+CORE4.GDT USCSLIB4.GLB TB3\_PG1 CONED

Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in.

**Boring No.17CY006 TEST BORING REPORT** File No29462-011 Former Con Edison Manufactured Gas Plants within Stuyvesant Town 17th Street Project Consolidated Edison Co. of New York Inc. Sheet No. 1 of 2 Client February 6, 2004 Aquifer Drilling & Testing, Inc./Fenley & Nicol Environmental, Inc. Start Contractor March 2, 2004 Finish Sampler Barrel **Drilling Equipment and Procedures** Casing Driller D. Gregorio/ M. Mede Rig Make & Model: Mobile B-47 truck mounted H&A Rep.S. Brousseau/P. Falce Type **HSA** S Bit Type: Cutting Head Elevation 9.64 Manhattan Borough Inside Diameter (in.) 4.25 1 3/8 Datum Drill Mud: None Hammer Weight (lb.) 140 Location See Plan Casing: Hammer Fall (in.) 30 Hoist/Hammer: Wire Winch Downhole hammer Gravel Sand Field Test Sample No. & Rec. (in.) Symbol Vell Diagram (mdd) Sample Depth (ft.) Visual-Manual Identification and Description Depth (ft.) % Medium **Foughness** Coarse % Coarse % Fines Dilatancy **Plasticity** Strength Depth (ft.) % Fine uscs ( (Density/consistency, color, GROUP NAME, max. particle size<sup>2</sup>, PID structure, odor, moisture, optional descriptions, geologic interpretation) % % 0.3 -TOPSOIL-0.6 0.5 SM Gray brown silty SAND (SM), mps = 0.6 in., no odor, moist. Trace 20 45 30 10 20 40 30 roots, frost to 1.0 ft. Brown silty SAND (SM), mps = 2.0 in., no odor, moist. Approximately 2.2 5% tile and concrete. 0.8 Dark brown, silty SAND with gravel (SM), mps = 6 in., no odor, SM 5 15 20 20 15 15 moist. 10% brick, tan concrete and cobble. Tan concrete was encountered from 3.3-3.8 ft. -FILL-5.0 0.5 5 GW-Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. 20 30 15 15 10 10 S1 5.0 7.0 GM Loose, orange to brown, well-graded GRAVEL with silt and sand (GW-GM), mps = 1.25 in., no odor, moist. Weathered boulder. 7.0 GW-25 25 15 15 10 10 S2 7.0 Same as S1 except Medium dense, mps = 1 in. WELL INSTALLED 3 9.0 9.0 0.4 S3 9.0 GW-Same as S1 except Medium dense, mps = 1 in., no odor, wet. 25 20 20 15 10 10 11.0 GM 10 8 11.0 0.3 ML Loose gray to brown SILT with sand (ML), mps = 0.1 in., wet, no 5 5 10 80 11.0 20 13.0 odor, boulders. 13.0 SP-Medium dense, brown to dark gray, poorly-graded SAND with silt 5 40 30 10 13.0 **S5** 16 15.0 SM (SP-SM) mps = 1.25 in., no odor, over weathered cobbles, brick fragments. 15.0 15 S6 14 15.0 SW-Brown, medium dense, well-graded SAND with silt (SW-SM), mps = 5 25 35 25 10 17.0 SM0.25 in., no odor, wet. Brick fragments. 17.0 0.2 S7 18 SW-Same as S6, except mps = 0.1 in., slight organic odor, brick fragments. 17.0 19.0 SM 19.0 0.3 15 15 25 30 10 19.0 SW-Medium dense, brown, well-graded SAND with silt and gravel 16 (SW-SM), mps = 0.5 in., slight organic odor, wet, brick fragments. 21.0 Water Level Data Sample Identification Well Diagram Summary Depth (ft.) to: Riser Pipe Elapsed Overburden (lin. ft.) 28.6 Open End Rod Date Time Bottom Bottom Screen Time (hr.) Water Thin Wall Tube Rock Cored (lin. ft.) т of Casing of Hole Filter Sand Cuttings 3/02/2004 U Undisturbed Sample Samples 09:30 11.0 S12 Grout S Split Spoon 17CY006 Boring No. Concrete G Geoprobe Bentonite Seal R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Field Tests: Dilatancy: Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Nedium, H-High Dry Strength: N-None, L-Low, M-None, L-Low, M-Nedium, H-High Dry Strength: N-No Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High

Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

G:\DATA\29\29455\_29462\_29463\GINT LOGS\29462-011.GPJ USCSTB+CORE4.GDT USCSLIB4.GLB ED TB3 PG1

SPT = Sampler blows per 6 in.

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Visual-Manual Identification and Description    Secondary   Second	-ile She											2		
Consity/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)   Section 2	ave		1		-		Sar E			S		S	Te	
SW- Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  -FILL-  10.6 S10 23.0  SW- SM Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  -FILL-  SW- Loose, brown to black, well-graded SAND with silt, black staining at tip, naphthalene-like odor. Wood fibers present.  SW- SM Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  -FILL-  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  SW- SM Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  SW- SM Same as S8 except mps = 0.75 in., staining in 3 in. tip of spoon, brick fragments.  SW- SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM SM tip, naphthalene-like odor. Wood fibers present.  SW- SM SM SM SM SM SM SM SM SM SM SM SM SM	% Fine	% Coarse	% Fine	% Fine	% Coa	% Coa	% Medium	0/ Fin (9	eule % Fille	% Fines	Dilatancy	Toughness	Plasticity	Strength
SM fragments.  -FILL-  10.6 S10 23.0									T				F	
SW- Loose, brown to black, well-graded SAND with silt, black staining at tip, naphthalene-like odor. Wood fibers present.  SW- SM Very dense, brown to black, well-graded SAND with silt, mps = 1.25 in., wet sheen. Black staining and naphthalene-like odor in bottom 6 in., of spoon. Brick fragments present. 1 3/8" diameter disk of fibrous Tar-Like Material.  NOTE: Spoon refusal at 25 ft.6 in., augered to 27'. Same as S11 except mps = 1.25 in., 30% brick pieces.														
Very dense, brown to black, well-graded SAND with silt, mps = 1.25 of the staining and naphthalene-like odor in bottom 6 in., of spoon. Brick fragments present. 1 3/8" diameter disk of fibrous Tar-Like Material.  NOTE: Spoon refusal at 25 ft.6 in., augered to 27'. Same as \$11 except mps = 1.25 in., 30% brick pieces.	-	-	-		-	_	_		+					
A8.6   S12   27.0   16   28.5     NOTE: Spoon refusal at 25 ft.6 in., augered to 27'.   Same as S11 except mps = 1.25 in., 30% brick pieces.	10	0	10	0	20	0 2	20	3(	0 2	20				
28.6 NOTE: Spoon refusal at 28.5 ft.	-		+	-	-		_	-	+			-		
Augered 1" additional. Refusal at 28 ft 7 in									Ī					
Split spoon contained washed in soils, pulverized brick in spoon tip. No recovery.														
BOTTOM OF EXPLORATION AT 28.6 FT.														
NOTES: Borehole backfilled with drill cuttings and sand upon completion.														
Sample "17CY006-00" collected from 0-0.2 ft. Sample "17CY006-11" collected from 9.0-11.0 ft. Sample "17CY006-21" collected from 19.0-21.0 ft. Sample "17CY006-26" collected from 25.0-25.5 ft.														
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													- Commonweal of Common	

	H.AI	ALEY DRIC	& H					TEST	BOF	RING REPO	RT			E	30	rir	ng	No	o.1 1	7M 7C	WD Y00	)O3	3/
	Pro Clie Cor	•	Conso	lidated	Edis	son Co.	of N	lew York I	nc.	vithin Stuyvesant T		th Street Station		She Sta	eet irt	l N	o. Ja		f 2 ary	30,	2004		
ı				Ca	asing	g San	npler	Barrel		Drilling Equipmen	nt and P	rocedures		Fin Dril					_		200 L. Cr		
	Тур	e		ŀ	ISA		S	-	Rig N	Make & Model: Day	ey Drill	DK 527 ATV Mo									H. K		n
	Insid	de Dia	meter (	in.) ∠	1.25	1	3/8	-	Bit Ty					Ele Dat			n	l M	0.0 anh	9 attai	n Bo	ารดบ	ıoł
	Han	nmer \	Veight (	(lb.)	-	1	40	-	Casir	Mud: None na:			<b>⊢</b>	Loc				See					-0
	Han	nmer F	all (in.)		-	3	30	-	Hoist	Hammer: Rope C	athead/Sa	afety Hammer											
	l (ft.)	(mdo	Sample No. & Rec. (in.)	ile (ft.)	Well Diagram		Symbol	V	/isual-N	Manual Identificatio	n and D	escription		eg eg	$\neg$		San Enji		SS		ield ssa		
	Depth (ft.)	PID (ppm)	Samp & Rec	Sample Depth (ft.)	Well Di	Depth (ft.)	nscs	(Densit structure, o	ty/consist odor, mo	stency, color, GROUF oisture, optional desc	NAME, riptions, g	max. particle size², geologic interpretat	ion)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
	- 0 - - -	0.0			0 0		SP	Brown, po structure,		aded SAND with grave, dry.	el (SP), n	nps = 3 in., no		5	10	15	60	5	5				
	_					4.2		Bottom of	Hand E	xcavation/Vac-Truck	Exploration	on at 4.2 ft. on cob	bles	-		_	_			-	-		_
	- 5 <i>-</i> -	0.4	S1 22	5.0 7.0			SM			ollected from spoon us blow counts recorded				5	5	10	10	50	20				
	-					7.0		Approxima	ately 10	silty SAND (SM), m % brick, 5% Ash-Lik fill material in top 10	e Materia	l, 5% Cinder-Like		-			_	_			-	-	
Apr 12, 05	_	4.6	S2 16	8.0 10.0		10.0	SM		st, appro		SAND (S				5	15	15	50	15				
AQUIFER.GPJ	<del></del> 10 -	5.4	S3 8	10.0 12.0		10.0	SM	Loose, bro petroleum-	own to g like odd	gray, silty SAND (SM or in tip of spoon, moi of spoon, less than 5°	st to wet.	Odor observed in	gray		5	10	10	60	15				
OGS\29462-011	-	15.6	S4	12.0 14.0		12.0	SM			SAND (SM), mps = . Odor throughout spo					5	10	10	60	15				
32_29463\GINT L	- 15 -	91.2	S5 14	14.0 16.0		14.0	SM	Same as Sa approxima		t stronger petroleum-li %.	ke odor,	visible staining			5	10	10	40	35				
G:\DATA\29\29455_29462_29463\GINT LOGS\29462-011 AQUIFER.GPJ	-	10	S6 11	16.0 18.0		16.0	SM	petroleum-	like odo	brown to black, silty S or, wet. Bottom 3 in. Approximately staining	of spoon	consists of very we	t,		5	5	5	55	30				
USCSTB+CORE4.GDT G:\(\text{O}\)	-	9.7	\$7 6	18.0 20.0		18.0	SM		like odo	silty SAND (SM), mp or, very wet. Approxi			%	1	10	15	15	40	20				
CSTB+	- 20 -		     	ter Lev	el D	\$ 20.0 ata			Sa	mple Identification	\\\/	ell Diagram	-		- 0	 Sun	nma	arv					=
LB US	D:	ate	Time	Elaps	ed_	Dep	th (ft.	m		Open End Rod		Riser Pipe	Ove	rbu					) 3	5.0			_
USCSLIB4.GLB		J.()	11110	Time (		Bottom f Casing	Botto of Ho		Т	Thin Wall Tube		Screen Filter Sand	Roc					. ft.	)	-			
	2/16	/2004	NA	NA		10.0	12.0	0.01	U	Undisturbed Sample Split Spoon	6 4 9	Cuttings Grout	Sam	·			73	S1		227			
									G	Geoprobe		Concrete Bentonite Seal	Borir	ng N	۷o. _			IW CY					
CON ED_TB3_PG1		eld Tes			Tou	tancy: ghness:	L-L	Rapid, S-SI .ow, M-Me	dium, I	H-High Dry	Strengtl	N-Nonplastic, L-L h: N-None, L-Lo	w, M-N	/led	liun	m, n,	H- H-H	Hig Iigh	h 1. V	′-Ve	у Ні	igh	
CONE	'SP	T = Sai	npler blo <b>No</b> t							s determined by direct manual methods of											s).		

HALEY ALDRIC	& H					TEST BORING REPORT	F	ile	No	- 29	1° 462			•		
~ ~ ~	9 (-		am		Symbol	Visual-Manual Identification and Description		ave	1	Sai			F	ield	Tes	st T
Depth (ft.) PID (ppm)	pple I	th (ft	Well Diagram	£	S Syn		% Coarse	Fine	Coarse	% Medium	e e	Seu	J.C.	Seut	iţ.	돭
	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	ٽ %	% Fi	\ %	W %	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 4.7	S8 S9	20.0 22.0 22.0		22.0	SM SM	-FILL- Same as S7, except 15% wood chips/organics observed 4 in., from bottom of spoon. Tighter, sandy material in bottom of spoon. Staining throughout 50%. Same as S8, except approximately 5% medium dense brick with gravel	5	10	10	10	40	25				
- 1.9	S10 8	24.0 24.0 26.0		24.0	SM	and Cinder-Like Material, very slight petroleum-like odor.  Very loose, dark gray to black, silty SAND (SM).										
- 25 -				26.0		-FILL-										
5.3	S11 24	26.0 28.0		26.0 27.0	SP- SM	Medium dense, dark gray to black, poorly-graded SAND with silt (SP-SM), mps = 1 in.		5	5	5	75	10				<u> </u>
-	S12	28.0		28.0	CL	Stiff, black, sandy lean CLAY (CL), naphthalene-like odor, wet, approximately 5% organics.  Top 8 in., same as top of (S11) except loose, slight to no odor, middle 4	$\mathbb{L}$	10	20	1-	30 50	70				
- 5.8	20	30.0		29.0	L _	$\frac{1}{1}$ in. moves to coarse SAND, mps = 0.03 in. with a strong petroleum-like	<u>.</u>	10						_		_
-30 - 1.9				29.5 30.0	SM SP-	odor, wet.  Bottom of layer grades into a silty SAND, product visible in dark rust	Ł.	- 1	10 10	10	50 70	10		-		<u></u>
- 30 - 1.9	S13 20	30.0 32.0		32.0	SM SP- SM	stain color, sheen visible on spoon.     Bottom of spoon, gray, poorly-graded SAND with silt, mps = 0.03 in.,   no discernible odor, no staining, product or sheen present, wet.     Loose, gray, poorly-graded SAND (SP), mps = 0.03 in., slight     petroleum-like odor, wet. Some spots of sheen in top portion of spoon				10	85	5				
-				35.0		(less than 5%). Spoon grades from coarser material into finer silty sand at bottom of spoon.  NOTE: Approximately 5 ft of running sands inside auger after advancing to 32 ft below ground surface. No sample taken.  -GLACIAL LACUSTRINE-		opposition of the state of the			The state of the s					
- 35 -						BOTTOM OF EXPLORATION AT 35 FT.  NOTE: Drill cuttings placed in drums. Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 17MWD03" for complete well detail.  Sample "17CY007-00" collected from 0 - 0.2 ft. Sample "17CY007-02" collected from 0.2 - 2.0 ft. Sample "17CY007-04" collected from 2.0 - 4.0 ft. Sample "17CY007-10" collected from 8.0 - 10.0 ft. Sample "17CY007-16FP" collected from 14.0 - 16.0 ft. Sample "17CY007-30" collected from 28.0 - 30.0 ft.										

HALE ALDR	Y& ICH						TEST	BORING REPORT  Boring No.17CY	′008						
Project Client Contrac	C	onsol	lidated	Edisc	on Co.	of N	ew York I	Plants within Stuyvesant Town 17th Street Station inc.  Ey & Nicol Environmental, Inc.  File No29462-011 Sheet No. 1 of 1 Start January 29, 2 Finish February 9, 2							
			Ca	sing	San	npler	Barrel	Drilling Equipment and Procedures  Driller J. Kamenicek / B							
Туре			H	ISA		S	-	Rig Make & Model: Davey Drill DK 527 ATV Mounted H&A Rep.A. Murphy/F	l. Klein						
Inside E	Diame	eter (i	n.) 4	.25	1	3/8	-	Bit Type: Cutting Head Elevation 8.87 Drill Mud: None Elevation Manhattan	Borough						
Hamme	er We	ight (	lb.)	-	1	40	-	Casing: - Location See Plan							
Hamme	r Fall	l (in.)		-	3	0	-	Hoist/Hammer: Rope Cathead/Safety Hammer							
£ €	2	i.)	Œ	ram		Symbol	V		eld Test						
Depth (ft.) PID (ppm)	Samole	& Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Syı	(Densit	Visual-Manual Identification and Description  ity/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , bodor, moisture, optional descriptions, geologic interpretation)	Toughness Plasticity Strength						
- 0 <del>  0</del> .			0.0 5.0			SP	_	wn to brown, poorly-graded SAND with gravel (SP), mps = 4 5 10 20 50 10 5 ucture, no odor, dry.							
					2.5			Moved 2 feet west.							
	Same as above, except dark brown. Encountered concrete obstruction concrete. Moved 2 feet west.  -FILL-  S1 5.0 4 7.0  GP Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. Dark gray, poorly-graded GRAVEL with sand (GP), mps = 0.5 in., no														
5 - 0.	4	4			7.0	GP	Dark gray, odor, mois with sand i	, poorly-graded GRAVEL with sand (GP), mps = 0.5 in., no st, possible fill. Spoon consisted of two 1.5 in diameter rocks in the middle of the two rocks.							
		S2	7.0 9.0	ALLED		SM	moist. Sm	ense, brown, silty SAND (SM), mps = 1.5 in., no odor, all brick pieces (approximately 5% of spoon). Some dark approximately 5%) on layer 2 inches from bottom of spoon.							
0. 0. -10 - 0. 0.	4	S3 18	9.0 11.0	NO WELL INSTALLED	9.0 9.5 10.0 10.4	SM ML SM	moist to we Yellow to	ense, brown, silty SAND (SM), mps = 1.25 in., no odor, et, 25% has slight black stain.  orange, SILT with sand (ML), mps = 1/16 in., no odor, ck swirling throughout 4 in. "orange" silt layer (~35% of							
		700		ON	11.0		layer). Light gray odor, mois Silty SANI odor.  BOTTOM	r, silty SAND (SM), 4 in. thick layer, mps = 1/64 in., no st, staining at extents of gray sand layer (10% of layer).  D with 60% brick in bottom of spoon, 30% black staining, no  -FILL-  OF EXPLORATION AT 11.0 FT.  Borehole backfilled with drill cuttings and sand upon							
							Sample "17 Sample "17	7CY008-00" collected from 0 - 0.2 feet 7CY008-02" collected from 0 - 2.0 feet. 7CY008-04" collected from 2 - 4.0 feet. 7CY008-11" collected from 9 - 11.0 feet.							
		Wat	er Lev	el Dat	ta			Sample Identification Well Diagram Summary	1 1						
Date	Т		Elapse Time (h	nr.) Br	ottom Casing	of Ho	m	O Open End Rod T Thin Wall Tube U Undisturbed Sample  Riser Pipe Screen Filter Sand Cuttings  Rock Cored (lin. ft.) 11.0 Rock Cored (lin. ft.) - Samples S3							
		-14	OT EN		NIEKE	.u-		S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Grout Concrete Bentonite Seal							
Field T	ests:			Dilata Tougl	nness:	L-L	ow, M-Me	low, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Ver	y High						
1SPT = 3	Sampl		ws per 6	in.	<sup>2</sup> Ma:	ximum	particle size	e (mm) is determined by direct observation within the limitations of sampler size (in millimeters visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	).						

Boring No.17CY009 TEST BORING REPORT File No29462-011 Project Former Con Edison Manufactured Gas Plants within Stuyvesant Town 17th Street Station Sheet No. 1 of 1 Consolidated Edison Co. of New York Inc. Client January 27, 2004 Contractor Aquifer Drilling & Testing, Inc./Fenley & Nicol Environmental, Inc. Start February 9, 2004 Finish Casing Sampler Barrel **Drilling Equipment and Procedures** Driller J. Kamenicek / B. Cruz Rig Make & Model: Davey Drill DK 527 ATV Mounted H&A Rep.S. Brousseau/H. Klein Type **HSA** S Bit Type: Cutting Head Elevation 7.55 Manhattan Borough Inside Diameter (in.) 3.25 1 3/8 Datum Drill Mud: None Hammer Weight (lb.) 140 Location See Plan Casing: Hammer Fall (in.) 30 Hoist/Hammer: Rope Cathead/Safety Hammer Sample No. & Rec. (in.) Gravel Sand Field Test Symbol Well Diagram PID (ppm) Sample Depth (ft.) Visual-Manual Identification and Description Depth (ft.) % Medium Toughness % Coarse % Coarse % Fines Dilatancy % Fine Plasticity % Fine Depth (ft.) USCS 8 (Density/consistency, color, GROUP NAME, max. particle size<sup>2</sup>, structure, odor, moisture, optional descriptions, geologic interpretation) SM 5 Gray, silty SAND (SM), trace of glass and brick fragments, mps = 1.0 5 10 30 30 20 in., no odor, dry. 1.0 Gray to brown, silty SAND (SM), approximately 5% glass, coal, brick SM 5 5 10 30 30 20 tile, and Clinker-like Material, mps = 4.0 in., no odor, dry. NOTE: Refusal at 4.2 ft. on concrete block (dimensions of 0.7'x1.0'x2') Moved 1.0' southwest, same description with concrete block mps = 9"x7"x4". Concrete foundation found 2'8" from building wall. Move 3.0' west, same sample description except asphalt present, mps = 7"x9"x13" concrete block. 5.0 0.4 SP-5 10 10 65 10 Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft. **S**1 5.0 7.0 SM Loose, brown, poorly-graded SAND with silt (SP-SM), mps = 1.25 in., no odor, moist, trace of Ash-Like Material in bottom of spoon. 7.0 2.3 5 10 5 50 30 7.0 SM S2 Medium dense, brown, silty SAND (SM), mps = 1 in., no odor, moist,  $\overline{21}$ WELL INSTALLED 9.0 trace of Coal-Like Material and brick. 8.2 SM Dark gray, silty SAND with gravel (SM), mps = 1.5 in., no odor, 10 10 5 5 40 30 9.0 moist, organics in tip of spoon, 0.25 in. layer of Coal-Like Material on 0.4 **S3** 9.0 SM 5 5 5 50 35 top of gray layer 15% black staining. 10 11.0 Medium dense, dark gray, silty SAND (SM), mps = 1 in., no odor, 10 wet, 50% staining throughout sample. Approximately 10% brick; 5% wood/organics. Similar to the bottom 8 in., of S2. 9 11.0 BOTTOM OF EXPLORATION AT 11.0 FT. NOTE: Borehole backfilled drill cuttings and sand upon completion. Sample "17CY009-00" collected from 0 - 0.2 feet Sample "17CY009-10" collected from 8.0 - 10.0 feet. Water Level Data Sample Identification Well Diagram Summary Depth (ft.) to: Riser Pipe Elapsed Open End Rod Overburden (lin. ft.) 11.0 Date Time Time (hr.) Bottom Bottom Screen Water Thin Wall Tube Т Filter Sand Rock Cored (lin. ft.) Casing of Hole Cuttings 2/9/2004 9.0 9.0 Undisturbed Sample Samples **S**3 NA NA 11.0 Grout Split Spoon 17CY009 Concrete Boring No. Geoprobe Bentonite Seal Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Dilatancy: R-Rapid, S-Slow, N-None Field Tests: Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High 6 in. Maximum particle size (mm) is determined by direct observation within the limitations of sampler size (in millimeters). L-Low, M-Medium, H-High

Note: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

G:\DATA\29\29455\_29462\_29463\GINT LOGS\29462-011 AQUIFER.GPJ USCSTB+CORE4.GDT USCSLIB4.GLB PG. TB3 

SPT = Sampler blows per 6 in.

H Ai	ALEY o	& H					TEST	во	RING F	REPO	RT					Вс	ori	ng	N	o.1	7C`	Y0 <sup>-</sup>	10	
Clie	ject ent ntracto	Conso	lidate	d Edis	on Co.	of N	lew York I	nc.	within Stuyv Nicol Enviro			7th Stre	eet Station	ı	SI	hee tart	t N	lo. F	ebr	f 1 uary	y 2, y 9,			
			C	Casing	Sar	npler	Barrel		Drilling E	quipment	and I	Proced	ures		1	nisl rille				-	y ∍, :k /∶			5
Тур	e			HSA		S	-	Rig I	Make & Mo	del: Dave	y Dril	II DK 5	27 ATV N	<b>f</b> ounted	H	&A	Re	p.A	. N	Iurp	hy/	H. I	Klei	n
Insi	de Dia	meter (	in.)	3.25	1	3/8	-	I		ing Head					4	leva atui		n	Ń	7.47 [anh	atta	n Bo	orou	ıøh
Han	nmer V	Veight (	(lb.)	_	1	40	-	Casi	Mud: None	e						oca		า		Pla				
Han	nmer F	all (in.)		_	3	30	-	1	t/Hammer:	Rope Cat	thead/	Safety I	Iammer											
		9 (;	Γ	Ē		poq	<u> </u>	<i>C</i> 1	N4			D	41		Gra	avel	+	Sar			F		Tes	t
ا ( <del>ا</del>	mdd	ole N	ole H.(ft.	iagra	_	Symbol	\	risuai-	Manual Ide	nuncation	and	Descrip	otion		arse	e e	Coarse	diu P	<u>o</u>	es	Σ	ness	ξį	£
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs			istency, color noisture, optic						% Coarse	% Fine	% Co	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 0 - -	0.0					SP			raded SAND r, dry. Appro						10	15	15	50	5	5				
- 5 -	0.2				5.0																			
	0,2	S1 6	5.0 7.0			SM	Medium d	ense, b	Excavation/Varown, silty Sal, and 5% brid	AND (SM)	, mps	= 0.5 ir	n., no odor	,		5	10	10	45	30				
ŀ	1.0	S2	7.0	+		SM	Medium d	ense. h	rown to dark	-FILL- gray, silty	SANE	) with g	ravel (SM)	slight	5	10	5	10	40	30				
-		8	9.0	STALLEI	9.0		odor, mois	st to we	et, occasional ained. Pieces	light brow	n grave	elly sand	l layer. Bo	ottom		,								
- 10 -	8.0	S3 7	9.0 11.0			SP			ray to brown, slight petroleu	ım-like odo			SP), mps =	0.5		15	15	10	55	5				
L				NO V	11.0		ВОТТОМ	OF EX	XPLORATIO	-FILL- N AT 11.0	FT.				-		<u> </u>							
							NOTE D	mal I a 1	h 1-6111 - d d-	J. d.:31														
			AND THE RESERVE AND THE PROPERTY OF THE PROPER				Sample "1 Sample "1	7CY01 7CY01	backfilled wit 0-00" collecte 0-09" collecte 0-11FP" colle	ed from 0 - ed from 7.0	0.2 fe	eet feet.		enon.										
					Увинальным мильмофициальным крамофундального жителиционного под комперентации по под под под под под под под п																			
	T	Wa	1	vel Da		() (5)		Sa	ample Ident	ification	V	Well Dia		1			Sui	nm	ary					_
D	ate	Time	Elap	sed_ (hr \ l	Dep Bottom	th (ft	om Water	0	Open End F			Scre		1							11.0			
2/0	/2004	NA	N.		Bottom Casing 9.0	of H	ole vvater	J T	Thin Wall T Undisturbe		 ∳, q, đ		r Sand ings	- 1	ick mp		red	(lir	n.ft. S	•	-			
2191	2004	MA	17.	r.	タいひ	11.	9.0	S	Split Spoor Geoprobe	•	4.4	Gro		Boi			).	17		3 701	0			
Fi	eld Tes	ts:	J		ancy:		Rapid, S-S Low, M-Me					N-Non	plastic, L None, L-I								/-Ve	rv H	liah	
¹SF	T = Sa	npler blo <b>No</b>		r 6 in.	<sup>2</sup> Ma	ximun	n particle siz	e (mm)	is determined I-manual m	d by direct of	observ	ation wit	hin the limi	tations o	of sa	mpl	er s	size	(in	nillir	nete			

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:IDATA\29\29455\_29462\_29463\GiNT LOGS\29462-011 AQUIFER.GPJ

H. Al	ALEY o	& H					TEST	BOF	RING RI	EPOF	₹T					Во	rii	ng	No	).1 1	7M 7G	WE H0	004 01	/
Clie	ent ent otracto	Conso	lidated ?	Edisc	on Co.	of N	ew York In	nc.	vithin Stuyve			th Street	İ		St	nee art	t N	o. Fe		f 2 ary	10,			******
			Са	sing	San	npler	Barrel		Drilling Equ	uipment	and F	rocedur	es		1	nisi rille					cruz			de
Тур	е		н	SA	1 ,	S	-	Rig N	/lake & Mode	el: Dave	y Drill	DK 527	ATV M	ounted	1						/B.			
Insid	de Dia	meter (	in.) 4	.25	1	3/8	_	Bit Ty		g Head					1	eva		n	1 M	0.0	8 atta	n D	oroi	
l		Veight	- 1	_		40	_	1	Mud: None						-	atur oca		<u> </u>	See			11 15	0100	gn
		Fall (in.)	` 1	-		30	_	Casir Hoist	ng: - /Hammer: R	Rope Cati	head/S	afetv Ha	mmer		-`	,,,,				1 10	.11			
(ft.)	(mc	ë No.	(#.)	ıgram		Symbol	V	1	Manual Ident						-	avel	1	San E	-	s			Tes	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	s sosn			stency, color, ( oisture, optiona						% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strenath
- 0 -	0.1			م م م	0.2 0.5		\		-BITUMON			ГЕ-			=	-								
-	0.1	,		4 4	0.3	SM			D with gravel ( ry, 10% trace i		s = 6 i	n., no str	ucture, sli	ght	10	10	10	40	15	15				
- - 5 -	1.7	S1 10	5.0 7.0		5.0	SM	Dense, bro	own, silt	excavation/Vacty SAND (SM) m of 2 in. of s	Truck E	1 in., n	o odor, n	noist, bric	 k and	0	5	5	5	60	25				_
- -	6.0	S2 8	7.0 9.0			SM			own, silty SAN ttom of spoon (				, no odor,		10	5	10	10	50	25				
- - 10 -	1.4	S3 3	9.0 11.0			SM	Similar to of brick.	S2, exce	ept 1.25 in. roo	ck in tip o	of spoo	n, no odo	r, moist,	trace					The same of the sa					
	0.6	S4 9	11.0 13.0			SM			irk gray-brown te in tip of spoo					, no	0	5	5	10	60	20				
	1.0	\$5 9	13.0 15.0			SM		concret	ork gray, silty S te (5%)/brick,						0	5	10	10	50	25				
- 15 - -	4.2	S7 14	15.0 17.0			SM	pockets of pocket of T	Tar-Lik Tar-Like	own, silty SAN se Material at 1 e Material stain aned, slight gas	ND (SM), 15.1 - 15. ned, coars	3 ft. ar se sand	nd 15.9 - to fine gi	16.2 ft., u ravel, low	er	0	10	15	50	15	15				
	1.9	S8 9	17.0 19.0			SP	Similar to less fines.	S7, exce	ept only trace o	coarse gra	ained T	ar-Like N	Aaterial ar	nd	0	10	15	20	55	5				
	2.2	S9 7	19.0 21.0		19.0		Similar to	 S8.		. – – –		<del></del>			_				_	-			_	
- 20 -		Wa	ter Leve	l Da				Sa	mple Identifi	cation		ell Diag				(	Şur	nm	ary					_
D	ate	Time	Elapse Time (h	r \ B	Dep lottom Casing	th (ft. Botto of Ho	m Water	<b>↓</b> ⊤	Open End Ro Thin Wall Tub	ре		Riser I Screer Filter S	and	Ro	ck (	Cor			. ft.	)	4.0 -			
			me grant programme of the state	enalesantesanastesanatestanatest				U S G	Undisturbed : Split Spoon Geoprobe	Sample	300	Grout Grout Concre Bentor		Sa Bor	mpl ing		o. 1	7N	S1 AW GF	D(	 )4/ )1			
	eld Tes			<b>Foug</b>	ancy: hness: <sup>2</sup> Ma	L-l	Rapid, S-SI ow, M-Me	low, N-	-None	Dry S	Streng	N-Nonpl th: N-No	astic, L-l	w, M	-Me	ediu	m,	H-	-Hig High	h 1. ∖	/-Ve	ry F	ligh	
									manual met															

	ALEY o						TEST BORING REPORT	F	ile	No	29	1′ 462	<b>7GE</b> -011	WD0 1001 l	l		
£.	ű.	No. in.)	t.)	ram		Symbol	Visual-Manual Identification and Description	Gra	ve		Sar	nd			ield	Tes	t
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	Coarse	Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
-20		დ ფ	SO	<b>≥</b> :] [:	Δŧ	Š	subcture, ouor, moisture, optional descriptions, geologic interpretation)	%	%	%	%	%	%	Ϊ́Ω	7	딦	St
	1.8	S10 4	21.0 23.0			SP	Medium dense, brown, poorly graded SAND (SP), mps = 0.25 in., no structure, no odor, wet, coarse sand/fine gravel is black but not stained.	0	5	10	15	65	5				
-		S11 8	23.0 25.0				Similar to S10. NOTE: No PID (raining)										
- 25 - -		S12 12	25.0 27.0			SP	Medium dense, brown, poorly graded SAND (SP), mps= 0.25 in., no structure, no odor.  NOTE: Augered to 29 ft. for 28 ft 30 ft sample.	0	5	10	15	65	5				
-	6.4	S13 9	28.0 30.0				Similar to S12, except contains frequent brick fragments 5% in lower 6 in. of sample, napthalene-like odor in tip of spoon.  -FILL-										
- 30 <i>-</i>											A CALLAGRAPHICA CONTRACTOR CONTRA				THE THE THE THE THE THE THE THE THE THE		
-					34.0		BOTTOM OF EXPLORATION AT 34.0 FT.		,								
							NOTES: Drill cuttings placed in drums.  Installed observation well in borehole upon completion. Refer to  "Observation Well Installation Report 17MWD04" for complete well details.										
	WAA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA AMADA						Sample "17GH001-00" collected from 0 - 0.2 ft. Sample "17GH001-07" collected from 5.0 - 7.0 ft. Sample "17GH001-15" collected from 13.0 - 15.0 ft. Sample "17GH001 - 19FP" collected from 17.0 - 19.0 ft. Sample "17GH001-30" collected from 28.0 - 30.0 ft.			WWW.W. Company of the	POPULATION AND ALL AND AND AND AND AND AND AND AND AND AND						
				The second secon													
								AMADONIA I III							The second secon		
							•										

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GINT LOGS\29462-011.GPJ

Apr 12, 05

'SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17MWD04/ 17GH001

Proj Clie	•	Forme Consc	lidated	Edis	on Co.	ufact	ured Gas F ew York I	Plants within Stuyvesant Town 17th Street Station nc.  ey & Nicol Environmental, Inc.  Boring No.17Gl  File No.29462-011 Sheet No. 1 of 2 Start February 19,		
Con	iliacio	Aqu			<del></del>			Finish February 24,	2004	1
T				asing		npler	Barrel	Drilling Equipment and Procedures  Driller D. Gregorio/ M  Rig Make & Model: Mobile B-47 truck mounted  H&A Rep.H. Klein	. Med	t
Type		meter (		ISA 25		S 210	-	Bit Type: Cutting Head Elevation 10.62		-
		Weight		25		3/8 40		Drill Mud: None Datum Manhattan	n Bor	(
		Fall (in.)	` 1	_		30	_	Casing: - Location See Plan Hoist/Hammer: Winch/Safety Hammer		
	_	9.0		Ē		log	<u> </u>	Gravel Sand F	ield Te	(
) (#	mdd	c. (in	ole h (ft.	iagra	_	Symbol	V	/isual-Manual Identification and Description	ness	2
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs		/isual-Manual Identification and Description  by/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , odor, moisture, optional descriptions, geologic interpretation)	Toughness	Discrete
- 0 -	0.0					SM		ty SAND (SM), mps = 12 in., no odors, moist, tely 5% brick, trace glass, red ceramic, white ceramic, and Material.		_
- 5 -	0.4	S1 2	5.0 7.0		5.0	SP	Very loose	Hand Excavation/Vac-Truck Exploration at 5.0 ft. c, brown poorly graded SAND with gravel (SP) approximately c, 40% cement/mortar. Concrete in tip of spoon.	- The state of the	
-	0.5	S2 8	7.0	ED		SM		ense brown, silty SAND (SM), mps = 1 in., no odor, moist, tely 20% brick, trace of Coal-Like Material.		
- 10 -	0.1	S3 16	9.0 11.0	WELL INSTALLED		SM	approxima	ense, gray-brown to black mps = 1 in., no odor, moist, tely 10% brick. Dark staining in bottom of spoon, tely 45%, of total spoon.	The second secon	
	0.1	S4 12	11.0 13.0	NO		SM		ense, gray silty SAND (SM), mps = 0.5 in., no odor, wet. ately 5% Ash-Like Material, trace woodFILL-	***************************************	
-	0.1	S5 1	13.0 15.0			SM	No recover	ry, (material similar to S4 in tip of spoon.)		
- 15 -	0.1	S6 12	15.0 17.0			SM	in., slight p	ense, gray to black, silty SAND with gravel (SM), mps = 1 petroleum-like odor, wet. Approximately 10% brick, 20% nic material interbedded with sand, 5% wood pieces.		
	0.3	S7 17	17.0 19.0			SM	slight petro	by to black, silty SAND with gravel (SM), mps = 0.5 in., oleum-like odor, wet, trace Ash-Like Material. Bottom 6 in., ontaining 15% black Coal-Like Material; staining throughout spoon.		
	0.2	S8 20	19.0 21.0			SM	(S8) Simila	ar to S7.		
- 20 -		Wa	ter Lev	el Da				Sample Identification Well Diagram Summary		-
Da	ate	Time	Elapse Time (I	ed_ nr.\B	Dep lottom	th (ft. Botto	m Water	O Open End Rod Riser Pipe Screen Overburden (lin. ft.) 31.0		
2/24/	/2004	NA	NA		Casing 11.0	of Ho	ne	T Thin Wall Tube U Undisturbed Sample  Filter Sand Cuttings  Rock Cored (lin. ft.) Samples  S13		
<u> </u>	_5557	7.17.7	11/1		-1.0	1.5,1	11.0	S Split Spoon Grout Concrete Boring No. 17GH002		-
Fie	ld Tes	ts:		Dilata			⊒ Rapid, S-SI .ow, M-Me	Geoprobe   Bentonite Seal		-   

ALD	EY & RICI	Ĭ					TEST BORING REPORT	F		No	- 294	62-	-011				
Depth (ft.)	rio (ppin)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)		Fine	se	San	d		<u>Fi</u>	l oughness	Plasticity a	
20					20.6		-FILL-									=	
	).3	S9 24	21.0 23.0		21.0	OL/ OH OL/ OH	Medium stiff, black organic soil (OL-OH), no odor, wet.  Similar to bottom of S8, except hard occasional layer of gray silty SAND with gravel, trace wood and peat.					10 10					
(	0.2	SI0 10	23.0 25.0			OL/ OH	Similar to S9.										
25 -		S11 16	25.0 27.0		26.6	OL/ OH	Similar to S10ORGANIC DEPOSIT-						100	***************************************			
	1.2 ).7	S12 20	27.0 29.0		26.6 27.0	SM SP- SM	Medium dense gray, silty SAND (SM), mps = 0.03 in., slight petroleum-like odor, wet, no visible staining, bottom 6 in. of spoon completely stratified from OL/OH layer.  -GLACIAL LACUSTRINE-			5	5	80	10				
30 -	).8	S13 18	29.0 31.0		29.0	SP- SM	Dense, gray, poorly-graded SAND with silt (SP-SM), mps = 0.03 in., slight petroleum-like odor, wet.  Similar to S12, except medium dense, slight odor, no observable staining.	<u>_</u>		_	5	85	10	_	_		
					31.0		-GLACIAL LACUSTRINE-								1		
							BOTTOM OF EXPLORATION AT 31.0 FT.	į							-		
	***************************************		:				NOTES: Borehole backfilled with drill cuttings and sand upon completion.							***************************************			
							Sample "17GH002-00" collected from 0-0.2 ft. Sample "17GH002-011" collected from 9.0-11.0 ft. Sample "17GH002-17" collected from 15.0-17.0 ft. Sample "17GH002-31" collected from 29.0-31.0 ft.										
-				***********			e size (mm) is determined by direct observation within the limitations of sampler anual methods of the USCS as practiced by Haley & Aldrich, Inc.		Bori	ng	No	•	1	7GH	002	<u> </u>	

H. Ai	ALEY DRIC	& .H					TEST	во	RING REPO	ORT				Вс	ri	ng	N	o.1	7G	H0	03	
Clie	ject ent ntracto	Consc	olidated	l Edis	on Co.	of N	lew York I	nc.	within Stuyvesant T		7th Street		SI	hee tart	t N	o. Fe		f 1 iary	16			
			С	asing	San	npler	Barrel		Drilling Equipme	ent and F	Procedures		1	nisl rille				-	27, I. M			
Тур	 е		]	HSA		S	_	Rig	Make & Model: M	obile B-4	7 truck mounted		┥						ssea			lce
Insi	de Dia	meter (	in.)	4.25	1	3/8	_		Type: Cutting Hea	.d			1	leva		n	M	9.97 Iank	atta	n R	oroi	uah
Han	nmer '	Weight		_		40	_	Drill Casi	Mud: None					atur oca		<u> </u>	See			1113		1511
1		Fall (in.)	` 1	_		30	_	1	ing: - st/Hammer: Winch	Downh	nole Hammer						500	110	***			
(ft.)	pm)	e No.	(ft.)	agram		Symbol	\	i	-Manual Identificati				-	avel	se	Sar E		Š		1	Tes	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs 8			istency, color, GROU noisture, optional desc				% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 0 -			1		0.2	SM			-TOPSC		0.5:		$\vdash$		5	20	35	40				_
-					0.7	SM		Frozer ty SAN	n, silty SAND (SM), on to 0.7 ft ND (SM), trace of brick	 ck fragmer	-	,	5	5	15	30	25	20				
- 5 - -	0.8	S1 8	5.0 7.0		5.0 7.0	SM	Medium de	ense, b	Excavation/Vac-Truck brown, silty SAND wi ximately 50% brick ar	th gravel (	(SM), $mps = 1$ in.	– – – , no	5	10	15	<u>-</u> 20	25	25				
-	1.7	S2 12	7.0 9.0	NLLED	7,0	SM	Same as S	1 ехсер	pt mps = 1.5 in., appr	roximately	y 30% brick and co	bble.		,								
- - 10 -	4.5	\$3 4	9.0 11.0	NO WELL INSTALLED	9.0	SM	Same as S	1 ехсер	pt mps = $0.75$ in., we	t, cobble	fragment in spoon	tip.										
-	3.3	S4 12	11.0 13.0	NO	11.0	SM	Same as S tip.	1 ехсер	ot dense, wet, mps =	1 in., cob	oble fragment in spo	oon					}					
_	0.9	\$5 8	13.0 15.0		13.0	SM			vn to gray, silty SANI e fabric in spoon tip.	), mps =	= 0.5 in., no odor,	wet,		5	20	30	20	25				
- 15 -	3.2	S6 10	15.0 15.5		15.0 15.5	sw	odor, wet.	NOTE	vn to gray, well-grade 3: HSA refusal at 15.0 -FILL XPLORATION AT 15	) ft. Split s			15	20	25	<u>2</u> 0	15	5				
							NOTE: Bo	rehole	backfilled with drill of	suttings or	ad cand unan campl	etion										İ
							Sample "1" Sanıple "1"	7GH00 7GH00	33-00" collected from a collected from 33-09" collected from 33-16" collected from	0-0.2 in. 7-9 ft.		etion.										
		Wa	ter Lev	el Da	ta			Sa	ample Identification	ı V	Vell Diagram				Sur	nm	ary					_
	ate	Time	Elaps Time	ed (hr.) <sup>B</sup>	Dep lottom Casing	of Ho	om Water	O T	Open End Rod Thin Wall Tube		Riser Pipe Screen Filter Sand	Ro	ck (	Cor		`	ı. ft.	)	15.5			_
2/27	/2004	10:00	0		10.0	11.6	0 10.0	U S G	Undisturbed Sampl Split Spoon Geoprobe	le 1999	Cuttings Grout Concrete Bentonite Seal	Sa: Bor				17	'GF		)3			
Fie	eld Tes	its:	1		ancy: hness:		Rapid, S-SI ow, M-Me	low, N	I-None PI	asticity:	N-Nonplastic, L-lath: N-None, L-La	Low, N	1-M	ediu	ım,	Н	-Hig	jh ,	/_\/^	m, 1.	lich	
¹SP	T = Sa	mpler blo		6 in.	<sup>2</sup> Ma	ximum	n particle size	e (mm)	is determined by direct I-manual methods	ct observa	ation within the limita	ations o	f sa	mple	ers	ize	(in r	nillir	nete		ayıı	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\GNTLOGS\29462-011.GPJ

HA ALI	LEY & DRIC	ξ H					TEST	BORING REPORT  Boring No.17GH0	04		
Proje Clier Cont		Conso	lidated	Ediso	on Co.	of N	ew York In	Plants within Stuyvesant Town 17th Street nc.  Sheet No. 1 of 2 Start February 16, 20 Finish March 1, 2004			
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  DrillerM. Smith/M. Mede			
Туре	)		H	ISA		S	-	Rig Make & Model: Mobile B-47 truck mounted H&A Rep.S. Brousseau/P.	. Falce		
Insid	e Dia	meter (	in.) 4	1.25	1:	3/8	-	Bit Type: Cutting Head Elevation 10.31 Drill Mud: None Elevation Manhattan B	orough		
Ham	mer V	Veight	(lb.)	-	1.	40	-	Casing: - Location See Plan			
Ham	mer F	all (in.)		-	3	0	-	Hoist/Hammer: Winch Downhole Hammer			
(£)	ш Ш	S (ii)	<u></u>	yram		Symbol	V	fisual-Manual Identification and Description	Test		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density structure, o	risual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size, dor, moisture, optional descriptions, geologic interpretation)	Plasticity Strength		
- 0 +	0.0				0.3	EM.	and excavation to 5.0 ft with air knife, mini vac, and post hole 5 20 35 40				
-	0.0				1.0	SM SM	-TOPSOIL- 5 5 10 25 25 30	-4-			
_							Frozen to 0   Dark brown	0.8 ft. n, silty SAND (SM), trace roots, mps = 0.4 in., no odor,			
							l <u>dry.</u> Brown, silt	ty SAND (SM), trace brick fragments and wood, mps = 2.0			
							in., no odo	r, dry.			
-								-FILL-			
- 5 -	3.5	S1	5.0		5.0	SM	Bottom of 1	Hand Excavation/Vac-Truck Exploration at 5.0 ft.	<u> </u>		
.		4	7.0			5141		wn silty SAND (SM), mps = 0.1 in., no odor, moist.			
					7.0						
	0.3	S2 8	7.0	Q	7.0	SM	Same as S1	l except mps = 1.25 in., cobble in spoon tip.			
-			9.0	VLLE							
.	0.8	S3	9.0	INSTALLED	9.0	SM	(\$3) Same	as \$1except mps = 1.25 in., wood and cobble in spoon tip.			
- 10 -		10	11.0	WELL I		Sivi	(33) Same	as stexcept tips = 1.25 iii., wood and cooble iii spooli dp.			
				) WE	11.0						
	0.7	S4 8	11.0	ON	11.0	SM	` :	um dense, brown silty SAND (SM), mps = 0.1 in., no odor,			
			13.0				moist to we	er. -FILL-			
		S5	13.0				Loose wet	t (washed) sands in spoon.			
		0	15.0				Loose, wet	A (Tradica) dands in spoots.			
	_										
- 15 -	0.4	\$6 6	15.0	4		SM		and realign to attempt sample from 15-17 ft. Medium dense, 15   5   10   30   20   20   3, silty SAND (SM), mps = 1.25 in., no odor, wet. Cobble			
			17.0					n, sity SAND (SM), mps = 1.25 in., no odor, wet. Cobble imple spoon.			
.	0.5	S7	17.0		17.0	SM	Very dense	e, silty SAND with gravel (SM), mps = 1 in., slight odor, $\begin{vmatrix} 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 $			
		12	19.0			PIAT	wet. Cobbl	le or concrete piece in tip. Hammer binding in HSA from			
					19.0		18.5-19 ft.				
	0.8	S8 12	19.0			SM		e, brown, silty SAND (SM), mps = 0.5 in., slight odor.  5 5 15 25 30 20  ned in tip of sample spoon.			
- 20 -		1	20.0 ter Lev	el Da	20.0 ita	Sample Identification   Well Diagram   Summary					
Da	ate	Time	Elaps Time (	ed	Dep Bottom Casing	O Open End Rod 日 Screen Overburden (lin. ft.) 27.5					
	T Thin Wall Tube Filter Sand Rock Cored (lin. ft.)										
2/27/2004 12:30 0 12.0 U Undisturbed Sample Grout S Split Spoon S Samples S12											
G Geoprobe Bentonite Seal											
	ld Test			Toug	ancy: hnęss:	L-L	.ow, M-Med	ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very I	High		
'SP'	r = Sar		ows per 6 te: So					e (mm) is determined by direct observation within the limitations of sampler size (in millimeters). visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.			

Apr 12, 05

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\:DATA\29\29455\_29462\_29463\GiNT LOGS\29462-011.GPJ

Ħ.	LEY & DRIC	Şţ.					TEAT DODING DEDORT	1			_			[004			
AL	DRIC						TEST BORING REPORT	F	ile ihe	No et	29 No.	462	-011 2 o	l f 2			
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)		ave	l gg	Sai	ηd			Toughness a	Plasticity a	
20 -		0, 40		>			Auger to 21 ft.								_	<u> </u>	É
	1.8	S9 12	21.0 23.0		21.0	SM	Medium dense, brown, silty SAND (SM), mps = 1.25 in., wet, dark gray (SM), slight petroleum-like odor.  Rock chip/cobble in spoon tip.		5	15	25	20	35				-
	0.3	S10 14	23.0 25.0		23.0	SM	Medium dense brown to gray brown, silty SAND (SM), mps = 1 in., no odor, wet. Rock chip in sample.		5	25	25	25	20				
25 -		S11 3	25.0 27.0		25.0	SM	(S11) Same as S10 above; dense.  Auger 26-27 as a result of spoon hammer binding from 24-25 ft.										
	59.5	S12 4	27.0 27.5		27.5	SM	Very dense, gray brown, silty SAND, naphthalene-like and ash-like odor. Brick chips in sample.		5	20	20	30	15				
							Spoon sampler refusal at 27.5 ft.  Auger refusal at 27.5 ft.  BOTTOM OF EXPLORATION AT 27.5 FT.  NOTE: Borehole backfilled with cuttings and sand.  Sample "17GH004-00" collected from 0-0.2 ft.  Sample "17GH004-20" collected from 19.0-21.0 ft.  Sample "17GH004-28" collected from 27.0-27.5 ft.										

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17GH004

AL	LEY o	& H					TEST E	BOR	ING RI	EPOI	RT					Вс	ri	ng	No	<b>)</b> ,1	7G	H0	05	
Proje Clier Cont		Consc	lidated	l Edis	on Co	of N	ew York Inc	ıc.	ithin Stuyve			h Street	Station		SI	nee art	t N	lo. F		f 2 uary	y 5,			
			С	asing	Sar	npler	Barrel		Drilling Equ	uipment	and P	rocedur	es		ł	nisl ille				-	12, M.		04 ayer	
Туре	)			HSA		S	-	Rig Ma	ake & Mode	el: CME	75 Tru	ıck moui	nted		4				_				Gra	
Insid	e Dia	meter (	in.)	3.25	1	3/8			pe: Cutting	g Head					ł	eva		n	1 M	0.7	0 atta	n R	orou	16
Ham	mer \	Veight		_	l	40	1 1	Drill M Casing	lud: None						-	atur oca		า	See					- 6
Ham	mer F	all (in.)	)	-		30	1 1	_	y Hammer: ≀	Winch/A	utomati	c Hamm	er											
<u>:</u> ;	Ê	No.		gram		Symbol	Vi	isual-M	anual Ident	ification	and D	escription	on		-	avel	1	San	-			1	Tes	t
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy			ency, color, ( sture, optiona						% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	
0	0.0					SP- SM	no structure	e, no odo	led SAND with or, moist. Occurrence Moved location	casional l	orick at			2 in.,	5	10	10	65	10					_
5	0.1	S1 3 S2	5.5 7.0 7.0 9.0	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	5.5	SM SM	Loose, light	t brown,	cavation/Vac. sity SAND approximately	with grav	vel (SM)			 no	5	15	10	30	25	15				
10 -	0.6	\$3 6	9.0 11.0	WELL INSTALLED	9.0	SP	Very loose, 1.37 in., no		own, poorly- re, no odor.	graded S	ĀND w	 ith gravel	(SP), mj	 os =	10	10	15	40	20	5				
	0.3	S4 12	11.0 13.0	NO WE	12.0	SP SM			silty SAND (S						5	5	5	50	20	15		_		
	0.5	\$5 6	13.0 15.0			SM	· .		ike odor; 20% 13 ft. except		ke Mate	rial, 10%	wood ch	ips.										
15 -	0.0	\$6 8	15.0 17.0		15.0	SM	Similar to S.	5 except	t medium den	nse, trace	of very	weathere	d rock, r	noist.								 	_	
	0.0	S7 3	17.0 19.0			SM	Similar to So Cinder-Like		t, strong naph al.	nthalene-l	ike odor	r, 20% fi	ne											
00	0.6	S8 11	19.0 21.0		19.0	SP- SM			k brown, poo:						10	10	15	30	25	10	-		_	-
20 —		Wa	ter Le	vel Da		/6		Sam	nple Identifi	cation	We	ell Diagr				(	Sur	mm	ary					_
Da	ite	Time	Elaps Time	(hr \ E	Dep Bottom Casing	th (ft. Botto of Ho	M Water		Open End Ro Thin Wall Tub			Riser F Screen Filter S		1				`	, ft. . ft.	,	27.9 -			
2/12/:	2004	NA	N/		15.0	17.0		υι	Undisturbed S		0, 9 6	Cutting Grout	s	Sai	mpl	es			S1 GF	2	 )5			_
Fiel	ld Tes	ts:		Dilat	ancy:		Rapid, S-Slo	G ( ow, N-N	Geoprobe None			N-Nonpla	ite Seal istic, L-I		1-M	ediu	um,	, H-	-Hig	ļh				
		mpler blo	ows per	Toug	hnéss	L-L	ow, M-Med	lium, H		Dry :	Strengt	h: N-No	ne, L-Lo	w. M	-Me	diu	m,	H-I	Higľ	n, ∨	<u>/-Ve</u> nete	ry H	ligh	_

	ALEY &	<u>چ</u>						E	Boi	rin	g N	01	7GI	1005			
A	DRIC		,	,			TEST BORING REPORT						-01: 2 o	l f 2	,		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	Г	g.	Sa Medium %		% Fines		Toughness a	Plasticity a	Strength
- 20 -							20% Cinder-Like Material.	Ė		F	F				<u> </u>	Ц.	0)
-	0.0	S9 24	21.0 23.0			SP- SM	Similar to S8FILL-										
	0.0	S10 9	23.0 25.0			SP- SM	Similar to S8.			froitestatumineromanatatatuminestatumin						-	
- 25 - -	0.4	S11 11	25.0 27.0			SP- SM	Similar to S8 except Dense, 15% Ash-Like Material.										
_	9.6	S12 8	27.0 27.9		27.9	SP- SM	Similar to S11 except heavy staining from 27.6-27.7 ftFILL-										
							BOTTOM OF EXPLORATION AT 27.9 FT  NOTE: Borehole backfilled with drill cuttings and sand upon completion.										
							Sample "17GH005-00" collected from 0-0.2 ft. Sample "17GH005-011" collected from 9.0-11.0 ft. Sample "17GH005-21" collected from 19.0-21.0 ft. Sample "17GH005-28" collected from 27.0-27.8 ft.										
											- The second second second second second second second second second second second second second second second			VF PROPERTY AND ADDRESS OF THE PARTY AND ADDRE			

CON ED\_TB3\_PG1 USCSUB4.GLB USCSTB+CORE4.GDT G\: DATA\:\text{29452\_29463\circ GNT LOGS\:\text{29462\_011} AQUIFER.GPU Apr 12, 05

'SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17GH005

HA AL	LEY & DRIC	∛ H					TEST	BORING REPORT  Boring No.17GH	006
Proj Cļie Con		Conso	lidated	Ediso	on Co.	of N	ew York I	ey & Nicol Environmental, Inc. Start February 16, 2	
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish February 19, 20 Driller M. Smith/M. Med	
Туре	<del>-</del>		H	ISA		S	-	Rig Make & Model: Mobile B-47 truck mounted H&A Rep.S. Brousseau/V	
Insid	le Dia	meter (i	in.)3.2	5/4.2:	5 1	3/8	-	Bit Type: Cutting Head Elevation 10.53 Drill Mud: None Datum Manhattan I	Borough
Ham	mer V	Veight (	(lb.)	-	1	40	-	Drill Mud: None  Casing:  Datum Mannattan I  Location See Plan	
Ham	mer F	all (in.)	·	-	3	30	-	Hoist/Hammer: Winch Safety Hammer	
<u> </u>	~	e No. (in.)	ı,	am		Symbol	\		d Test
Depth (ft.)	(mdd)	ple I	th (ft	Diagr	Ę	USCS Syn		Visual-Manual Identification and Description  by/consistency, color, GROUP NAME, max. particle size, odor, moisture, optional descriptions, geologic interpretation)	g Gi
Dep	PID	Sample N & Rec. (ii	Sample Depth (ft.)	Well Diagram	Depth (ft.)	Visual-Manual Identification and Description  ty/consistency, color, GROUP NAME, max. particle size, odor, moisture, optional descriptions, geologic interpretation)	Plasticity Strength		
0	ND				0.3		\		
					0.8	to brown, silty SAND (SM), trace roots, mps = $0.6 \text{ in., no}$   $5 20 35 40$   15 15 30 25 20			
							to SAND (SM), trace of concrete fragments and pieces, brick		
-								, mps = 3.5 in., no odor, dry.	
_	0.1				5.0				
- 5 -	0.1	S1 16	5.0 7.0			SM		Hand Excavation/Vac-Truck Exploration at 5.0 ft. 5 10 15 25 25 20 lense, red-brown, silty SAND with gravel (SM), mps = 1.37	
and and and and and and and and and and		10	7.0					ucture no odor, dry.	
The state of the s	0.7	62	7.0		7.0	CD	77	-FILL-	
		S2 5	7.0 8.5	ED		GP- GM		e, gray, poorly-graded GRAVEL (GP-GM) with silt and sand, 50 10 5 10 15 10 37 in., no structure, no odor, dry.	
in the second	0.2			WELL INSTALLED		CD	Cincilos to	S2 arrest Medium descentible 100/ briefs	
		S3	9.0	INS		GP- GM	Silmar to	S2 except Medium dense with 10% brick.	
- 10 -		4	11.0	ELL					
	0.4			NO W					
	0.4	S4 4	11.0 13.0	Z		GP- GM	Similar to	S2.	
			13.0						
	0.3	S5A	13.0		13.0	SM	Dance are	ay to brown, silty SAND with gravel (SM), mps = 1.25 in., 5 10 30 20 15 20	
		33A	14.0			SIVI		re, no odor, moist.	
		S5B 6	14.0 15.0						
- 15 -		<b>S</b> 6	15.0				No recover	rry.	
		0	17.0			***************************************			
	0.3								
	0.0	\$7 6	17.0 19.0			SM	Similar to	S5 except very denseFILL-	
	ND				18.5				
	ND	S8	19.0		19.0	SM SP-		S5 except, red brown.	
20 -		10	21.0			SM		25 in. Occasional layer of very loose silt.	
		Wa	ter Lev			th /ft	\ to:	Sample Identification Well Diagram Summary	
Da	ate	Time	Elaps Time (	hr \ B	ottom		Mator	Screen Overburgen (III. II.) 29.8	
2/19/	2004	NA	NA	010	Casing 9.0	of Hc	ne	T Thin Wall Tube Filter Sand Rock Cored (lin. ft.) -  U Undisturbed Sample Sangle Samples S13	
	2001	. 14 %	'''	Account to the same of the sam		11.(	, 10.5	S Split Spoon Grout Boring No. 17GH006	
Ei-	ld Test			Dilata	ancv'	R-⊏	Rapid 9-91	G Geoprobe Bentonite Seal   Sentence   Seal   Sentence   Seal   S	
		s: npler blo		Toug	hnéss:	L-L	ow, M-Me	ddium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very e (mm) is determined by direct observation within the limitations of sampler size (in millimeters).	High
- 3P	ı – oar							e (mm) is determined by direct observation within the limitations of sampler size (in millimeters).  visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GinT LOGS\29462-011.GPJ

	ALEY	Šę.					TEAT BARNA DECAT	E	3or	in	g N	lo1'	7GF	1006	i		
A	JDRIC						TEST BORING REPORT						-01: 2 o	1 f 2	<u>!</u>		
(£)	m)	No.	ft.)	gram		Symbol	Visual-Manual Identification and Description	Gra	ave		Sar	nd		F	ield	Tes	t
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20		00 ∞	0,0	5		-		6	6	6	6	6	6	İΩ	T <sub>C</sub>	<u>a</u>	<u>x</u>
-	ND	S9 3	21.0 23.0			SM	Very dense gray-brown, silty SAND with gravel (SM), mps = 0.75 in., no structure, slight naphthalene-like odorFILL-		15	10	10	30	35				
-		S10 0	23.0 25.0		23.0		No recovery.					_					
- <b>2</b> 5	0.8	SII 3	25.0 27.0			SM	Very loose, gray-brown silty SAND (SM), mps = 0.03 in., no structure, naphthalene-like odor in spoon tip.				20	35	45		***************************************		
-	7.9	S12 4	27.0 29.0		27.0	SM	Similar to S11 except medium dense; 3 inch black stained layer from 28.7-29.0 ft. naphthalene-like odor present. Red brick in the spoon tip.										
L	1.0	S13 6	29.0 29.8		29.8	SP- SM	Very dense, gray-brown, poorly-graded SAND with silt and gravel (SP-SM), mps = 1.37 in., no structure, naphthalene-like odor present. Approximately 10% red brick.	5	10	15	40	20	10				
							-FILL- BOTTOM OF EXPLORATION AT 29.8 FT.				***************************************	***					
							NOTE: Borehole backfilled with drill cuttings and sand upon completion.										
							Sample "17GH006-00" collected from 0-0.2 in. Sample "17GH006-07" collected from 5.0-7.0 ft. Sample "17GH006-15" collected from 13.0-15.0 ft. Sample "17GH006-29" collected from 27.0-29.0 ft.		,								
									***************************************				***************************************				
	overstoom.																
															***************************************		

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT GADATA/29/29455\_29463\_29463/GINT LOGS/29462-011.GPJ Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soll identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17GH006

AÍ	DRIC	й ■					•	TEST	ВО	RING REPO	RT				BC	rii	ng	NO	.17	'MV	750	13
Proj Clie Cor	•	Conso	lidat	ed Ed	lison (	Co. o	of No	ew York I	nc.	within Stuyvesant To		th Street Station		Sł		t N	o. Ja		1 ry 2	6, 2		
			T	Casi	ng S	amp	oler	Barrel		Drilling Equipmen	t and P	rocedures			nisł rille		Fe Cr		ary	12, 2	004	r
Тур	<del></del> е			HSA	4	S		-	Rig	Make & Model: Day	ey Drill	DK 527 ATV M	ounted	ł					urpł	ıy/H	. Kle	e
Insid	de Dia	meter (i	n.)	4.2	5	1 3/	/8	-	1	Type: -				1	eva atur		n	1( Ma	0.00 inha	ttan	Boro	· · ·
Ham	nmer V	Veight (	lb.)	-		140	)	-	1	Mud: - ing: -				<u> </u>	oca		1 5	See :				_
Ham	nmer F	all (in.)				30		-	Hois	st/Hammer: Rope Ca	thead/Sa	afety Hammer										
(£	m)	No.	. 4	(.)	gram		Symbol	\	/isual-	-Manual Identification	n and D	escription		<del> </del>	avel	- 3	San E		$\vdash$		ld Te	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample	neptin (	well Diagram Depth	(ft.)	S			istency, color, GROUP noisture, optional descr				% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Diacticity	1000
0 -	0.0			۵	۵	S	SP-			rown, poorly-graded SA				10	5	25	50	10	十	Ť	+	Ξ
							SM	(SP-SM), i brick.	mps =	4 in., no structure, no -FILL-	odor, dry	y. Approximately	5%					of cereshalor minimized by the control of the cereshalor management of the				
	0.0					.5	SP-	Dark brow		orly-graded SAND with	silt and o	gravel (SP-SM), m			15	10	45	20	10	-	- -	
- 5 -								1 i <u>n., no s</u>	tructur	e, no odor, dry. Appro Excavation/Vac-Truck I -FILL-	imately	10% brick, 5% gla				,						
- 10 -		S1 18	8.0 10.	1.4 .1"	10	s.0	SM	in., no odo Bottom 10	or, moi in. of	ple, medium dense, bro st. sample, medium dense, 5 in., no odor, moist.					5	5	5	60 2	25			
0								NOTE: 4 i	in., of o <u>on; C</u>	Ash-Like Material at bo <u>oal-Like Material in ap</u> p	ottom of s o <u>roximat</u> e	sample, approxima e <u>ly 15% of sam</u> pl <u>e</u>	tely									
· 15 -		S2 14	13. 15.	1. 4-		S	SM			vn, silty SAND (SM), n % brick, 20% Ash-Like -FILL-					5	5	5	55	30			
					19	.1		borehole u 17MWS03	pon co " for c	ttings placed in drums. mpletion. Refer to "Obomplete well details.	servation		in									
		10/-1	or!	0) (5) 1	Doto			MULIUM	.,	XPLORATION AT 19.		oll Diagrass	1			<u>                                     </u>						_
D.	ato		Fla	<u>evel l</u> psed	D	epth			0	ample Identification  Open End Rod		ell Diagram Riser Pipe	Ove	erb:			nma (lin.	ary ft.)	10	) 1		
	ate	inne .	Time	e (hr.	Botto of Casi	m E	3otto of Ho		1	Thin Wall Tube		Screen Filter Sand					•	. ft.)	1.5	-		
2/12/	/2004	NA		ΙA	13.0		15.0	10.0	USG	Undisturbed Sample Split Spoon Geographe	44	Cuttings Grout Concrete	Sar Bor	<u> </u>			17N	S2 NW		3		_
Fie	eld Test	ts:			latancy			apid, S-SI		Geoprobe I-None Pla	<u>ISSSS</u> sticity: 1	Bentonite Seal V-Nonplastic, L-L	l .ow, N	l-Me	ediu	ım,	H-	High	<u> </u>			_
100	T = Sar	npler blo	ws pe		ughnę	ss: Maxir	L-L num	ow, M-Me particle size	dium, e (mm)	H-High Dry is determined by direct	Strengt	th: N-None. L-Lc	w. M-	Мe	diu	m.	H-F	liah	. V-	Very eters	Hig	r

HA AL	ALEY ( DRIC	& H					7	rest	во	RING	REPO	RT					В	ori	ng	No	o.1	7M	W:	S04	1
Proj Clie Cor		Conso	lidat	ed Ed	lison C	o. of	Ne	red Gas F w York Inal, Inc.		within Stuy	yvesant To	wn 17	th S	Street		S	hee tart	et N	lo. I		f 2 ch	12,			
				Casir	ng Sa	ample	er	Barrel		Drilling	Equipmen	t and F	roc	edures		1	nis rille			Mar Iedo		12,	200	4	
Гуре	e			HS/	1	S	1	_	Rig	Make & M	odel: Mob	ile B-4	7 Tr	uck Mour	nted	-				. M		ohy			
•		meter (	in.)	4.25		1 3/8		_	1	Type: -							leva atu	atic	n	1 M	0.0	)3 natta	n B	oro	
		Veight ( Fall (in.)	. 1	-		140 30		-	Cas	∣Mud: - sing: - st/Hammer	∵ Wire Wi	nch/ S	Safet	ty Hamme	r			rii	n	See					<u>us</u>
		o ·		_ [	<u>_</u> _	g	十		1						-	Gra	ave	Ī	Sar	_		F	ielo	Te	st
Depth (ft.)	РІВ (ррт)	Sample No. & Rec. (in.)	Sample	Deptin (IIt.)	Well Diagla	USCS Symbol	,	(Densit	y/cons	-Manual Id sistency, colo noisture, opt	or, GROUP	NAME,	max	x. particle		% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Ctronoth
0 -				40	0.		1	Brown, sil odor, dry,	ty SAI	ND with gratrace red brid	-ASPHAL vel (SM), m ck. -FILL-		0 in	., no struc	ure, no	10	-	+	40	15					
	0.5				3.	SM	1	Similar to	above	, except blac	k, fuel-like	odor, 59	 % ci:	nder, Clin	cer-like	10	10	10	40	15	15			<u> </u>	-
					3.	8 SM	1 \			al-Like Mate	FILL-				THE PARTY NAMED VALUE OF	10	10	10	40	15	15		-	-	-
5 -				11110:	5.	0	+			sample except Report 17M	-FILL-					$\not\perp$									-
			u o r oppopuje svenskyvejkeznickadelaka, konstilaka, venika, konstruktur.														,	ster fronte frantes and a second construction of the second construction of							
10 -																a de mandamento de defende en estado de defenda de estado de destado de destado de destada de estado de estado	standaring and depositional regions and commence and commerce and comm								
15 -																AND THE RESIDENCE OF THE PROPERTY OF THE PROPE	Admittadi — in di indice de commune commune commune de commune commune commune de commune de commune de commune							VIAMONOA, MA DA DANAMA	
20 -		' Wa	ter L	evel (	 Data				S	ample Ider	ntification	W	/ell l	Diagram				Sui	mm	ary			<u>'                                     </u>	•	<u>-</u>
Da	ate	Time		psed e (hr.)	Do Botton of Casir		ft.) tton Hole	n Water	O T	Open End Thin Wall			S F	Riser Pipe creen ilter Sand	Ro	verb ock	Co		•		,	20.5 -			
		-1	ТОТ	ENCC	UNTE	RED-			U S	Split Spoo		9,90	G	outtings Grout Concrete	1	amp ring		 D.	17.	ΜV	VS	04			
Fie	eld Tes	ts:			atancy			apid, S-S			Plas	sticity:	B N-N	entonite S lonplastic	eal L-Low, I	M-M	edi	um	, H	-Hic	jh			1	
1SP	T = Sa	mpler blo		er 6 in		<u>laximu</u>	ım p		e (mm	H-High ) is determine I <b>I-manual</b> r	ed by direct	<u>observa</u>	tion		imitations	of sa	mp	ler s	size	(in r	nillir	nete		ligh	<u></u>

H Al	ALEY & LDRIC	Å H					TEST BORING REPORT	F	ile	No		162-	-011	WS0			
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)		vel		Sar	d	% Fines	Dilatancy	Toughness	Plasticity a	Strength
- 20					20.5		BOTTOM OF EXPLORATION AT 20.5 FT.  NOTES: Drill cuttings placed in drums.  Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 17MWS04" for complete well details.  Sample "17MWS04-04 FP" collected from 3.0 - 4.0 ft.										

CON ED\_T83\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA/29/29455\_29462\_29463/GINT LOGS/29462-011 FENLEY.GPJ Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

17MWS04

H.A	ALEY & DRIC	& H					TEST	BORING REPORT  Boring No.19MV 19GF	VD05/ H001
Clie	ject ent ntracto	Conso	lidated	Edisc	n Co.	of N	ured Gas P ew York Intal, Inc.	Start February 5, 2	
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  Finish March 5, 20 Driller M.Smith / M.Mea	
Тур	e		Н	ISA	;	<u> </u>	-	Rig Make & Model: Mobile B-47 Truck-mounted H&A Rep.H.Klein / J.C	
Insid	de Dia	meter (i	in.) 4	1.25	1:	3/8	-	Bit Type: Cutting Head Elevation 10.93 Drill Mud: None Datum Manhattan	Borough
Han	nmer V	Veight (	lb.)	-	1	40	-	Casing: - Location See Plan	
Han	nmer F	all (in.)			3	0	-	Hoist/Hammer: - Downhole Hammer	
Œ.	Ê	Sample No. & Rec. (in.)	(£	gram		Symbol	V	/isual-Manual Identification and Description	eld Test ဖ္က
Depth (ft.)	PID (ppm)	mple Rec. (	Sample Depth (ft.)	Well Diagram	tt.	S Sy	(Densit	Visual-Manual Identification and Description  by/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , odor, moisture, optional descriptions, geologic interpretation)	Toughness Plasticity Strength
L	E E	s ar	Sar	Well	Depth (ft.)	nscs	structure, c	odor, moisture, optional descriptions, geologic interpretation)	Toug Plas Strei
- 0 -				ΔΔ			Dark brow	-TOPSOIL- 5 35 60	
ŀ				4 4			Dark orow	vn/black, (4 in. frost), no odor, moist, mps = 1 in.	
ŀ					2.0	SM	Brown sil	Ity SAND (SM), no odor, moist, mps = 4 in. 5 10 5 55 25	
Ļ						Jin	Diown, on	(3) 67 (17) (60 (17), 18 (18), 18) (7) (8)	
								nent/concrete encountered at 3.5 bgs (cement 2.5 in. thick).	
					4.3			d removed (no soil). Refusal on smooth concrete same as in 19MWS05.	
- 5 -	1.7	S1	5.0			SM	Bottom of	Hand Excavation/Vac-Truck Exploration at 5.0 ft. rk brown, silty SAND with gravel (SM), roots, no structure,	
ŀ		14	7.0					for which strip SAND with graver (SM), roots, no structure,	
L	0.0							-FILL-	
	0.0	S2 16	7.0 9.0			SM		rk brown, silty SAND with gravel (SM), brick pieces, common 15 10 10 30 10 25 structure, wet, slight organic odor.	
Ī									
ŀ	1.7	S3	9.0			SM		rk brown to black, silty SAND with gravel (SM), Asphalt-Like 10 20 30 15 25	
- 10 -		10	11.0					wood, roots, no structure, wet, slight	
	0.0						Note: Con	screte rubble from 10.7 to 11.0 ft.	-
		S4 15	11.0 13.0			SM	Medium de musty orde	ense, gray, silty SAND (SM), no structure, wet, slightly	
					•		masty orac	-FILL-	
	0.0	S5	13.0			SM		ny, silty SAND with gravel (SM), trace roots, no structure,   10   10   5   30   20   25	
-		15	15.0				wet, slight	musty odor.	
- 15 -	0.0		15.0			03.5	T	STATE CAND (CAN DECEMBER )	
		\$6 9	15.0 17.0			SM	Loose, gra	ay, silty SAND (SM), no structure, wet, slight organic odor.	To the same of the
									Washington and the same of the
ŀ	0.0	S7	17.0			SM		ense, gray, silty SAND (SM), no structure, wet, slight musty	
-		4	19.0				odor.		
	0.1		10.0				T	-FILL-	
20		\$8 8	19.0 21.0			SM	Loose, gra	y, silty SAND (SM), no structure, wet, no odor.	
- 20 -		Wat	ter Lev	- 1				Sample Identification Well Diagram Summary	
D	ate	Time	Elapse Time (l	hr ∫ B	ottom		m Motor	O Open End Rod Riser Pipe Screen Overburden (lin. ft.) 33	
3/3/	2004		(1	of C	Casing	of Ho	ole vvater	T Thin Wall Tube Filter Sand Rock Cored (lin. ft.) -  U Undisturbed Sample S14	
اد اد	2004						0.0	S Split Spoon Grout Boring No. 19MWD05/	
Fie	eld Test	is:		Dilata	incv.	R-F	Rapid. S-SI	G Geoprobe Bentonite Seal 19GH001  low, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	
L		npler blo		Tough	ness:	L-L	ow. M-Me	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Ver e (mm) is determined by direct observation within the limitations of sampler size (in millimeters	y High
								visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	

Apr 12, 05

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\:DATA\29\29455\_29462\_29463\GINT LOGS\29463-011.GPJ

H. Al	ALEY & DRIC	% II					TEST BORING REPORT	F	ile	No	29	19 463	<b>9GH</b> -011	WD0 1001 l f 2			
	٥	. (-i	·	am		loqi	Visual-Manual Identification and Description	Gra	avel	_	Sar	nd	Ť		ield	Tes	<u>t</u>
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Ē	USCS Symbol	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> ,	% Coarse	Fine	Coarse	% Medium	ine	% Fines	апсу	Toughness	icity	gth
L	PID	San R R	Sar	Well	Depth (ft.)	nsc	structure, odor, moisture, optional descriptions, geologic interpretation)	8	% F	%	2 %	% Fine	% ₽	Dilatancy	Toug	Plasticity	Strength
- 20 - - -	0.2	S9 4	21.0 23.0			SM	Medium dense, gray, silty SAND (SM), no structure, wet, no odor.		5	5	40	35	15				
-	1.0	S10 15	23.0 25.0			ML	Loose, gray, sand SILT (ML), bonded, wet, no odor.					15	85				
- 25 -	0.0	S11 10	25.0 27.0		26.0	ML	Loose, gray, silty SAND (ML), slightly bonded, wet, no odorFILL-			5	45	35	15				
	1				26.5	PT	Stiff, brown PEAT, wood fibers.	-									
-	0.0	S12 12	27.0 29.0			OL/ OH	Soft, gray, clayey SILT and peat with sand (OL/OH), trace organics, bonded, wet, slight organic odor.					10	90				
-	0.0	S13	29.0	圕	29.0	SP	-ORGANIC DEPOSITS-	$\vdash$		10	70	15	5				
-30 -		12	31.0			or .	Loose, gray, poorly-graded SAND (SP), no structure, wet, no odor.			10	//	13	3				
1 30	0.0			計		SP	Loose, brown, poorly-graded SAND (SP), no structure, wet, no odor.			10	70	15	5				
-	0.0	S14 4	31.0 33.0			SP	Loose, gray, poorly-graded SAND (SP), no structure, wet, no odor.			5	70	20	5				
					33.0	***************************************	-GLACIAL LACUSTRINE-										
							BOTTOM OF EXPLORATION AT 33 FT.										
							Note: Groundwater observation well installed in boring upon completion.		,								
							Soil cuttings placed in drums.										
							Sample 19GH001-00 collected from 0-0.2 ft. Sample 19GH001-07 collected from 5-7 ft. Sample 19GH001-15 collected from 13-15 ft. Sample 19GH001-31 collected from 29-31 ft.										
															**************************************		
		,															

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA/29/29455\_29462/29463\GINT\_LOGS\29463-011.GFJ Apr 12, 05

'SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

19MWD05/ 19GH001

HA AL	LEY & DRIC	Š H					TEST	BORING REPORT  Boring No.19GHO	002
Proj Clie Con		Conso	lidated	Edisc	on Co.	of N	ured Gas P ew York Intal, Inc.	Start February 24, 20	
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish March 2, 200- Driller M. Smith/K. Kegal	+
Туре	<del></del>			_	(	3	_	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P.Falce/J.O'Br	ien
Insid	le Dia	meter (i	in.)	_	1	.5	_	Bit Type: - Elevation 6.33 Drill Mud: - Datum Manhattan B	Roroug
Ham	mer V	Veight (	(lb.)	-		-	-	Drill Mud: -  Casing: -  Datum Manhattan E  Location See Plan	oroug.
Ham	mer F	all (in.)		-		-	-	Hoist/Hammer:	
	<u> </u>			am		poq	`		Test
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Densit	/isual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size², ador, moisture, optional descriptions, geologic interpretation)	Plasticity
0 -	1.7	G1	0.0	>		ر		-CONCRETE-	Δ
		16	4.0		0.5	SW-		ack, well-graded SAND with silt and gravel (SW-SM), no 10 10 15 25 30 10	
					1.5	SM SP	odor, mois	st. Pieces of brick, concrete, Clinker-Like Material, mps = 2	
	1.0				2.5	or	No odor, n	noist, brown, poorly-graded SAND with gravel (SP), brick,	
	1.8					SW- SM	Dark gray,	2 Clinker-Like Material, mps = 4 in.  well-graded SAND with silt and gravel (SW-SM), pieces of cherete, slight organic odor, moist, mps = 1 in.	
		G2 24	4.0 8.0		4.5	CM			<u> </u>
5 -	60	24	8.0			SM SM	1 in. Bottom of Brown, sil	SAND (SM), mps = 1 in., wet, slight organic odor, mps = 0 5 15 25 30 25  Hand Excavation/Vac-Truck Exploration at 5.0 ft. ty SAND (SM) with brick, white ceramic pieces, no structure, et, no odor.	
10 -	0.0	G3 10	8.0 12.0	NO WELL INSTALLED		SM	Brown, sil	ty SAND with gravel (SM), no structure, wet, no odor.	
	0.0	G4 11	12.0 16.0	NO N		SM	Brown, silt	ty SAND with gravel (SM), no structure, wet, slight organic 20 10 10 20 15 25	
15 -	0.0	G5 19	16.0 20.0			SM	Brown, silt	ty SAND with gravel (SM), no structure, wet, slight organic 15 10 5 20 20 30 -FILL-	
quitorium									
-									
20		101	ton 1					Sample Identification   Well Diseases	
Da	ate		Elapse	ed	Dep	th (ft. Botto		Sample Identification   Well Diagram   Summary   O Open End Rod   Riser Pipe   Overburden (lin. ft.) 30	
			Time (I	" of (	Casing	of Ho	Water	T Thin Wall Tube U Undisturbed Sample Filter Sand Cuttings Samples Grout Rock Cored (lin. ft.) - Samples Grout	
								S Split Spoon G Geoprobe  Solution G Geoprobe  GOODTON	
	ld Test				nnéss:	1-1	ow M-Me	ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Ory Strength: N-None I-Low M-Medium, H-High V-Very I	High
¹SP	T = Sar		ws per 6					e (mm) is determined by direct observation within the limitations of sampler size (in millimeters).  visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29463\GINT LOGS\29463-011.GPJ Apr 12, 05

H	ALEY &	چ ک						TE	Bor	in	g N	019	GH	1002	?		
AL	DRIC						TEST BORING REPORT						-011 2 o	l f 2	2		
ft.)	Ê	No. (in.)	£.	jram		Symbol	Visual-Manual Identification and Description	Gra	ave		Sar	ıd		F	ield		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20 -	0.0	G6	20.0	_		SM	Brown silty SAND (SM), no structure, wet, slight organic odor.	Ě	5	┿	50				-	О.	S
-		30	24.0				-FILL-										
						- Control of the Cont											
-	0.0	<b>G</b> 7	24.0		23.5 24.0	SM	Gray, silty SAND (SM), slightly bonded, wet, slight organic odor.  -GLACIAL LACUSTRINE-	<del> -</del> -	<u> </u>	-	_	65	35		-		
- 25 -		0	28.0				No Recovery.									ļ	
_		And distribution and desired a															
-	0.0	G8	28.0			SM	Gray-brown, silty SAND (SM), stratified, wet, slight musty odor.				5	55	40				
_		7	30.0		30.0		-GLACIAL LACUSTRINE-										
- 30 -					30.0		BOTTOM OF EXPLORATION AT 30 FT.	T	<u> </u>								
		- Proposition of the Control of the			,		Notes: Borehole backfilled with drill cuttings and sand upon completion and concrete patched.										
						ekovenkenterniskelikkenoneavokaskaskaskaskaskaskaskaskaskas	Sample 19GH002-00 collected from 0 - 0.2 ft. Sample 19GH002-02 collected from 0 - 2 ft. Sample 19GH002-04 collected from 2 - 4 ft. Sample 19GH002-07 collected from 5 - 7 ft. Sample 19GH002-13 collected from 12 - 13 ft. Sample 19GH002-30 collected from 28 - 30 ft.										
						maning developed the control of the		***************************************									
				aboute a contract of the contr													
					dde sin skrift medda e skiede e malles sande												
															-		
								***************************************									
	<b>Т</b>																

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GNT\_LOGS\29463-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

19GH002

HA AL	LEY d DRIC	& H					TEST	BORING REPORT  Boring No.19GHO	003
Proj Clie Con		Conso	lidated	Edisc	on Co.	of N	ured Gas P ew York Intal, Inc.	Start March 4, 200	
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish March 9, 200- DrillerM.Smith/K.Kegal	4
Турє	<del></del>			-	(	 Э	-	Rig Make & Model: Simco Earth Probe 200 ATV H&A Rep.P. Falce	
Insid	le Dia	meter (i	in.)	-	1	.5	-	Bit Type: - Elevation 6.29 Drill Mud: - Datum Manhattan B	Borough
Ham	mer V	Veight (	lb.)	_		-	-	Drill Mud: -  Casing: -  Datum Mannattan E  Location See Plan	
Ham	mer F	all (in.)		-		-	-	Hoist/Hammer:	
·	<u>-</u>	9 (-)	Ţ	am		loqu	V		d Test
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Density	Visual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size, addr., moisture, optional descriptions, geologic interpretation)	Plasticity
- 0 +		0,740		>	0.5			-CONCRETE-	Δ. 0
-	1.3				1.5	SW- SM	odor, mois	ack, well-graded SAND with silt and gravel (SW-SM), no tr, pieces of brick, concrete, Clinker-Like Material, mps = 2	
-					3.0	SP	2.5 ft. Bro	piece on south side of hole - full width (10 in.) x 6 in. thick at own, poorly-graded SAND with gravel (SP), brick, concrete, ke Material, moist, no odor, mps = 6 in.	William Company of the Company of th
-						SW- SM	Dark gray,	, well-graded SAND with silt and gravel (SW-SM), pieces of 15 15 20 20 20 10	
-		G1	4.0		4.0	SM		concrete, moist, no odor, mps = 2 in.  SAND (SM), wet, slight organic odor, mps = 0 .1 in.  0 5 15 25 30 25	
- 5 -	1.8	27	8.0		5.0	SM	Bottom of	Hand Excavation/Vac-Truck Exploration at 5.0 ft. 0 0 20 25 30 25 own, silty SAND (SM), moist, mps = 0 .1 in.	-
- - - 10 -	2.1	G2 24	8.0 12.0	NO WELL INSTALLED			Similar to :	above.	
		G3 12	12.0 16.0				Similar to a	above.	
- 15 -				And the second second	15.0			┄╌╌╌╌╌╌╌	
-	0.8	G4 14	16.0 20.0			SM		silty SAND with gravel (SM), fragments of coal, Tar-Like 5 10 20 25 25 15 dry, no odor, mps = 0.25 in.	
	2.1					SM	Yellow-bro	own, silty SAND (SM), no odor, wet, mps = 0.1 in.	
-					19.5	-			
- 20						SM	Dark gray,	silty SAND with gravel (SM), no odor, dry, mps = 0.75 in. 5 15 15 15 30 20	Г1-
	and the same of th		er Leve			th (ft.	) to:	Sample Identification Well Diagram Summary  Riser Pipe Quarkurden (lin # ) 20	
2/0/2	-	Time	Time (I	nr ∖ Bo	ottom Casing	Botto	Water	O Open End Rod  T Thin Wall Tube  U Undisturbed Sample  Screen  Filter Sand  Cuttings  Cuttings  Overburden (lin. ft.) 30  Rock Cored (lin. ft.) -  Samples  G7	
3/9/2	2004						10	S Split Spoon Grout Grou	
Fie	ld Test	s:		Dilata Tough				ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very I	
¹SPT	Γ = Sar	npler blo	ws per 6	in.	<sup>2</sup> Ma:	kimum	particle size	of (mm) is determined by direct observation within the limitations of sampler size (in millimeters).  Visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	เลิก

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT GADATA/29/29455\_29462\_29463/GINT LOGS/29463-011.GPJ

Ħ.	LEY	Ş.					TEST DODING DECOR	i						1003			
AL	DRIC	#1					TEST BORING REPORT	F	ile	No et l	294 No	463 2	-01	l f 2	<u>.</u>		
	(	غَ ( <u>-</u>	_	E		poq	Visual Manual Identification and Description	Gra	ve	ı	Sar	nd			ield	Tes	<u>s</u> 1
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	£	S Symbol	Visual-Manual Identification and Description	% Coarse	Fine	% Coarse	% Medium	ine	% Fines	ancy	Toughness	icity	
	PID	San & R	San	Well	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	°	% F	%	%	% Fine	% ₽	Dilatancy	Toug	Plasticity	
20 -	3.1	G5 4	20.0 24.0			ML	-FILL- Dark-gray SILT with sand (ML), moist, slight organic odor, mps $=0.1$ in.	0	0	0	20	40	60				
	2.1	G6 12	24.0		24.0	SM	Yellow-brown, silty SAND (SM), no odor, wet, mps = 0.1 in.	0	0	20	 25	30	35				-
25 -	3.1	12	28.0		25.0	<u> </u>		-		-	-	<del> </del>	-				
	1.9				26.5	ML	Dark-gray SILT with sand (ML),dry, slight organic odor, mps = 0.1 in.	0				40					-
	1.5					SM	Red-brown, silty SAND (SM), moist to wet, slight organic odor, mps = 0.1 in.	0	0	15	25	30	30				
	1.9	G7	28.0		28.0	SM	-FILL-  Gray silty SAND (SM), moist to wet, slight organic odor, mps = 0.1 in.	0	0	20	20	20	40				
		18	30.0				-GLACIAL LACUSTRINE-			***************************************							
30 -					30.0		BOTTOM OF GEOPROBE EXPLORATION AT 30 FT.										
,							Notes: Borehole backfilled with drill cuttings and sand upon completion										
						and describe the second described and the seco	and concrete patched.  Sample 19GH003-00 collected from 0 - 0.2 ft.  Sample 19GH003-07 collected from 5 - 7 ft.  Sample 19GH003-16 collected from 14 - 16 ft.  Sample 19GH003-30 collected from 28 - 30 ft.		1								

CON ED\_TB3\_PG1 USCSUB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\29463-011.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

19GH003

HA AL	LEY & DRIC	Š H						TEST	во	RING I	REPO	RT					Во	rir	ng	No	.19	9M'	ws	 805	1
Proj Clie Con		Conso	lida	ted	Edisc	on Co.	of N	ured Gas F ew York I ntal, Inc.		within Stuy	vesant To	wn 19	th Street	Station		Sł St	neet art	t No		of bru	1 ary	, 5, .7, 2			-
			į	Ca	asing	San	npler	Barrel		Drilling E	Equipmen	t and P	rocedure	es			nist ille:					M.S			
Туре	Э			Н	ISA		S	-	Rig	Make & Mo	odel: Mob	ile B-47	7 Truck N	1ounted		Н	&A	Rej	p.A.	Μu	ırph	ıy/J	.O'	Brie	n
Insid	de Diar	meter (i	in.)	4	.25	1:	3/8	-	1	Type: I Mud:						1	eva atur		n	10 Ma	0.69 anh	9 attai	n Bo	orou	ıgh
Ham	nmer V	Veight (	(lb.)		-	14	40	-		i iviua. sing: -							ocat		) 5	See					<u> </u>
Ham	nmer F	all (in.)			-	3	80	-		st/Hammer:	- Down	hole Ha	ammer												
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	nple	Depth (ft.)	Diagram	th	S Symbol			-Manual Ide			•			Coarse D	Fine	% Coarse	% Medium		% Fines		Toughness @	Tes	
Dep	PID	San & R	San	Dep	Well	Depth (ft.)	nscs			noisture, opti					ion)	%	% Fi	% C	₩	% Fine	% F	Dilatancy	Toug	Plasticity	Strength
- 0 - - -						3.5	SP			orly-graded S bist, frequent					= 1	5	5	10	50	30					
						4.7				countered at 3		hamine	er & hand	excavated	).		-	_		- +			- —		
- 5 - - - - - - - - - - - - -						17.5		Bottom of See Test B 4.7 to 17.5	oring	Excavation/V Report 19MV	-FILL-	xplorati	on at 4.7	ft.	om						Construction of the Constr				
								воттом	OF E	XPLORATIC	ON AT 17.5	FT.								-					
																				***************************************					
		Wa	ter I	_eve	el Dat	ta			S	ample Iden	tification	W	ell Diagr	am			ا ا	Sun	nma	ary					
Da	ate	Time		apse ne (h	hr \ B	Depo ottom Casing		m Motor	O T U	Open End Thin Wall <sup>-</sup> Undisturbe	Tube		Riser P Screen Filter S Cuttings	and	Ove Roo Sar	ck (	Cor		,	•	_	7.5 -			
									S	Split Spoo Geoprobe	n .	6 A.	Grout Concre Bentoni	te	Bori				19N	ЛW	/S(	)5			
Fie	eld Test	s:			Dilata Tougl	hness;	L-L	Rapid, S-S ow, M-Me	dium,	N-None H-High	Plas Dry	Strengt	N-Nonpla th: N-No	stic, L-Lo	w, M-	Me	diu	n,	H-H	ligh	. V	'-Ve	ry H	ligh	
¹SP	T = Sar	npler blo <b>No</b> 1								) is determine I <mark>l-manual m</mark>													s).		

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:IDATA\29\29455\_29462\_29463\GINTLOGS\29463-011.GPJ Apr 12. 05

H/AL	LEY & DRIC	& H					TEST	BORING REPORT  Boring No.00BG001	
Proj Clie Cor		Conso	lidated	Edisc	n Co.	of N	ew York I	Plants within Stuyvesant Town Background nc.  Ey & Nicol Environmental, Inc.  File No29455, 29462, 29463-0 Sheet No. 1 of 3 Start February 9, 2004 Finish February 24, 2004	<b>D11</b>
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  Driller D. Gregorio/C. Guzzard	lo
Тур	Э		Н	ISA		S	-	Rig Make & Model: Kantera CT450 truck mounted H&A Rep.P. Falce/W.Graham	į.
Insid	le Dia	neter (i	n.) 4	.25	1	3/8	-	Bit Type: Cutting Head Elevation 20.93 Drill Mud: None Datum Manhattan Borou	ıgh
Ham	mer V	Veight (	lb.)	-	1	40	-	Casing: Location See Plan	
Ham	mer F	all (in.)		-	3	0	-	Hoist/Hammer: Winch/ Safety Hammer	
ft.)	Ê	S (ii)	£. (-)	gram		Symbol	V	Gravel Sand   Field Test   Sual-Manual Identification and Description   و المعادية   Gravel Sand   Field Test	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Densit	/isual-Manual Identification and Description  by/consistency, color, GROUP NAME, max. particle size, bodor, moisture, optional descriptions, geologic interpretation)	Strength
- 0 -	0.0					ML	Frozen, da	ark brown, sandy SILT (ML), mps = 0.5 in., no structure, no 5 15 30 50	
					0.7	SM	odor.		_
							Brown, sil	ty SAND with gravel (SM), mps = 6 in., no structure, no	
					3.0		odor, mora	-FILL-	
-	0.0				3.0	SM	Similar to	above, except 20-25% brick and concrete pieces. 5 10 10 15 40 20 -FILL-	
- 5 -	0.0	S1 10	5.0 7.0		5.0	SM	Very dense	Hand Excavation/Vac-Truck Exploration at 5.0 ft. e, dark brown, silty SAND with gravel (SM), mps = 1.5 in., re, no odor, 40% red brickFILL-	_
_	0.3	S2 17	7.0 9.0	INSTALLED		SM		S1, except 25% red brick, 10% Ash-Like Material, slight le-like odor.	
- 10 -	0.2	\$3 4	9.0 11.0	WELL INST.		SM	Similar to	S1, except dense, coarse gravel lodged in nose of spoonFILL-	
-	2.4	\$4 18	11.0 13.0	NON		SM		S1, except dense, 20% red brick, 5% Coal-Like Material, 5% s (12.0 ft), 5% Clinker-Like MaterialFILL-	
_	0.2	S5 10	13.0 15.0			SM	Similar to spoon.	S1, except 20% red brick, coarse gravel lodge in nose of -FILL-	
- 15 - -	0.1	S6 20	15.0 17.0		15.0	SM		ense, dark brown, silty SAND (SM), mps = 0.25 in., no no odor, moist.  -FILL-	_
-	0.0	S7 22	17.0 19.0		10.5	SM	Similar to	S6FILL-	
- - 20 -	0.0	\$8 21	19.0 21.0		18.5 19.0	SM SM	occasionall	ense, olive brown, silty SAND (SM), mps = 0.25 in.,	
		Wat	er Leve			LL /£1	\ 4	Sample Identification Well Diagram Summary	_
Da	ate	Time	Elapse Time (h	ar ∖B	ottom		m Motor	O Open End Rod Riser Pipe Screen Overburden (lin. ft.) 50.0	
			,	of C	Casing	of Ho	ole Trater	T Thin Wall Tube Filter Sand Rock Cored (lin. ft.) - U Undisturbed Sample Sample S23	
								S Split Spoon Grout Grout Generate Boring No. 00BG001	
Fie	ld Test	s:		Dilata	incv:	R-F	Rapid, S-SI	G Geoprobe Bentonite Seal   Bentonite Se	
		npler blo		Tough	nnéss:	L-L	ow. M-Me	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High (mm) is determined by direct observation within the limitations of sampler size (in millimeters).	
								visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA129128455\_29462\_29463/GNT LOGS/BACKGROUND.GPJ

W	ALEY & DRIC	&						1			_			001			
A	DRIC						TEST BORING REPORT				29. No.			462 f 3	, 29	463	-01
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram		Symbol	Visual-Manual Identification and Description	Coarse 5	ave	l eg	Sar Wedium %		es		ield ssau		
	DID (	Sam & Re	Sam Dept	Well	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	ပိ %	% Fine	% Coarse	% Me	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
- 20 -					21.0	SM	-GLACIAL LACUSTRINE-			T							
-	0.1	S9 14	21.0 23.0			SP- SM	Medium dense, brown, poorly graded SAND with silt and gravel (SP-SM), mps = 1 in., no structure, no odorGLACIAL LACUSTRINE-	5	10	15	30	30	10				
-	0.2	S10 16	23.0 25.0		23.0	SM	Dense, red-brown, silty SAND (SM), mps = 0.02 in., no structure, no odor.  -GLACIAL LACUSTRINE-		-	-	30	35	35	S	L	Z	N
25 - -	0.3	S11 14	25.0 27.0			SM	Similar to S10, except looseGLACIAL LACUSTRINE-										and the same of th
- -	0.1	S12 14	27.0 29.0			SM	Similar to S10, except medium dense, rust staining 28.2 to 28.5 ftGLACIAL LACUSTRINE-										
- 30 -	0.0	S13 2	29.0 31.0			SM	Similar to SI0GLACIAL LACUSTRINE-										
_	0.0	S14 3	31.0 33.0			SM	Similar to S10, except medium denseGLACIAL LACUSTRINE-			- Announce - Announce							
-	0.6	S15 16	33.0 35.0			SM	Similar to S10, except medium denseGLACIAL LACUSTRINE-										
- 35 - -	0.0	S16 10	35.0 37.0			SM	Similar to S10, except loose, occasional gray fat CLAY seam 1/8 in. thick.  -GLACIAL LACUSTRINE-										
  -  -	0.0	S17 8	37.0 39.0			SM	Similar to S10, except medium dense, stratified appearanceGLACIAL LACUSTRINE-								Marie Williams		
- - 40 -	0.0	S18 11	39.0 41.0			SM	Similar to S16, except medium denseGLACIAL LACUSTRINE-								***************************************		
	0.0	S19 13	41.0 43.0			SM	Similar to S10, except medium denseGLACIAL LACUSTRINE-									**************************************	
  -  -	0.0	S20 13	43.0 45.0			SM	Similar to S10, except medium denseGLACIAL LACUSTRINE-										
- 45 - -	0.0	S21 15	45.0 47.0			SM	Similar to S10, except medium denseGLACIAL LACUSTRINE-		***************************************								
-	0.0	S22 18	47.0 49.0			SM	Similar to S17, except gray lean CLAY layer from 48.8 to 49.0 ftGLACIAL LACUSTRINE-										
	0.0	S23	49.0		49.0	SC	Medium dense, gray-brown, clayey SAND (SC), mps = 0.25 in.,		5	10	20	40	25				

CON ED\_TB3\_PG1 USCSLB4.GLB USCSTB+CORE4.GDT G:IDATA/29/29455\_29462\_29463/GINT LOGS/BACKGROUND.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

00BG001

HA AL	LEY & DRIC	₹ H					TEST BORING REPORT	1						001 462		162	_
				1	I ·	<del></del>	TEOT BOKING KEI GIKT	S	he	et i	٧o.	3		f 3			_
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	şe	% Medium		% Fines		Toughness a	Plasticity a	t
50 -		10	50.0		50.0		frequent coarse sand and fine gravel layers 1/2 in. thick, no odor.  -GLACIAL LACUSTRINE- BOTTOM OF EXPLORATION AT 50.0 FT.  NOTES: Borehole backfilled with drill cuttings and sand upon completion.  Sample "00BG001-00" collected from 0 - 0.2 ft.  Sample "00BG001-04" collected from 0 - 2.0 ft.  Sample "00BG001-04" collected from 2.0 - 4.0 ft.  Sample "00BG001-07" collected from 13.0 - 15.0 ft.  Sample "00BG001-15" collected from 33.0 - 35.0 ft.  Sample "00BG001-55" collected from 48.0 - 50.0 ft.										

HA AL	LEY & DRIC	₹ H					TEST	BORING REPORT  Boring No.00B	G002	
Proj Clie Con		Conso		Ediso	on Co.	of N	ew York I	Start February 9,	2004	)11
	***		Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish March 5, 2 Driller M.Smith/R.Bule		
Туре	<del></del>		-	ISA		 S	_	Rig Make & Model: Mobile B-59 truck mounted H&A Rep.S.Brousseau	•	bell
		meter (		1.25	1	3/8	_	Bit Type: Cutting Head Elevation 20.78 Dell Much Name Manhatta	n Doro	wah
		` Veight (	1	-		40	_	Drill Mud: None  Casing:  Datum Mannatta Location See Plan	11 15010	ugu
Ham	mer F	all (in.)		-	3	30	_	Hoist/Hammer: Winch/ Safety Hammer		
		<u>.</u>		Ē		<u> </u>		Gravel Sand F	ield Tes	st
ı (ff.	(mdd)	Se N	Je (ft.	iagre	_	Symbol	V	/isual-Manual Identification and Description	ness ity	۽
Depth (ft.)	PID (I	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs		Visual-Manual Identification and Description  y/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , odor, moisture, optional descriptions, geologic interpretation)	Toughness Plasticity	Strength
- 0 -						SM		-brown, silty SAND (SM), mps = 0.6 in., trace roots, no 20 40 40 st. Frost to 1.0 ft.		
					1.3	SM		-FILL- ty SAND (SM), mps = 4 in., no odor, dry, 25% bricks at 4.5		1-
-							to 5.0 ft.	-FILL-		
- 5 -	0.2				5.0					
	0.3	S1 3	5.0 6.5			SP- SM	Very dense (SP-SM), i	Hand Excavation/Vac-Truck Exploration at 5.0 ft. e, brown to dark brown, poorly graded SAND with silt mps= 1.5 in., brown with dark brown mottling, no structure,		
.		52	7.0				no odor, di in. particle	ry, 5% gray micaceous particles and frequent black asphalt 0.1 ss.		
1		S2 0	7.0 9.0	ED			No recover	-FILL-		
				LALI	0.0					
- 10 -	0.0	S3 2	9.0 11.0	WELL INSTALLED	9.0	SP		I-brown, poorly graded SAND with gravel (SP), mps = 0.5 acture, no odor, dry, 15% brick fragments.  -FILL-		-
	0.0	S4 3	11.0 13.0	N ON		SP	Similar to fragments.			
	0.0		12.0			G.D.	36.11	-FILL-		
-		S5 6	13.0 15.0			SP		ense, gray, poorly graded SAND with gravel (SP), mps = 0.5 Lecture, no odor, dry, 40-50% probable crushed concrete fill.		
- 15 -	0.0	S6	15.0		15.0	SP	Medium de	ense, red, poorly graded SAND (SP), mps = 0.5 in., no 45 10 5		-
		12	17.0		:	or	structure, i	no odor, dry, 10% brick particles with occasional 0.5 inch ments, 5% concrete fragments.  -FILL-		
.	0.1	S7	17.0			SP		S6, except loose, moist at 17.5 ft, occasional 1 in. pocket of		
.		11	19.0				Ash-Like N	MaterialFILL-		
	0.0	S8 6	19.0 21.0		19.0	SM		ense, brown-red, silty SAND (SM), mps = 0.2 in., no 10 15 50 25 no odor, wet.		$\vdash$
- 20 -		Wa	ter Lev	el Da	ta			Sample Identification   Well Diagram   Summary		
Da	ate	Time	Elaps	( D	Dep ottom	th (ft. Botto		O Open End Rod Riser Pipe Screen Overburden (lin. ft.) 50.0		
	10:		Time (	of (	Casing	of Ho	ole vvater	T Thin Wall Tube Filter Sand Rock Cored (lin. ft.)		
3/4	/04	NA	0	-	17.0	19.0	0   17.0	Grout Grout		
								G Geoprobe Bentonite Seal		
	ld Test				hnéss:	L-L	ow. M-Me	low, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Ve	ry High	1
'SP	T = Sar	npler blo <b>No</b> 1			<sup>*</sup> Ma ntifica	ximum ation	particle size	e (mm) is determined by direct observation within the limitations of sampler size (in millimeter visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	rs).	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA/29/29455\_29462\_29463/GINT LOGS/BACKGROUND AQUIFER.GPJ

HA AL	LEY & DRIC	ξ H					TEST BORING REPORT	F	ile	No	- 294	<b>‡</b> 55	,294	002 62,2 63	946	i3-
	_	· · ·		E		ō		-	ne avel		Sar	d	0		eld	Ге
(#.)	PID (ppm)	ole N.	Je (ft.)	iagra		Symbol	Visual-Manual Identification and Description	arse	a	arse	dium	Φ.	es		SS	
Depth (ft.)	PID (	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs	(Density/consistency, color, GROUP NAME, max. particle size $^2$ , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity
20 -							-GLACIAL LACUSTRINE-									
	0.0	S9 10	21.0 23.0			SM	Similar to S8GLACIAL LACUSTRINE-									
	0.2	\$10 6	23.0 25.0			SM	Similar to S8GLACIAL LACUSTRINE-								:	
- 25 -	0.1	S11	25.0		25.0	SM	Similar to S8, except soil has finer grain.		-	_	10	50	40	_	_	_
		9	27.0			GWI	-GLACIAL LACUSTRINE-					50	70			
	0.0	S12 18	27.0 29.0			SM	Similar to S11GLACIAL LACUSTRINE-									
- 30 -	0.0	S13 15	29.0 31.0			SM	Similar to S11GLACIAL LACUSTRINE-			transfer i mishashramanni handinakasa						
	0.0	S14 18	31.0 33.0		31.0	SM	Similar to S11, except grain sizeGLACIAL LACUSTRINE-		_	_	 35	40	25	_	***************************************	_
	0.0	S15	33.0 35.0			SM	Similar to S14GLACIAL LACUSTRINE-				Contract of the Contract of th				MANAGEMENT AND A STATE OF THE S	
- 35 -	0.0	S16 18	35.0 37.0		mananananan dakanan dakanan mananan manan	SM	Similar to S14GLACIAL LACUSTRINE-									
	0.0				37.0											
	0.0	S17 20	37.0 39.0			SM	Similar to S14, except grain sizeGLACIAL LACUSTRINE-				5	55	40			
40 -		S18 16	39.0 41.0			SM	Similar to S17GLACIAL LACUSTRINE-									
	0.0	S19 20	41.0 43.0			SM	Similar to S17, except looseGLACIAL LACUSTRINE-									
	0.0	S20 22	43.0 45.0	And the second s		SM	Similar to \$19GLACIAL LACUSTRINE-									
- 45 -	0.0	S21 17	45.0 47.0			SM	Similar to S19, except medium denseGLACIAL LACUSTRINE-									
	0.0	S22 12	48.0 50.0			SM	Similar to S21GLACIAL LACUSTRINE-									
1SPT	= Samr	lor blow		20.0			size (mm) is determined by direct observation within the limitations of sample	+		<u></u>			l		002	_

HALE ALDE	EY& RICH					TEST BORING REPORT	1					<b>002</b>	294	63-0	711
						TEOT BOKING KEI OKT				292 10.		f 3		05-0	/1
Depth (ft.)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	še	% Medium	% Fines		Toughness @	Plasticity al	t -
50 -				50.0		BOTTOM OF EXPLORATION AT 50.0 FT.  NOTES: Borehole backfilled with drill cuttings and sand upon completion.  Sample "00BG002-00" collected from 0 - 0.2 ft.  Sample "00BG002-04" collected from 2.0 - 4.0 ft.  Sample "00BG002-17" collected from 15.0 - 17.0 ft.  Sample "00BG002-17" collected from 17.0 - 19.0 ft.  Sample "00BG002-33" collected from 31.0 - 33.0 ft.  Sample "00BG002-50" collected from 48.0 - 50.0 ft.									

H. Al	ALEY O	& H				; · ·	TEST	BORING REPORT  Boring No.	00BG003
Clie	ject ent ntracto	Consc	lidated	Edisc	on Co.	of N	ew York In	y & Nicol Environmental, Inc. Start February	3 y 2, 2004
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish Februar Driller M.Smith/C	y 27, 2004 Guzzardo
Тур	е		ŀ	ISA		S	_	Rig Make & Model: Kantera CT450 truck mounted H&A Rep.H.Klein	
Insi	de Dia	meter (	in.) 4	1.25	1	3/8	-	Bit Type: Cutting Head Elevation 13. Drill Mud: None Datum Man	34 hattan Borougl
		Veight	1	-		40	-	Casing: Location See P.	an
Han	nmer I	all (in.		-   -	1 3	30   =	-	Hoist/Hammer: Winch/ Downhole Safety Hammer  Gravel Sand	Field Test
(ft.)	(mdd)	e No	(ft.)	agram		Symbol	V	isual-Manual Identification and Description	SS S
Depth (ft.)	PID (pl	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	nscs s		isual-Manual Identification and Description  //consistency, color, GROUP NAME, max. particle size <sup>2</sup> , dor, moisture, optional descriptions, geologic interpretation)	Dilatancy Toughness Plasticity
- 0 -						SM	Dark brow	n, silty SAND (SM), mps = 2 in., no odor, moist/frozenTOPSOIL-	
_			Andrew Comment of the		1.0	SM	Brown, sil	y SAND with gravel (SM), mps = 6 in., no odor, moist. 10 10 5 5 55 15	
					3.5	SM		above except, brick at 3.5 ft. Less than 5% wood pieces (6	
_	0.4				5.0		of iron pip	· · · · · · · · · · · · · · · · · · ·	
- 5 - -	0.1	S1 8	5.0 7.0			SM	Medium de	-FILL- Hand Excavation/Vac-Truck Exploration at 5.0 ft. ense, dark brown, silty SAND (SM), mps = 0.25 in., no no odor, moist. Approximately 15% red brick.	
<del>-</del>	0.0	S2 5	7.0 9.0	LLED		SM	Similar to	-FILL- S1, except 5% red brick, 5% Clinker-Like MaterialFILL-	
- - 10 -	0.2	S3 14	9.0 11.0	NO WELL INSTALLED		SM		S1, except dense, 10% red brick, 25% Clinker-Like Material,ike Material.	
	0.0	S4 21	11.0	ON		SM	Similar to	63, except medium dense, wet.	
=	0.1	S5 12	13.0 15.0			SM		63, except loose, 14.2-14.4 ft black stained soil; 14.4-14.6 ft black stained soil.  -FILL-	
- 15 - -	0.0	\$6 10	15.0 17.0		15.0	SP- SM	(SP-SM). (	nse, dark brown to dark gray poorly-graded SAND with silt Decasional sandy, organic layer 2-3 in. thick, organic odor, ely 5% roots.	
-	0.0	S7 18	17.0 19.0			SP- SM			
- - 20 <i>-</i>	0.0	S8 10	19.0 21.0	A Line		SP- SM	Similar to Sin. thick.	-ESTUARY DEPOSIT- 67, except loose, frequent shell fragments, approximately 0.25	
		Wa	ter Lev			th (ft.	) to:	Sample Identification Well Diagram Summary  Riser Pipe Querburden (lin. ft.)	
	ate	Time	Elapse Time (I NA	hr.) Bo	ottom Casing	Botto of Ho	m Water	O Open End Rod T Thin Wall Tube U Undisturbed Sample  O Open End Rod Screen Filter Sand Cuttings  Cuttings  Overburden (lin. ft.) Rock Cored (lin. ft.) Samples S23	51.0
2/2	6/04	NA	INA		11.0	13.0	) 11.0	S Split Spoon  S Split Spoon  S Split Spoon  S Split Spoon  S Split Spoon  S Split Spoon  S Split Spoon  S Split Spoon  Boring No. 00BG0	03
Fie	eld Test	s:		Dilata	incv:	R-F	Rapid, S-SI	G Geoprobe Bentonite Seal Bentonite Seal Boundary No.  Description: Geoprobe Bentonite Seal Bent	
		npler bio	ws per 6	Tough	ness: <sup>2</sup> Ma:	L-L ximum	ow. M-Me	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, (mm) is determined by direct observation within the limitations of sampler size (in mill	meters).
		No	te: So	il ide				risual-manual methods of the USCS as practiced by Haley & Aldrich, I	

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT GADATA/29/28455\_29462\_29463/GINT LOGS/BACKGROUND.GPJ

H.A	LEY &	}z H					TEST BORING REPORT	ı			_			003			_
			1	,	· · · · · · · · · · · · · · · · · · ·	7								462 f 3		463	3-
(#)	(mdi	le No.	le (ft.)	agram	described for the second form of the second	USCS Symbol	Visual-Manual Identification and Description	-	ave	9	Sai		S		ess ess		
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	uscs	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Co2	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	
20 -					21.0	SP- SM	-ESTUARY DEPOSIT-										Ī
	0.0	S9 20	21.0 23.0	-	21.0	OL/ OH	Loose, dark brown, ORGANIC SOIL with sand (OL-OH), mps = $0.02$ in., no structure, organic odor present, approximately $30\%$ plant material.				5	10	85				1
	0.0	610	22.0	-		01./	-ORGANIC DEPOSIT-										
		S10 20	23.0 25.0			OL/ OH	Similar to S9, except medium dense clay interbedded in I/8 in. thick seams. Fibrous peat in I/4 in. thick seams, coarse sand I/4 in. thick seams, organic odor present.  -ORGANIC DEPOSIT-						Canada de Canada				
- 25 -	0.0	S11	25.0			OL/	Similar to S10.			- Contract of Cont							***************************************
		18	27.0			ОН	-ORGANIC DEPOSIT-						***************************************				-
	0.0	S12 8	27.0 29.0		27.5		Description and CAND with all and area (CD CM)	_	40	000	100	45	40				-
			29.0			SP- SM	Dense, gray, poorly-graded SAND with silt and gravel (SP-SM), mps = 0.75 in., no structure, no odor, approximately 5% plant matterESTUARY DEPOSIT-	3	IU	20	140	15	10				
- 30 -		S13 12	29.0 31.0			SP- SM	Similar to S12 (27.5-29.0 ft)ESTUARY DEPOSIT-										
	0.0	614	21.0	-	31.0		Very law and Law Law Law Law Law Law Law Law Law Law	40	40	20	20	10	40				_
		S14 10	31.0 33.0		manufacture of the second seco	SP- SM	Very dense, gray-brown, poorly-graded SAND with silt and gravel (SP-SM), mps = 1.37 in., no structure, no odorGLACIAL LACUSTRINE-	10	10	30	30	10	10				
	0.0	S15	33.0	-		SP-	Similar to \$14.										
		6	35.0	A Comment of the Comm	35.0	SM	-GLACIAL LACUSTRINE-		,								
35 -	0.0	S16 8	35.0 37.0	-	33.0	SM	Very dense, red-gray, silty SAND (SM), mps = 0.13 in., occasional 1 to 2 in. thick, sandy SILT layers, no odorGLACIAL LACUSTRINE-	-	5	15	35	15	30				
	0.0	S17 10	37.0	_		SM	, 1 1 0 ,			***************************************							
		10	39.0				thickGLACIAL LACUSTRINE-										
	0.0	S18	39.0	-	39.0	SM	Very dense, red gray, silty SAND with gravel (SM), mps = 1.37 in., no	5	10	10	15	30	30		-		-
40 -		6	41.0				structure, no odor.										
	0.0	S19 8	41.0 43.0				-GLACIAL LACUSTRINE-										
					42.5	SP	Very dense, tan, poorly-graded SAND (SP), mps = 0.03 in., no	<u> </u>		-	70	25	5				-
	0.1	S20 8	43.0			SP	structure, no odor.  Similar to \$19, except occasional silt seam approximately 1/8 in. thick.				, 0	دع					
		o	45.0				-GLACIAL LACUSTRINE-										
45 -	0.0	S21	45.0		45.0	CL	Very dense, olive-brown, sandy lean CLAY with gravel (CL), mps =	5	10	1-	10	15	60				
		10	47.0				0.75 in., interbedded with brown silt and black biotite, 1/8 in. thick, no odor.										
	0.0	S22	47.0			CL	-GLACIAL LACUSTRINE- Similar to S21, except dense.										
		12	49.0				-GLACIAL LACUSTRINE-										
	0.0	S23	49.0		NAME OF TAXABLE PARTY O	CL	Similar to S21.										
I			L	2	<u> </u>	<u> </u>	size (mm) is determined by direct observation within the limitations of sample		L	1	1	1				3	_

Sheet No. 3 of 3 at 1 at 1 at 1 at 1 at 1 at 1 at 1 at
Section   Sect
SP Dense, poorly-graded SAND (SP), mps = 0.03 in., occasional 2 in. thick layers of black sand (doistie in nature), no odor.  GLACIAL LACUSTRINE-BOTTOM OF EXPLORATION AT 51.0 FT.  NOTES: Borehole backfilled with drill cuttings and sand upon completion.  Sample "00BG003-00" collected from 0 - 0.2 ft.  Sample "00BG003-15" collected from 13.0 - 15.0 ft.  Sample "00BG003-30" collected from 28.0 - 30.0 ft.  Sample "00BG003-50" collected from 48.0 - 50.0 ft.
SP Dense, poorly-graded SAND (SP), mps = 0.03 in., occasional 2 in. thick layers of black sand (biotite in nature), no odor.  GLACIAL LACUSTRINE  BOTTOM OF EXPLORATION AT 51.0 FT.  NOTES: Borrelo backfilled with drill cuttings and sand upon completion.  Sample "00BG003-00" collected from 0 - 0.2 ft.  Sample "00BG003-0" collected from 13.0 - 15.0 ft.  Sample "00BG003-30" collected from 13.0 - 15.0 ft.  Sample "00BG003-50" collected from 48.0 - 50.0 ft.  Sample "00BG003-50" collected from 48.0 - 50.0 ft.

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Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

00BG003

HALEY ALDRIC					,	TEST	BORING REPORT  Boring No.	00B(	<b>3</b> 00	4
Project Client Contract	Conso	lidated	Edisc	on Co.	of N	ew York I	y & Nicol Environmental, Inc. Start March	3 10, 2	.004	
		Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures Finish Marcl			
Туре		E	ISA	-	S	-	Rig Make & Model: Mobile B-59 truck mounted H&A Rep.A.Mur			
Inside Di	•		1.25	1	3/8	-	Bit Type: Cutting Head Elevation 9.3 Drill Mud: None Elevation Ma	86 1hattar	ı Bo	rough
Hammer	_	1	-		40	-	Casing: Location See F	lan		
Hammer			_   _		30 5	-	Hoist/Hammer: Winch/ Safety Hammer  Gravel Sand	Fi	ield <sup>-</sup>	Γest
(ft.)	SP Dark brown, poorly graded SAND with silt and gravel (S M 1.5 in., no structure, organic odor, moist, some root mate FILL.  SP Brown, poorly graded SAND with gravel (SP), mps = 2. structure, no odor, moist, approximately 30-50% brick from FILL.  SP Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 Loose, brown, poorly graded SAND (SP), mps = 0.5 in. no odor, dry.  SP Loose, brown, poorly graded SAND (SP), mps = 0.25 in staining with No. 6 fuel-like odor, frequent brick fragmer red silty sand stained soil, from 7.4 ft. to 8.0 ft., slight oif faint kerosene-like/No. 6 fuel-like odor, wet in lower portion, white cobble with mica partings, slight oily sheen. 10% to mottled in lower 1 ft of sample.  SP Similar to S3, except loose, wet, 5% brick fragments, bla organics mottled through lower 1 ft of spoon, slight organ—FILL-  SS 13.0  SM Loose, dark brown, silty SAND (SM). SM Very loose, dark brown silty SAND (SM), black organics through entire sample.  -ESTUARY DEPOSIT-  SM Similar to S5.  -ESTUARY DEPOSIT-				isual-Manual Identification and Description		SS			
Depth (ft.) PID (ppm)	Samp & Rec	Samp Depth	Well Di	Depth (ft.)	nscs		isual-Manual Identification and Description  //consistency, color, GROUP NAME, max. particle size², dor, moisture, optional descriptions, geologic interpretation)	% rines Dilatancy	Toughness	Plasticity
- 0	SP Brown, poorly graded SAND with gravel (SP), mps = structure, no odor, moist, approximately 30-50% brick -FILL-  SP Bottom of Hand Excavation/Vac-Truck Exploration at 2 Loose, brown, poorly graded SAND (SP), mps = 0.5 in no odor, dry.  SP Loose, brown, poorly graded SAND (SP), mps = 0.5 in no odor, dry.  SP Loose, brown, poorly graded SAND (SP), mps = 0.25 staining with No. 6 fuel-like odor, frequent brick fragmered silty sand stained soil, from 7.4 ft. to 8.0 ft., slight faint kerosene-like/No. 6 fuel-like odor from 8.0 ft. to 9 Medium dense, gray, poorly graded SAND (SP), mps structure, faint No.6 fuel-like odor, wet in lower portio white cobble with mica partings, slight oily sheen. 10% mottled in lower 1 ft of sample.  SP Similar to S3, except loose, wet, 5% brick fragments, to organics mottled through lower 1 ft of spoon, slight organics mottled through lower 1			n, poorly graded SAND with silt and gravel (SP-SM), mps = 10 5 5 45 25 1 structure, organic odor, moist, some root material.	0					
	Classity/consistency, color, GROUP NAME, max. p. structure, odor, moisture, optional descriptions, geological structure, odor, moisture, optional descriptions, geological structure, odor, moisture, optional descriptions, geological structure, odor, moisture, optional descriptions, geological structure, organic odor, moist, some root may structure, no odor, moist, some root may structure, no odor, moist, approximately 30-50% brick in FILL-    Solution   Sol			no odor, moist, approximately 30-50% brick from 3-5 ft.						
- 5 -	structure, no odor, moist, approximately 30-50% brick from -FILL-  S1 5.0  SP Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft Loose, brown, poorly graded SAND (SP), mps = 0.5 in., n no odor, dry.						wn, poorly graded SAND (SP), mps = 0.5 in., no structure,	-		
	S1 5.0 3 7.0  SP Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 Loose, brown, poorly graded SAND (SP), mps = 0.5 in., no odor, dry.  S2 7.0 11 9.0  SP Loose, brown, poorly graded SAND (SP), mps = 0.25 in. staining with No. 6 fuel-like odor, frequent brick fragment red silty sand stained soil, from 7.4 ft. to 8.0 ft., slight oil faint kerosene-like/No. 6 fuel-like odor from 8.0 ft. to 9.0  S3 9.0  SP Medium dense, gray, poorly graded SAND (SP), mps = 1 structure, faint No.6 fuel-like odor, wet in lower portion, white cobble with mica partings, slight oily sheen. 10% bit mottled in lower 1 ft of sample.  SP Similar to S3, except loose, wet, 5% brick fragments, blac organics mottled through lower 1 ft of spoon, slight organi-FILL-						th No. 6 fuel-like odor, frequent brick fragments and a lens of a lens of nd stained soil, from 7.4 ft. to 8.0 ft., slight oily sheen with			
- 10 -			) WELL INS		aint No.6 fuel-like odor, wet in lower portion, fragment of le with mica partings, slight oily sheen. 10% black organics,					
		1	N	12.8	SP		ottled through lower 1 ft of spoon, slight organic odorFILL-			
-	SS 13.0 17 15.0  SS 15.0 17 15.0  SM Loose, dark brown, silty SAND (SM). SM Very loose, dark brown silty SAND (SM), black organics mother through entire sample.  SS 15.0 9 17.0  SM Similar to S5, except toose, wet, 3% of the Haghielis, black organics of FILL-  SS 13.0  SM Loose, dark brown silty SAND (SM). SM Similar to S5.  -ESTUARY DEPOSIT-  16.8  CL Very soft, gray, lean CLAY (CL), mps = 0.1 in., no structur wet.  -ESTUARY DEPOSIT-						, dark brown silty SAND (SM), black organics mottled ire sample.	5		
- 15 - -		1 .		16.0			a de la constanta de la consta			
	S7 17.0 20 19.0  CL Very soft, gray, lean CLAY (CL), mps = 0.1 in., no structure, wet.  -ESTUARY DEPOSIT-  CL Similar to S7, except mps = 0.25 in., frequent white shells 1%.  -ESTUARY DEPOSIT-  Water Level Data  Sample Identification  Well Diagram							5 N	М	м
- 0.1	Time   Sa   19.0   CL   Similar to S7, except mps = 0.25 in., frequent white shells 19   ESTUARY DEPOSIT-    Water Level Data   Sample Identification   Well Diagram   Company   Property					-ESTUARY DEPOSIT-				
_	S8   19.0   CL   Similar to S7, except mps = 0.25 in., frequent white shells 1%ESTUARY DEPOSIT-    Water Level Data   Sample Identification   Well Diagram				O Open End Red Riser Pipe Overburden (lin. ft.)	50.0				
Date	Water Level Data te Time Elapsed Time (hr.) Bott				Botto	m Water	O Open End Rod Screen Overburder (III. It.)	JU.U -		
3/11/04	NA	0	4	48.0	50.0	) 10.2	U Undisturbed Sample Sout Split Spoon Split Spoon Split Spoon Split Spoon Sout Sout Sout Sout Sout Sout Sout Sout	004		
Field Te	sts:		Dilata				G Geoprobe   Seat   Bentonite Seat   Seat			
CDT - C	ampler blo	ows per (	6 in.		ximum	particle size	dium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, (mm) is determined by direct observation within the limitations of sampler size (in mixinal-manual methods of the USCS as practiced by Haley & Aldrich,	limeters	у Ні s).	gh

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:IDATA\29\29455\_29462\_29463\GINT LOGS\BACKGROUND.GPJ

HA AL	DRIC	₹ H					TEST BORING REPORT	F	ile	No	- 29	455	, 29	004 462 f 3	, 29	46:	1
		0.0		٤		ō			ne ive		No. Sar		- 0		ield	Те	
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	ŧ	S Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size²,	% Coarse	ine	Coarse	% Medium	ine	% Fines	Dilatancy	Toughness	icity	
20 -	PED	San & R	San	Well	Depth (ft.)	nscs	structure, odor, moisture, optional descriptions, geologic interpretation)	% C	% Fine	0%	2%	% Fine	₩.	Dilat	Toug	Plasticity	
20	0.0				21.0	CL										1	
	0.0	S9 24	21.0 23.0			CL	Similar to S8, except without shellsGLACIAL LACUSTRINE-										
		S10	23.0 25.0			CL	Similar to S9GLACIAL LACUSTRINE-										
- 25 -	0.1	S11 24	25.0 27.0			CL	Similar to S9, except soft, occasional layer of silty clayGLACIAL LACUSTRINE-										
	0.0	S12 23	27.0 29.0		27.2	SP	Medium dense, brown-gray, poorly-graded SAND (SP), mps = 0.1 in., no structure, no odor, wet.  -GLACIAL LACUSTRINE-			10	35	50	5	-			
	0.0	S13 10	29.0 31.0		29.0 30.0	SM	structure, no odor, wet.		_	10	<u>1</u> 0	40	40			 	
- 30 -						SP	TGLACIAL_LACUSTRINE			25	60	10	5				
	0.0	S14 8	31.0 33.0			SP	Medium dense, red, poorly graded SAND (SP), mps = 0.1 in., occasional 2 inch layer of gray silty sand at top of sample, no odor, wet.  -GLACIAL LACUSTRINE-			20	65	10	5				
	0.0	S15 7	33.0 35.0			SP	Similar to S14, except frequent pockets of fine grained brown sand with gold pyrite, mps = 1.0 inGLACIAL LACUSTRINE-	***************************************	,								
- 35 -	0.0	S16 11	35.0 37.0			SP	Medium dense, red-brown, poorly graded SAND (SP), mps = 0.75 in., contains a 3 inch layer of fine sand with occasional 0.25 inch pocket of vellow sand.	manuscration and a second and a	5	30	55	5	5				
.	0.0						-GLACIAL LACUSTRINE-										
		S17 5	37.0 39.0			SP	Similar to S16, except homogeneous structureGLACIAL LACUSTRINE-			***************************************							
- 40 -	0.0	S18 8	39.0 41.0			SP	Similar to S15GLACIAL LACUSTRINE-				TOTAL DESIGNATION OF THE PARTY						
	0.0	S19 7	41.0 43.0			SP	Similar to S15GLACIAL LACUSTRINE-										
	0.0	S20 22	43.0 45.0			SP	Similar to S15GLACIAL LACUSTRINE-	October State of the State of t							:		
- 45 -	0.0	S21 23	45.0 47.0			SP	Similar to S15GLACIAL LACUSTRINE-										
					48.0							2	***************************************				
		S22	48.0 50.0			SM	Medium dense, red-brown, silty SAND (SM), mps = 0.1 in., occasional laminae of gray lean clay, no odor, wetGLACIAL LACUSTRINE-				10	55	35				
1SPT	= Samp	ler blow	s per 6 in	ı. ²Ma	kimum s	article	e size (mm) is determined by direct observation within the limitations of sample		Bor					AD/	<del></del>	<u>-</u>	

HA	LEY &	Š.					TEST DODING DEPORT	1					004			
ALL	DRIC						TEST BORING REPORT				294 No.		462. f 3		463	-(
Depth (ff.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	Goarse S	% Fine	ge	% Medium	% Fines		Toughness a	Plasticity a	t
50 -					50.0		BOTTOM OF EXPLORATION AT 50.0 FT.  NOTES: Borehole backfilled with drill cuttings and sand upon completion.  Sample "00BG004-00" collected from 0 - 0.2 ft. Sample "00BG004-02" collected from 0 - 2.0 ft. Sample "00BG004-04" collected from 2.0 - 4.0 ft. Sample "00BG004-09PP" collected from 7.0 - 9.0 ft. Sample "00BG004-15" collected from 13.0 - 15.0 ft. Sample "00BG004-15" collected from 12.0 - 3.1.0 ft. Sample "00BG004-31" collected from 48.0 - 50.0 ft.									

HAI ALI	LEY & ORIC	ξ H					TEST	BORING REPORT  Boring No.00BG	3005	5
Proje Clien Cont		Conso	lidated	Ediso	on Co.	of N	ew York I	Inc. Sheet No. 1 of 3 Start February 5, 2	2004	
			Consolidated Edison Co. of New York Inc.  Aquifer Drilling & Testing, Inc.  Casing Sampler Barrel Drilling Equipment and Propertion of the Properties of the		Barrel	Drilling Equipment and Procedures  Finish February 16, DrillerM.Smith/D.May				
Type			HSA  HSA  A .25  1 3/8  eight (lb.)  - 140  - 230  - Hoist/Hammer: Cat-Head/ Autom  Casing: Hoist/Hammer: Cat-Head/ Autom  Visual-Manual Identification and Des  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, GROUP NAME, m. structure, odor, moisture, optional descriptions, ged  (Density/consistency, color, ged  (Density/consistency, color, ged  (Density/consistency, color, moisture, optional descriptions, ged  (Density/consistency, color, ged  (Density/consistency, color, ged  (Density/consistency, color, ged  (Density/consistency, color, ged  (Density/consistency, color, ged  (Density/consistency, color, moisture, optional descriptions, ged  (Density/consistency, col		-	Rig Make & Model: CME 75 truck mounted H&A Rep.H.Klein/P.Fa				
Hamr	mer V	Veight (	(lb.)	4.25 - -	1	40	-	Drill Mud: None Datum Manhattar	Boro	ough
	<u> </u>	Casing   Sampler   Barrel   Drilling Equipment and Procedures				Gravel Sand F	eld Te	est		
Depth (ft.)	PID (ppm)	Consolidated Edison Co. of New York Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedument of (in.)		Visual-Manual Identification and Description    Solid   Size   Si	Toughness	Strength				
- 0 -		Casing   Sampler   Barrel   Drilling Equipment and Proceed								
		Former Con Edison Manufactured Gas Plants within Stuyvesant Town Background Consolidated Edison Co. of New York Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedures								
- 5 -	0.0				5.0	SM	FILL- 0 5 10 25 20 40 F Hand Excavation/Vac-Truck Exploration at 5.0 ft.			
	4.1			VLLED		SM	fragment le	lodged in nose of spoonFILL- e, brown, silty SAND with gravel (SM), mps = 0.25 in., no list.		
- - 10 -	4.3		\$	ELL INST	9.0	SP		own, poorly graded SAND with gravel (SP), mps = 0.25 in., 10 15 20 30 20 5 moist.		
-	4.4	Second   S						e, gray, silty SAND (SM), mps = 0.1 in., no odor, moist. 0 5 15 25 20 35	-	
	4.1	Company   Comp		Loose, gra						
- 15 -	4.4	10								
-	4.2	SS 13.0   SM   Loose, gray, silty SAND (SM), mps = 0.1 in., slight orgat -ESTUARY DEPOSIT-  SM   Very loose, gray to black, silty SAND (SM), slight petroleum-ling odor, wet.  STUARY DEPOSIT-  SM   Loose, gray to black, silty SAND (SM), slight petroleum-ling odor, wet.  -ESTUARY DEPOSIT-  SM   Loose, gray to black, silty SAND (SM), slight petroleum-ling odor, wet.  -ESTUARY DEPOSIT-  SS   19.0   19.5   SM   Very loose, black, silty SAND (SM), mps = 0.05 in., slight odor, wet.  Water Level Data   Sample Identification   Well Diagrated of Casing of Hole   Depth (ft.) to: O Open End Rod   Image: Screen of Casing of Hole   Thin Wall Tube   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of Hole   Image: Screen of Casing of								
- 20			1		19.5	SM				
Dat	te	S8   19.0   19.5   SM   Very loose, black, silty SAND (SM), mps = 0.05 in., slight						O Open End Rod Riser Pipe Screen Overburden (lin. ft.) 51.0		
2/16/		10:00			-	_	14.0	U Undisturbed Sample S Split Spoon G Geoprobe  U Undisturbed Sample Grout Concrete Bentonite Seal  Samples S23 Boring No. 00BG005		
	d Test			Tougl	hnéss:	L-L	.ow. M-Me	edium. H-Hiah Dry Strenath: N-None. L-Low. M-Medium. H-Hiah. V-Ver	y High	h
'SPT	= San							te (mm) is determined by direct observation within the limitations of sampler size (in millimeters visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.	s).	

CON ED\_T83\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GINT.LOGS\BACKGROUND AQUIFER.GPJ

H.A	LEY &	& H					TEST BODING DEPORT	1			-			005			
AII	שמע						TEST BORING REPORT	F	ile She	No et	29. No.	455 2	,294 2 <u> </u>	162,2 f 3	294	63.	-1
(f.)	т) (н	n. (.	£)	ıram		Symbol	Visual-Manual Identification and Description	Gr	ave	<u></u>	Sar	ηd		F	ield	Te	15
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Sy	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	Coarse	Fine	Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	
□ 20 -	<u>-</u>	ળ જ	SΩ	>	ΔE	OL/	Very soft, black SILT (OL/OH), organic odor, wet.	%	%	%	%	%	%	٥	<u>P</u>	à.	
	3.5		21.0			OH OL/	-ORGANIC DEPOSIT- Medium, stiff, black SILT (OL/OH), slight organic odor, wet.										
		24	23.0			OH	-ORGANIC DEPOSIT-					***************************************					
	0.0	S10 18	23.0		23.5		Similar to S9.										
		16	25.0		25.0	SM	Very loose, gray, silty SAND (SM), no odor, wetGLACIAL LACUSTRINE-	/ 0	U	115	20	30	35				
25 -	2.9	S11 18	25.0 27.0		25.0	SP- SM	Medium dense, gray, poorly graded SAND with silt (SP-SM), mps = 0.5 in., slight organic odor, wet.  -GLACIAL LACUSTRINE-	0	0	25	30	35	10	-			
	2.8	S12 16	27.0 29.0			SP- SM	Similar to S11GLACIAL LACUSTRINE-			- Anna Caracana and Caracana an							
	2.1					_	<del></del>			· · · · · · · · · · · · · · · · · · ·				Unique de la companie			
30 -	3.1	S13 22	29.0 31.0			SP- SM	Similar to S11GLACIAL LACUSTRINE-							ALL PROPERTY OF THE PERSON OF	-		
	2.7	S14	31.0		31.0	SP	Loose, gray, poorly graded SAND (SP), mps = 0.25 in., slight organic	5	5	20	30	35	5	_	-	_	-
		24	33.0				odor, wetGLACIAL LACUSTRINE-			-							
	3.1	S15 17	33.0 35.0	-	33.0	ML	Soft, red-brown SILT (ML), no odor, wetGLACIAL LACUSTRINE-	0	0	0	0	5	95	-	-		-
35 -	3.2	\$16 16	35.0 37.0			ML	Medium stiff, red-brown, SILT (ML), no odor, wetGLACIAL LACUSTRINE-	0	0	0	0	5	95				
	2.6	S17 18	37.0 39.0			ML	Similar to SI6GLACIAL LACUSTRINE-										
			39.0	Signature of the second	38.8		-GLACIAD LACOSTRINE-										
40 -	2.5	S18 14	39.0 41.0			SP- SM	Loose, red-brown, poorly graded SAND with silt (SP-SM)GLACIAL LACUSTRINE-	0	5	10	25	50	10				
	2.5 2.5	S19	41.0		40.8 41.0		Medium stiff, gray-brown lean CLAY (CL), no odor, moist.	-	-	20	25	30	25	=‡	=	_ :	-
	۷,٦	16	43.0			SM	Medium dense, red-brown, silty SAND (SM), mps = .025 in., no odor, wet.  -GLACIAL LACUSTRINE-	0		20	دع		۷				
	2.4	S20 14	43.0 45.0			SM	Similar to S19, except looseGLACIAL LACUSTRINE-										
45 ~	2.4	621	45.0		45.0	SP-	Medium dense, brown-gray, poorly-graded SAND with silt (SP-SM),	_		-	_	90	10			<b></b> .	
		S21 16	45.0 47.0			SM	mps = .012 in., no odor, moist, layered structureGLACIAL LACUSTRINE-				5	30	10				
	3.4	S22 24	47.0 49.0		dunkelter furket until kennemen beson	SP- SM	Similar to S21, except interbedded gray clay layersGLACIAL LACUSTRINE-										
	3.6	S23	49.0				Similar to S21.		-								

H	ALEY &	Ž					TEST BORING REPORT	1			-			005			
	DRIC						1E31 BORING REPORT				294 No.			162, f 3		63-0	)11
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	vel	Coarse	San Medium	d	% Fines		Toughness @		Strength
- 50 -		23	51.0			SP-	-GLACIAL LACUSTRINE-	F		F							
					51.0	SM											
t					51.0		BOTTOM OF EXPLORATION AT 51.0 FT.										
					Anni Anni Anni Anni Anni Anni Anni Anni		NOTES: Borehole backfilled with drill cuttings and sand upon completion.										
							·										

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29465\_29462\_29463\GINT.LOGS\BACKGROUND AQUIFER.GPJ

Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

00BG005

Proj Clie Con		Conso		Edisc	on Co.	of N	ew York I	Plants within Stuyvesant Town Background File No29455,29462,294 Sheet No. 1 of 2 Start February 3, 2 Finish February 17, 2	004
			Ca	asing	San	npler	Barrel	Drilling Equipment and Procedures  Driller D. Gregorio / D. Ma	
Туре	9		ŀ	ISA		S	-	Rig Make & Model: CME 75 truck mounted H&A Rep.H.Klein/W.G	
Insid	le Dia	meter (	in.) 3	3.25	1	3/8	-	Bit Type: Cutting Head Elevation 11.75 Drill Mud: None Datum Manhattan	Bor
Ham	nmer V	Veight	(lb.)	_	1	40	-	Casing: Location See Plan	
Ham	nmer F	all (in.)		-	3	80	-	Hoist/Hammer: Cat-Head/ Automatic Hammer	
(;)	Ê	No. in.)	£	ram		Symbol	\	Visual-Manual Identification and Description	eld T
Depth (ft.)	РІВ (ррт)	ac. (	th (f	Well Diagram	£	S Syr		Visual-Manual Identification and Description  by/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , O i ii ii ii ii ii ii ii ii ii ii ii ii	<u>2</u>
Dep	PID	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well	Depth (ft.)	USCS		ty/consistency, color, GROUP NAME, max. particle size, of the color, moisture, optional descriptions, geologic interpretation)	rougiliess
0					0.3			-TOPSOIL-	Ŧ
					1 5	SP- SM	Brown, po no odor, n	porly-graded SAND with silt and gravel (SP-SM), mps = 5 in., 5 10 5 10 60 10 moist.	
					1.5	SP-	Similar to	above, except with 20% brick fragments and 5% cobbles,	- -
of the same of the						SM		.0 ft. bgs).	
			Artistandri marana and and and and and and and and and					-FILL-	
5 -	0.0	SI	5.0	The second secon	5.0	SM		Hand Excavation/Vac-Truck Exploration at 5.0 ft. 5 10 10 45 15 15	- -
		2	7.0					lense, dark brown, silty SAND with gravel (SM), mps = 1.37 ucture, no odor, 10% red brickFILL-	
	0.4	S2	7.0			SM	Similar to	S1, except loose.	
		8	9.0	ALLE				-FILL-	
	0.6	S3	9.0	NST		SM	Similar to	S1, except 70% red brick.	
10 -		10	11.0	NO WELL INSTALLED				-FILL-	
	0.0	S4	11.0	NO NO		SM	Similar to	S2, except wet.	
		3	13.0					-FILL-	
	0.2	S5	13.0			SM	Similar to	S1, except loose, 10% Ash-Like Material, some black staining	
-		8	15.0				at 14.2 fee		
15 -	0.0				15.0				
	0.0	\$6 10	15.0 17.0			OL/ OH		gray-brown ORGANIC SOIL (OL/OH), mps = 0.03 in.  1 tan to white layer of medium sand, organic odor present,	
							moist.	-ORGANIC DEPOSIT-	
	0.0	S7	17.0		17.0	ML	Very soft,	gray-brown SILT (ML), mps = 0.03 in., frequent shells and	-
***************************************		20	19.0	Total Control of the			shell fragn	nentsESTUARY DEPOSIT-	
	0.0	S8	19.0			ML	Similar to	S7, except soft.	
20 -		20	21.0	0 D-		<u> </u>		-ESTUARY DEPOSIT-	
			er Lev Elaps	ed	Dep	th (ft.		Sample Identification Well Diagram Summary  O Open End Rod Riser Pipe Overburden (lin. ft.) 41.0	
υe	ate	Time	Time (l	br ∫ Bo	ottom Casing	Botto	m Water	Thin Wall Tube Filter Sand Rock Cored (lin. ft.)	
2/16	5/04	NA	NA		11.0	13.0		U Undisturbed Sample Cuttings Samples S18	
	and the second							S Split Spoon Concrete Boring No. 00BG006	
Fie	ld Test	· · ·		Dilata	ncv.	R-F	Ranid S-SI	G Geoprobe     Bentonite Seal	-

							E	3or	ing	g N	000	)BG	006			
LDRIC						TEST BORING REPORT									63-	011
(ma	No. (in.)	(fr.)	gram		ymbol	Visual-Manual Identification and Description			$\overline{}$	1	1					
JD (pp	Sample & Rec.	Sample	Vell Dia	Septh ft.)	SCS S	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	6 Coars	% Fine	6 Coar	6 Medii	% Fine	% Fines	ilatancy	endgno	asticity	Strength
+	0, 00	0, =	>		3		0,	0,	0,	0	0	0,		T	Δ.	Ś
0.4	S9 21	21.0 23.0			ML	Similar to S7ESTUARY DEPOSIT-		THE PROPERTY OF THE PROPERTY O								
0.0	S10 12	23.0 25.0		24.0	ML PT	Similar to S7, except soft.  -ESTUARY DEPOSIT- Soft, brown, fibrous PEAT (PT), 30% plant fibers, organic odor, moist.					5	95				
	S11 12	25.0 27.0		26.5		-PEAT DEPOSIT-										
0.0	S12 20	27.0 29.0			ML SM	Soft, gray, silt with SAND (ML), mps = 0.02 in., stratified, organic odor.  -ESTUARY DEPOSIT-		10	10							
0.0	S13 20	29.0 31.0			SM	Medium dense, gray, silty SAND (SM), mps = 0.03 in., no structure, no odor.  -GLACIAL LACUSTRINE- Similar to S12.  -GLACIAL LACUSTRINE-										
0.0	S14 14	31.0		30.5 31.0	ML SM	Stiff, red-brown, silt with SAND (ML), mps = 0.02 in., interbedded with occasional gray silt seams 1/8 in. thick.	_	15	_ 15	- <u>5</u> 10	10 20	85 40	R	<u>N</u>	Z ]	<u>N</u>
0.0	S15 20	33.0 35.0			SM	in., no structure, no odor.  -GLACIAL LACUSTRINE-  Similar to S14, except loose.  -GLACIAL LACUSTRINE-								WAS COLOR OF THE C		
0.2	S16 21	35.0 37.0			SM	Similar to S14, except interbedded with fine sand and silt layerGLACIAL LACUSTRINE-	5	15	20	25	15	20				
0.0	S17 5	37.0 39.0			SM	Similar to S14GLACIAL LACUSTRINE-										
0.0	S18 3	39.0 41.0			SM	Similar to S14, except looseGLACIAL LACUSTRINE-										
				41.0		BOTTOM OF EXPLORATION AT 41.0 FT.  NOTES: First attempt was continuous sampling to 37 ft. At 37 ft running sands blew into the HSA at approximately 8.0 ft. The augers were retracted from the hole 10 ft and the drillers attempted to keep ahead of H20 on the sand to prevent blow-in. This second attempt achieved a total depth of 41.0 ft where the sand blew in approximately 2 ft over the 41-43 ft. Boring was terminated at 41 ft due to the drillers inability to counter act the head differential in accordance with Haley & Aldrich's Scope of Work.  Borehole backfilled with drill cuttings and sand upon completion.  Sample "00BG006-00" collected from 0 - 0.2 ft. Sample "00BG006-09" collected from 7.0 - 9.0 ft. Sample "00BG006-15" collected from 13.0 - 15.0 ft. Sample "00BG006-30" collected from 28.0 - 30.0 ft.										
	0.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.4	Color   Col	Color   Colo	Color   Colo	Color   Colo	Company   Comp	Care   Care	Care   Care	TEST BORING REPORT	Comparison   Test Boring Report   File No.29   Sheet No.	TEST BORING REPORT	TEST BORING REPORT	TEST BORING REPORT	TEST BORING REPORT	TEST BORING REPORT

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Apr 12, 05

¹SPT = Sampler blows per 6 in. ²Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

00BG006

AUT	ORIC								RING REPO												306	_
Proje Olien Contr	The Consolidated stractor Aquifer Driver Aquifer Driver Aquifer Driver Aquifer Driver Aquifer Driver Aquifer Driver Aquifer (in.)    Ca	d Edis	son Co.	of N	ew York In	nc.	within Stuyvesant To Vicol Environmental,		ckground		Sh St	ieet art	t N	o. N	1 o Mar	f 1 ch 1	10, 2	2004		C		
	Water Level  Water Level  Water Level  Water Level	asing	Sar	npler	Barrel		Drilling Equipment	and P	rocedures			nish iller					12, 2 Bule		1			
уре				HSA	<u></u>	_	_	Rig I	Make & Model: Mob	———ile B-59	truck mounted										arbe	:]
• •	e Diar	neter (		4.25		_	_		ype: Cutting Head					eva		n	9	.89	atta	D	oroı	
		,	1	-		_	_	1	Mud: None			}		itur cat		, ,	See			11 D	0100	-
		_	1	-		_	-	Casi Hois	ng: t/Hammer:							. ,	300	1 10	.11			
T	_	o' ∵		E	<del>T</del>	loc	l						Gra	vel	;	San			F	ield	Tes	
<u>  [</u>	mdc	i (ii	e E	iagra	_	Symbol	V	/isual-	Manual Identification	and D	escription		ırse		Coarse	Hin	0	Se	ς	ssət	₹	
		Samp & Red	Samp	Well Diagram	Depth (ft.)	SS	(Density structure, o	y/consi odor, m	stency, color, GROUP oisture, optional descri	NAME, otions, (	max. particle size², geologic interpretati	on)	% Coarse	% Fine	% Coe	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	
1				مام	3	SP-	Dark brow	n, poor	rly graded SAND with s	ilt and g	gravel (SP-SM), mps	s=	10	5	5	45	25	10				
					1.0	SM			re, organic odor, roots -FILL-			/					-				<u> </u>	
					1	SP	in., no stru at 3.0 - 5.0	icture, ) ft.	own, poorly graded SAI organic odor, occasiona ortared brick at 3.5 ft.)				15	10	10	40	25					
5 -					3.0		Bottom of	Hand F				†	-	5	5	60	25	5		-		-
							Bottom or	mana 1	SACAVARION VAC Truck I	Apiorati	on at 5.0 it.						-					
10 -							Note: See	"Test E	Boring Report 00BG004	' for soi	l descriptions.			3	THE THE PROPERTY OF THE PROPER					VIII. VIIII. VIIII. VIIII. VIIII. VIII. VIII. VIII. VIIII. VIIII. VIII. VIII. VIII. VIIII. VIIII		
5																						
				[]			NOTES: I	Drill cu	ttings placed in drums.													
					1						letien Defente			1						ĺ		
***************************************									ion well in borehole upc Il Installation Report 001							-						
				[:] [:]	19.2	$\blacksquare$	details. BOTTOM	OF EX	PLORATION AT 19.2	FT.				$\dashv$			-					-
		\A(		1		1 1				10/	- U D' 1			<u> </u>								
			1	····		th (ft.	) to:	0	ample Identification Open End Rod		ell Diagram Riser Pipe	Ove	rhi			nm: (lin		1 1	9.2			
Dat	е	ııme		(hr \ E	Bottom Casing	Botto	m Water	T	Thin Wall Tube		Screen Filter Sand	Roc				,	,	_	y.∠ ~			
								U	Undisturbed Sample	9, q d	Cuttings	San										
								S G	Split Spoon Geoprobe	* * ·	Grout Concrete Bentonite Seal	Borir	ng	No.	. (	100	ΛV	VS(	)6			
				i			Rapid, S-Si				5 5 0 0 0 0 1											

Äi	DRIC	& H				,	TEST	во	RING REPO	RT				Во	rii	ng	No	.0(	MV	۷D	06
Proj Clie Con		Conso	lidate	ed Ed	lison Co	of N	ew York I	nc.	within Stuyvesant To		ckground		St	nee art	t N	o. j N	l of Aaro	2 ch 1	52, 2 0, 20	004	j3-(
				Casir	ng Sar	npler	Barrel		Drilling Equipmen	t and P	rocedures		1	nisł ille					5, 20 .dam		
уре	<del></del>			HSA	4	-	_	Rig	Make & Model: Mob	ile B-59	truck mounted		-1						y/B.		be
nsic	de Dia	meter (	in.)	4.25	5	-	-		ype: Cutting Head				1	eva atur		n	I M	0.08 anha	} ittan	Bo	ro
lam	nmer \	Weight	(lb.)	-		-		1	Mud: None ing:				-	ocat		1 ;	See				_
∃am	nmer f	Fall (in.)		-		-	-		st/Hammer:												
_	(C)	9 (÷		/ · · /	<u> </u>	Symbol	\	/isual-	-Manual Identificatior	and D	escription		$\vdash$	avel		San		Ŧ		eld ٦ س	e
티	udd)	ple Sc. (i	ple 4		E - E	Syr					•	,	arse	Fine	barse	ediur	Je	nes	ıncy	unes	city
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample	Depui (ii)	vell of Depth (ft.)	USCS			istency, color, GROUP noisture, optional descri				% Coarse	% Fir	% Coarse	% Medium	% Fine	% Fines	Dilatancy	loughness	<b>Plasticity</b>
0 -						SP-	Dark brow	n, poo	orly graded SAND with	gravel an	nd silt (SP-SM), m	ps =	_		5	45			7	+	=
				٥	a 1.0	SM			ure, organic odor, roots				<u>.</u>	ļ			-	-	- 4		
							·														
						SP			own, poorly graded SA			= 5	15	10	10	40	25				
							in., no stru	icture,	organic odor, some roo .0 to 5.0 ft.	ts, 15%	bricks (probable		ļ								
					5.0		menochi	, at 5	-FILL-				Ì								
5 -						$\Gamma^{-}I$	Bottom of	Hand	Excavation/Vac-Truck E	Exploration	on at 5.0 ft.			5	5	60	25	5			_
							Note: See	"Test l	Boring Report 00BG004	" for soil	1 descriptions.										
														,							
10 -																					
					d																
					1								- Control of the Cont				İ				
15 -																					
														<u> </u>	- illowed and						
				И		1															
-																	To Manage Manage Anna State Anna				
and the same of th				777									Telephone de la constante de l				an commence or				
20 -																					
		Wa	ter Le			11. 75		S	ample Identification	We	ell Diagram				<u>Sur</u>	nma	ary			-	
Da	ate	Time		osed (hr.)	D	th (ft. Botto	m	0	Open End Rod		Riser Pipe Screen	1				(lin	,		1.0		
			111116	, (III.)	of Casing			T	Thin Wall Tube	999	Filter Sand Cuttings	1 .			ed	(lin	. ft.)	)	-		
								U	Undisturbed Sample Split Spoon		Grout		mpl					/D/	)6		
								G	Geoprobe		Concrete Bentonite Seal	<u> </u>				00N					
Fie	ld Tes	sts:			atancy: ughness		Rapid, S-S .ow, M-Me				N-Nonplastic, L- h: N-None, L-L								-Ver	Hi.	ah
		mpler blo							is determined by direct												-

H/AL	ALEY & DRIC	%z H					TEST BORING REPORT	F	ile	No	294	ŀ55,	29	VD0	, 29	463	3-01
Depth (ft.)	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	Visual-Manual Identification and Description  (Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	vel	e e	San	d			Toughness a	Plasticity at	
- 20 <i>-</i> - - - - 25 -																	
- - 30 - - -					34.0		BOTTOM OF EXPLORATION AT 34.0 FT.										
							NOTES: Drill cuttings placed in drums.  Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 00MWD06" for complete well details.										
															THE PROPERTY OF THE PROPERTY AND ASSOCIATION OF THE PROPERTY O		The state of the s

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:\DATA\29\29455\_29462\_29463\GINT LOGS\BACKGROUND.GPJ

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

00MWD06

Water Level Data  Date  Time    Elapsed Time (hr, or Casing of Hole   Solid Mater of Casing of Hole   Solid Mater   Solid Mater   Solid Mater   Solid Mater   Solid Mater   Solid Mater   Solid Spoon   Solid Mater	AL Proj Clie	DRIC ect nt	TEST BORING REPORT  Former Con Edison Manufactured Gas Plants within Stuyvesant Town Backg Consolidated Edison Co. of New York Inc.  Casing Sampler Barrel Drilling Equipment and Proc. Aquifer Drilling & Testing, Inc.  Casing Sampler Barrel Drilling Equipment and Proc. Plants Wishin Stuyvesant Town Backg Consolidated Edison Co. of New York Inc.  Casing Sampler Barrel Drilling Equipment and Proc. Plants Wishin Stuyvesant Town Backg Consolidated Edison Co. of New York Inc.  Casing Sampler Barrel Drilling Equipment and Proc. Plants Wishin Stuyvesant Town Backg Consolidated Edison Co. of New York Inc.  Casing Sampler Barrel Drilling Equipment and Proc. Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Mobile B-59 to Plants Wishin Stuyvesant Town Backg Consolidated Sample Stuyves Consolidated Samples Spilt Spoon Geoprobe Plasticity New					Fil Sh St	e N neet	lo2!	945 D. 1 Fe	5,29 of bru	9462 2 ary 9	2946 , 200	63-0 04					
HSA   -   -			TEST BORING REPORT  Former Con Edison Manufactured Gas Plants within Stuyvesant Town Background Consolidated Edison Co. of New York Inc.  Aquifer Drilling & Testing, Inc.  Casing Sampler Barrel Drilling Equipment and Procedures  HSA   -			1														
Bit Type: Cutting Head   Dillameter (in.)   4.25   -	Type		Former Con Edison Manufactured Gas Plants within Stuyvesant Town Backgroun Consolidated Edison Co. of New York Inc.  ctor Aquifer Drilling & Testing, Inc.  Casing Sampler Barrel Drilling Equipment and Procedure Bit Type: Cutting Head Drill Mud: None Casing: A 1.0 Casing: HSA Right Mad: None Casing: Provention of Procedure Proced			d														
	•		Former Con Edison Manufactured Gas Plants within Stuyvesant Town Background Consolidated Edison Co. of New York Inc. or Aquifer Drilling & Testing, Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedures			EI	eva	tior						-						
Hammer Fall (in.)		ect Former Con Edison Manufact Consolidated Edison Co. of Natractor Aquifer Drilling & Testing,    Casing   Sampler	-				—						an B	oro	<u>u</u>					
Water Level Data   Depth (ft.) to:   See "Test Boring Report 00BG001" for soil descriptions.   Summary   Depth (ft.) to:   See "Test Boring Report 00BG001" for soil descriptions.   Summary   Depth (ft.) to:   Data   Time   Elagsad   Depth (ft.) to:   Dota   Time   Elagsad   Depth (ft.) to:   Dota   Depth (ft.) to:   D		PRICH  ect Former Con Edison Mont Consolidated Edison of Casing & Casing & HSA  de Diameter (in.) 4.25  mer Weight (lb.) - mer Fall (in.) - me	-	_	_	1				Juan	1011	r)	icc i	lall						
0.0		Water Level Date of Time Elapsed Time (hr.)  Water Sampler blows per 6 in.	Π_		70					Gra	vel	5	Sano	j	Т	Field	l Te	- S		
0.0	pth (ft.)	(mdd) C	mple No Rec. (in.	water Level Data  Water Level Data  More: See "Test Boring Report 00BG001" for soil descriptions  Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 1.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 2.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 2.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 2.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concrete pieces.  FIGURE 3.0 Similar to above, except 20 - 50% brick and concre		ize²,	Coarse	Fine	Coarse	Medium	Fine	Fines	ssauybr	sticity						
Mil.   Frozen, dark brown, sandy SILT (ML), mps = 0.5 in., no structure, no   5   5   20   20   50			က္ထဲဆ	water Level Data    Water Level Data   Manufactured Gas Plants within Stuyvesant Town Background insolidated Edison Co. of New York Inc.		etation)	%	%	-			-	Ĭ	Pia						
10   10   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   10   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   15   40   20   40   40   40   40   40   40		0.0		Tormer Con Edison Manufactured Gas Plants within Stuyvesant Town Background Consolidated Edison Co. of New York Inc.  Aquifer Drilling & Testing, Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedures		ture, no		5	5	20	20 5	0			ļ					
Water Level Data  Date Time Elapsed Depth (ft.) to: Time (hr.) Bottom Bottom Water Water of Casing of Hole  U Undisturbed Sample S Split Spoon G Geoprobe  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High			TEST BORING REPORT  TEST BORING REPORT  TEST BORING REPORT  Townsolidated Edison Co. of New York Inc.  cactor Aquifer Drilling & Testing, Inc.  Casing Sampler Barrel Drilling Equipment and Processing, Inc.  Casing Sampler Barrel Drilling Equipment and Processing Inc.  Casing HSA - Rig Make & Model: Mobile B-59 tr Bit Type: Cutting Head Drill Mucl: None Casing: Hoist/Hammer: -  Casing: Hoist/Hammer: - Hoist/Hammer: -  (Casing: Age of Bit Drilling Equipment and Drilling Equipment and Processing Inc.  Casing: Hoist/Hammer: -  (Casing: Age of Bit Drilling Equipment and Processing Inc.)  Casing: Hoist/Hammer: -  (Casing: Hoist/Hammer: -  (	L-		╁			$\neg$	+		+	-	+						
Water Level Data  Date Time Elapsed Depth (ft.) to: Time (hr.) Bottom Bottom Water Water of Casing of Hole  U Undisturbed Sample S Split Spoon G Geoprobe  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High		0.0		Water Level Data   Sample Bottom of Hand Excavation/Vac-Truck Exploration at 5.0 ft.		n., no	5	10	10	15	40 2	.0								
Water Level Data  Date Time Elapsed Depth (ft.) to: Time (hr.) Bottom Bottom Water Water of Casing of Hole  U Undisturbed Sample S Split Spoon G Geoprobe  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High				Tater Level Data    Casing   Sampler   Barrel   Drilling Equipment and Procedures			5	10	10	15	40 2	0	+-		1					
Water Level Data  Date Time Elapsed Depth (ft.) to: Time (hr.) Bottom Bottom Water Water of Casing of Hole  U Undisturbed Sample S Split Spoon G Geoprobe  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High	5 -	PRICH  Sect Former Con Edison Manufacture of Consolidated Edison Co. of Neuractor Aquifer Drilling & Testing, Sampler HSA  Casing Sampler HSA  e Diameter (in.) 4.25  mer Weight (lb.)	Pottom of		Evaloration at 5.0 ft			10	10	30	30 1		4-		1					
Water Level Data  Date Time Elapsed Time (hr.)  Casing Of Hole  U Undisturbed Sample Some Split Spoon G Geoprobe  Field Tests:  Diatancy: R-Rapid, S-Slow, N-None Plasticity. N-Nonpastic, L-Low, M-Medium, H-High				### Con Edison Manufactured Gas Plants within Stuyvesant Town Backgroun onsolidated Edison Co. of New York Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedur			" for soil descriptions.			element element element element element element element element element element element element element element		RETRIVERED RESERVED FRANCISCO PROPERTY OF LABOUR VISION RESERVED FRANCISCO PROPERTY OF THE PRO								
Water Level Data    Date   Time   Elapsed   Time (hr.)   Bottom   Bottom   Stample   Screen	10 -		Former Con Edison Manufactured Gas Plants within Stuyvesant Town Background Consolidated Edison Co. of New York Inc. or Aquifer Drilling & Testing, Inc.    Casing   Sampler   Barrel   Drilling Equipment and Procedures																	
Date   Time   Elapsed   Depth (ft.) to:   O Open End Rod   Time (hr.)   Bottom of Casing   Of Hole   Solid Spoon   Solid Spoo	15		Water Level Data  Time Elapsed Time (hr.) of Casing of Hole Water of Hole Water T Thin Wall Tube U Undisturbed Sample S Split Spoon G Geoprobe  S: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-N Toughness: L-Low, M-Medium, H-High Dry Strength: npler blows per 6 in. Maximum particle size (mm) is determined by direct observation																	
Date Time   Elapsed   Depth (ft.) to: Open End Rod   Riser Pipe   Screen   Rock Cored (lin. ft.) 27.0   Riser Pipe   Riser Pipe   Screen   Rock Cored (lin. ft.) 27.0   Riser Pipe   Ris	20		Time   Elapsed   Depth (ft.) to:   O Open End Rod   Elapsed   Sc   Sc   Sc   Sc   Sc   Sc   Sc   S			Well Diagram				Sim	ıms	arv								
Time (hr.) Bottom of Hole Water T Thin Wall Tube U Undisturbed Sample S Split Spoon G Geoprobe S Split Spoon G Geoprobe S Bentonite Seal Filter Sand Cored (lin. ft.) - Samples - Boring No. 00MWS07	Dr	ate	Time	Elap	sed	Dep				Riser Pipe	Ov	erb					27	0		•
S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Geoprobe S Bentonite Seal  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High		ale.	iiiie .	Time					·	1	1				`	,		-		
S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Geoprobe S Bentonite Seal  Field Tests:  Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High		Water Leve Pate Time Elapse Time (h					'	Cuttings	Sa	mp	es							_		
Field Tests: Dilatancy: R-Rapid, S-Slow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High		T = Sampler blows per 6 in, ** ** ** ** ** ** ** ** ** ** ** ** **				Concrete		ing	No.	. (	)ON	ИW	S07							
Toughness: L-Low, M-Medium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V-Very High	Fie	ld Test	s:						low, N-None Plas	sticity: N-Nonplastic,	L-Low, N	1-M	ediu	ım,	H-	High		/a	اء ال	-

F	HALEY & TEST BORING REPORT							Boring No00MWS07														
	AL	DRIC						TEST BORING REPORT					File No 29455, 29462, 29463-011 Sheet No. 2 of 2									
	) 	(111-)	Œ	(in.)				loqu	Visual-Manual Identification and Description	Gra	ąvel		San	ıd		F	ield	Tes	t			
Conth (#)	n Inds	PID (ppm)	Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Density/consistency, color, GROUP NAME, max. particle size², structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength				
-2		<u>a</u>	ഗ് ×	ਔΔ	1	۵€		structure, odor, moisture, optional descriptions, geologic interpretation)	%	%	%	%	%	%	Ö	P	Pla	Str				
						27.0	SM	BOTTOM OF EXPLORATION AT 27.0 FT.  NOTES: Drill cuttings placed in drums.  Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 00MWS07" for complete well details.														

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G:DATA/29/29455\_29462\_29463/GINT LOGS/BACKGROUND AQUIFER.GPJ

Apr 12, 05

<sup>1</sup>SPT = Sampler blows per 6 in. <sup>2</sup>Maximum particle size (mm) is determined by direct observation within the limitations of sampler NOTE: Soil identification based on visual-manual methods of the USCS as practiced by Haley & Aldrich, Inc.

Boring No.

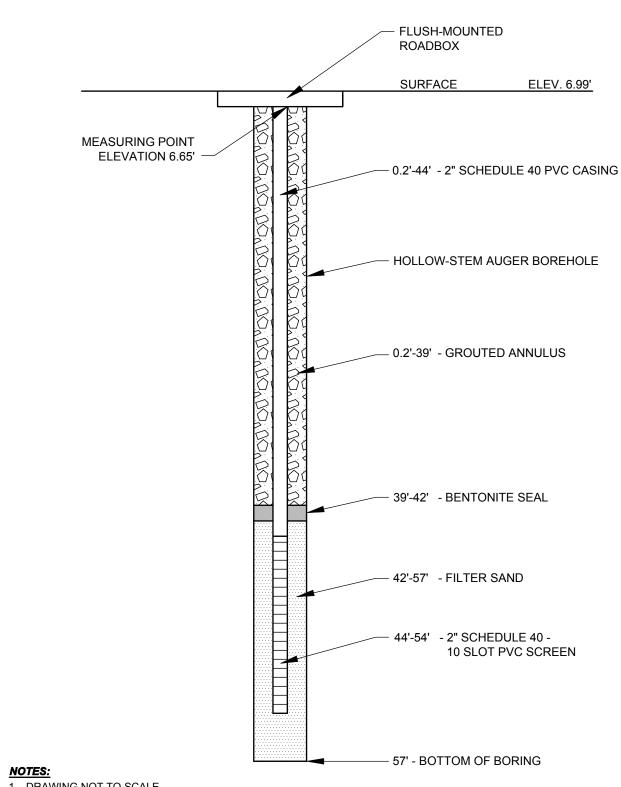
00MWS07

HALEY ALDRIC	& H				•	TEST	BORING REPORT  Boring No.0	)MWD	07									
Project Client Contracto	Conso	lidated	Ediso	n Co.	of No	ew York I	Start February	9, 2004										
Casing Sampler					pler	Barrel	5	Finish March 3, 2004 Driller D. Gregorio/R. Buley										
Туре		Н	SA		-	-	Rig Make & Model: Mobile B-59 truck mounted H&A Rep.P.Falce/	-										
Inside Dia	ameter (	in.) 4	.25		-	-	Bit Type: Cutting Head Elevation 20.8 Drill Mud: None Datum	9 attan Bo	rough									
Hammer '	Weight (	(lb.)	-		-	-	Casing: Location See Pla											
Hammer	Fall (in.)	•	-		-	-	Hoist/Hammer:											
<u> </u>	<u>9</u> (-		ш	d	lod		Gravel Sand	Field T	Γest									
n (ff.	c. (ir	ole h (ff.	lagra	_	Symbol	V	isual-Manual Identification and Description	ness	<u>₹</u> £									
	Samp & Re	Sample Depth (ft.)	Well Diagram	Depth (ft.)	SS	(Density structure, c	isual-Manual Identification and Description  //consistency, color, GROUP NAME, max. particle size <sup>2</sup> , dor, moisture, optional descriptions, geologic interpretation)	Dilatancy Toughness	Plasticity Strength									
0.0			ما ام		ML		k brown, sandy SILT (ML), mps = 0.5 in., no structure, no 5 5 20 20 50											
.			0 0	1.0		odor. \	-TOPSOIL-		-									
0.0			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3.0	SM	Brown, sile	y SAND with gravel (SM), mps = 4 in., no structure, no 5 10 10 15 40 20											
			Δ Δ Δ	o	SM	Similar to	bove, except 20 - 25% brick and concrete pieces. 5 10 10 15 40 20 -FILL-											
5 - 0.0	wate Time			5.0	SM	Bottom of	Hand Excavation/Vac-Truck Exploration at 5.0 ft. 5 10 10 30 30 15											
- 10 -					a consideration of the constant of the constan	Note: See	Test Boring Report 00BG001" for soil descriptions.											
- 15 -																		
- 20								-										
		ter Leve			h (ft.)	to:	Sample Identification Well Diagram Summary											
Date	Time	Elapse Time (h	ոr ∖Bo	ttom	Botto	m Water	O Open End Rod Overburden (IIn. ft.) 4	3.0										
		(	of C	asing	of Ho	e Trace	T Thin Wall Tube U Undisturbed Sample  T Thin Wall Tube  Filter Sand Cuttings  Rock Cored (lin. ft.) Samples	-										
							S Split Spoon G Geoprobe  S Split Spoon G Geoprobe  S Split Spoon G Grout S Concrete Bentonite Seal	)7										
Field Tes	sts:		Dilatai Tough				ow, N-None Plasticity: N-Nonplastic, L-Low, M-Medium, H-High lium, H-High Dry Strength: N-None, L-Low, M-Medium, H-High, V	-Very Hir	ah									
	manlar bla						(mm) is determined by direct observation within the limitations of sampler size (in millim		<u> </u>									

CON ED\_TB3\_PG1 USCSLIB4.GLB USCSTB+CORE4.GDT G\DATA\29\29455\_29462\_29463\GINT LOGS\BACKGROUND AQUIFER.GPJ

HALEY & ALDRICH	TEST BORING REPORT								Boring No00MWD07 File No29455,29462,29463-01 Sheet No. 2 of 2									
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opm) (ff.)	le (#	iagraı	_	Symb	Visual-Manual Identification and Description	arse	a)	arse	äig	co.	Se	5	ress	ţ.				
Depth (ft.) PID (ppm) Sample No. & Rec. (in.)	Sample Depth (ft.)	Well Diagram	Depth (ft.)	USCS Symbol	(Density/consistency, color, GROUP NAME, max. particle size <sup>2</sup> , structure, odor, moisture, optional descriptions, geologic interpretation)	% Coarse	% Fine	% Coarse	% Medium	% Fine	% Fines	Dilatancy	Toughness	Plasticity				
20				SM		And the property of the second					The second secon							
- 25 -			·							ommin vije nije nije i nije i nije i nije i nije i nije i nije i nije i nije i nije i nije i nije i nije i nij		не дости на полителните однивани водина на полителните однива на полителните однива на полителните однива на п	o de la constante de la constante de la constante de la constante de la constante de la constante de la consta					
- 30 - - 30 -													skopojopane izinden suskanian andemoka personala suskanian suskanian suskanian suskanian suskania					
- 35 -							Подражения в применения в применения в применения в применения в применения в применения в применения в примен						оружання выполня этом переделення выполня выполня выполня выполня выполня выполня выполня выполня выполня выпол					
-40 -								ARRENA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE CANADA DE					talendy blok je na dosak de jeskoje inde jedy vere ne jedy nje a tema sjema na se jedy na jedy na jedy na jedy					
			43.0		BOTTOM OF EXPLORATION AT 43.0 FT.  NOTES: Drill cuttings placed in drums.  Installed observation well in borehole upon completion. Refer to "Observation Well Installation Report 00MWD07" for complete well details.					жана радине финанский (ус. ///ул.а ; «Мака Малай ; »/у., жан маламалам ус.», «Канат мун. «Ангула» (у », «Мундула		Professional Selection and Associated Selection (Selection Selection						
¹SPT = Sampler blo	ws per 6 in	ı. ²Max	imum r	particle	e size (mm) is determined by direct observation within the limitations of sample		30.	inc	No	лаланда, од "далано сумбарал дейскурит аусталара, сумаларада	00	MV	VD(	07				





- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST14SB04 FOR BORING INFORMATION.

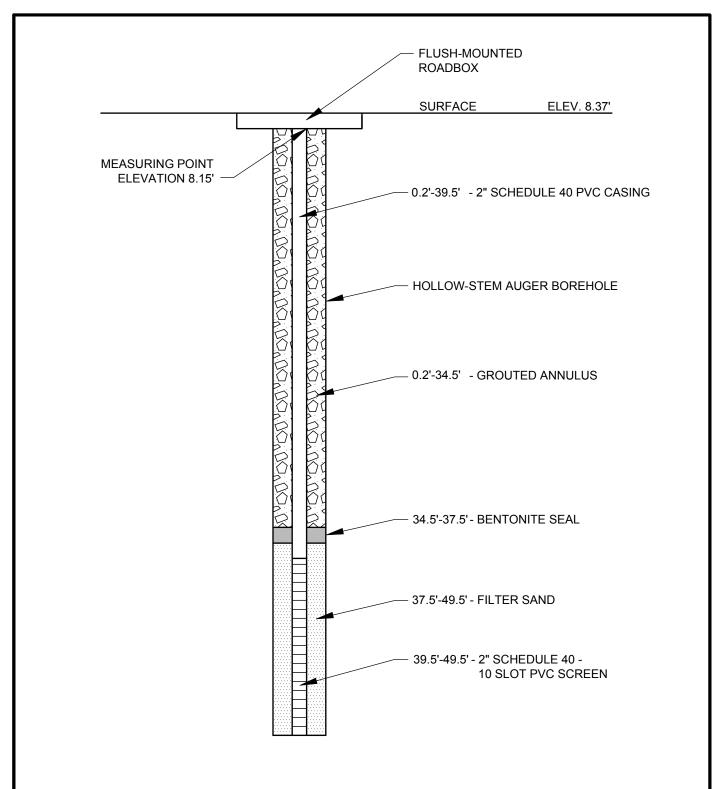
INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT TOWN FORMER MGP SITES NEW YORK, NEW YORK

> CONSOLIDATED EDISON CO. OF NEW YORK, INC.



WELL 14MWDD01 **CONSTRUCTION DETAILS** 

September 2007



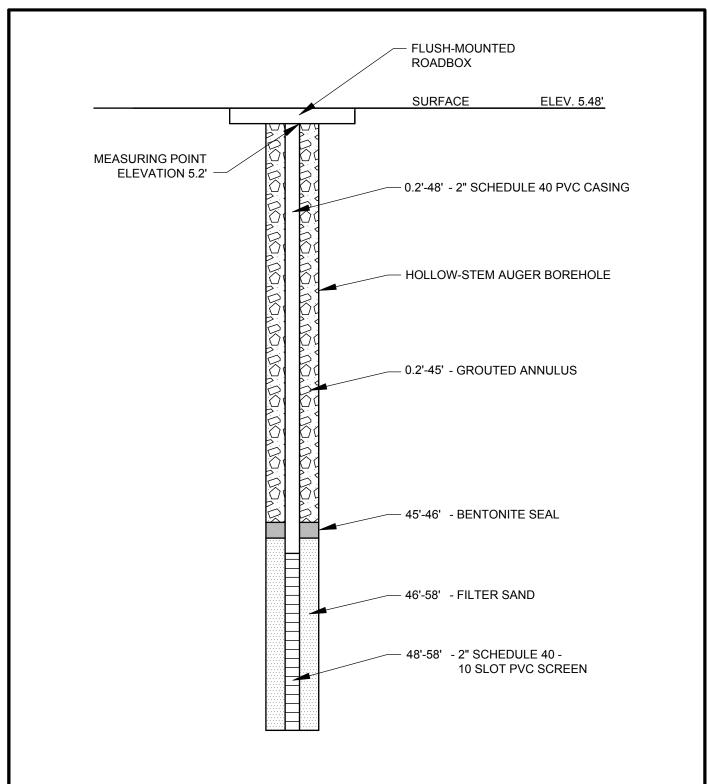
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST14SB05 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



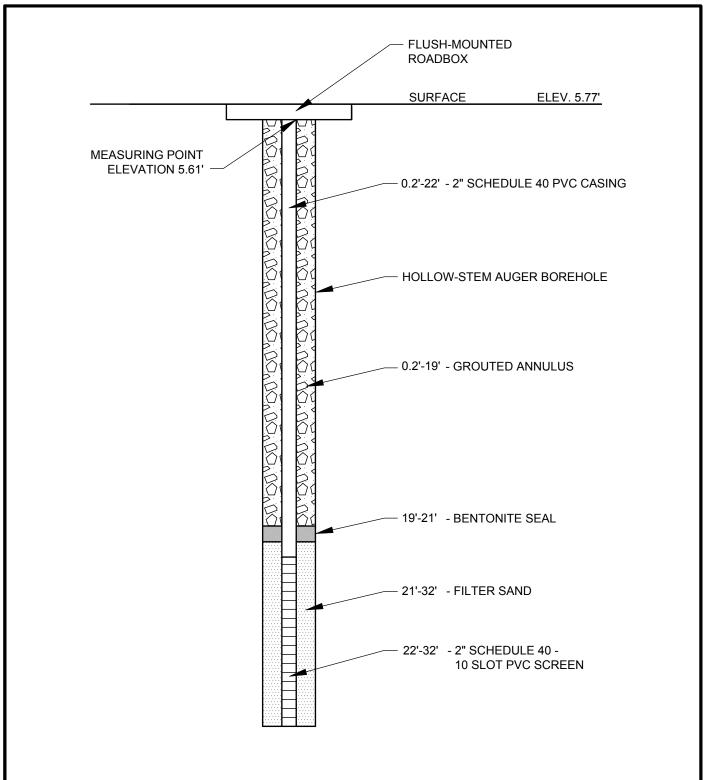
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST14SB06 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO. OF NEW YORK, INC.

Project 060660

September 2007



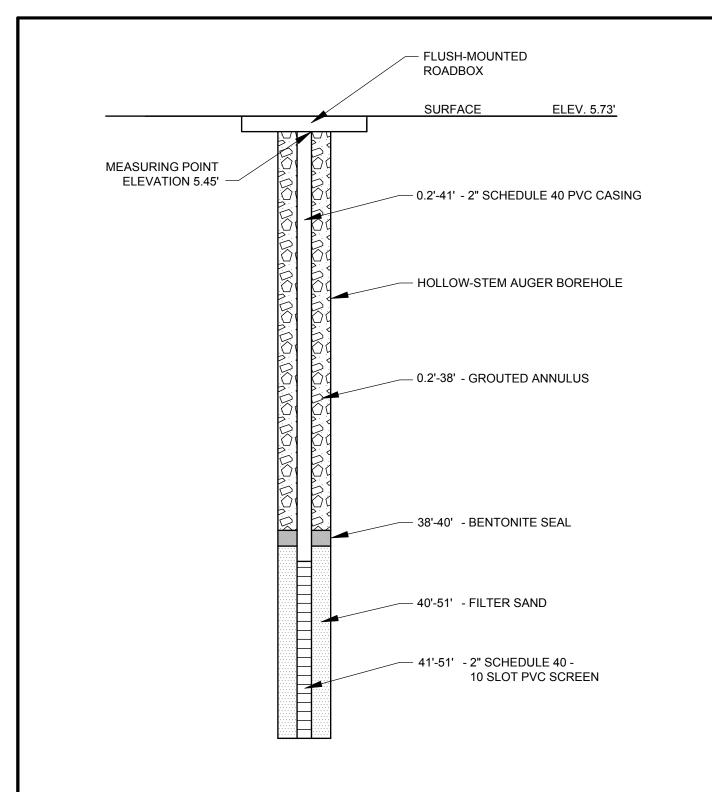
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST14SB08 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST14SB08 FOR BORING INFORMATION.

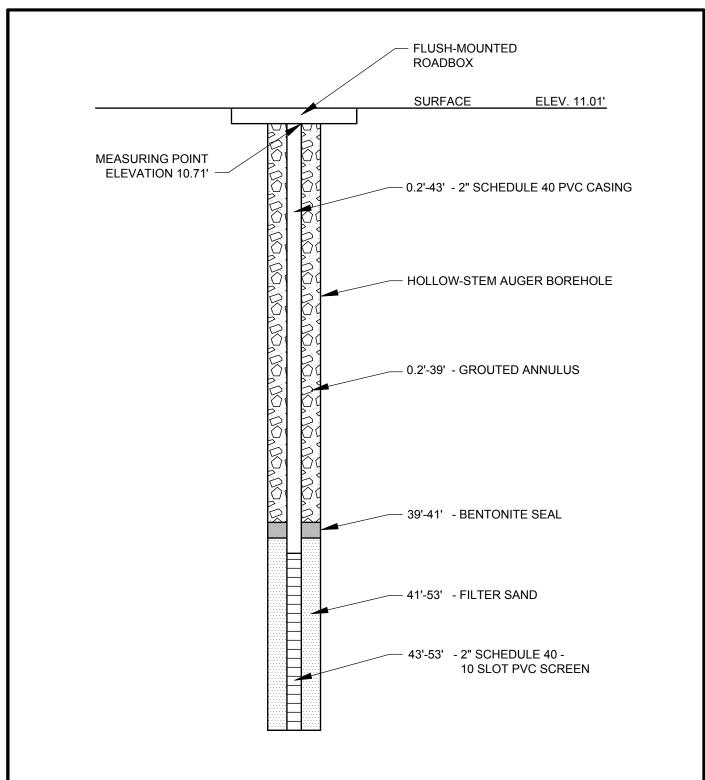
INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO. OF NEW YORK, INC.



WELL 14MWDD05
CONSTRUCTION DETAILS

September 2007



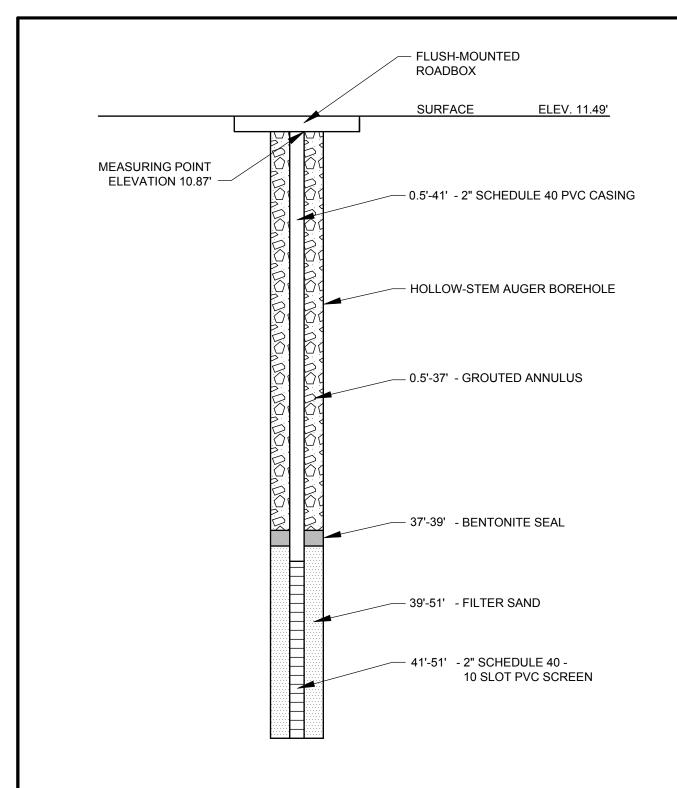
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST17SB03 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT
STUYVESANT FORMER MGP SITES
NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



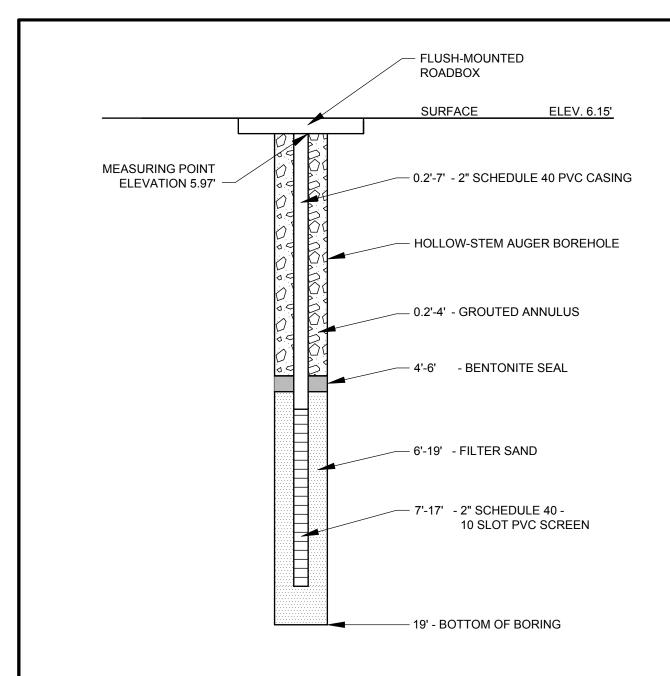
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST17SB04 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



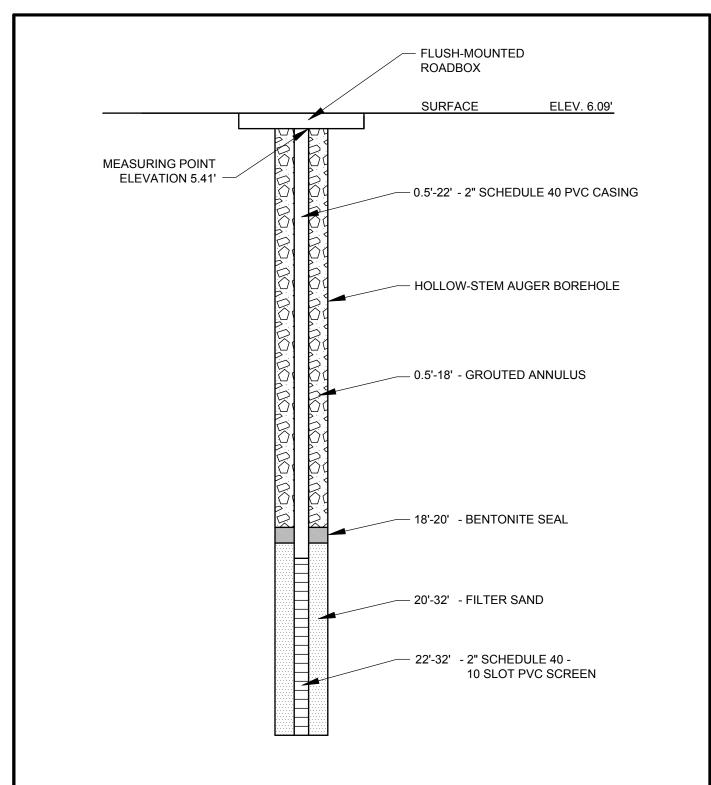
- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST17SB05 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT
STUYVESANT FORMER MGP SITES
NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



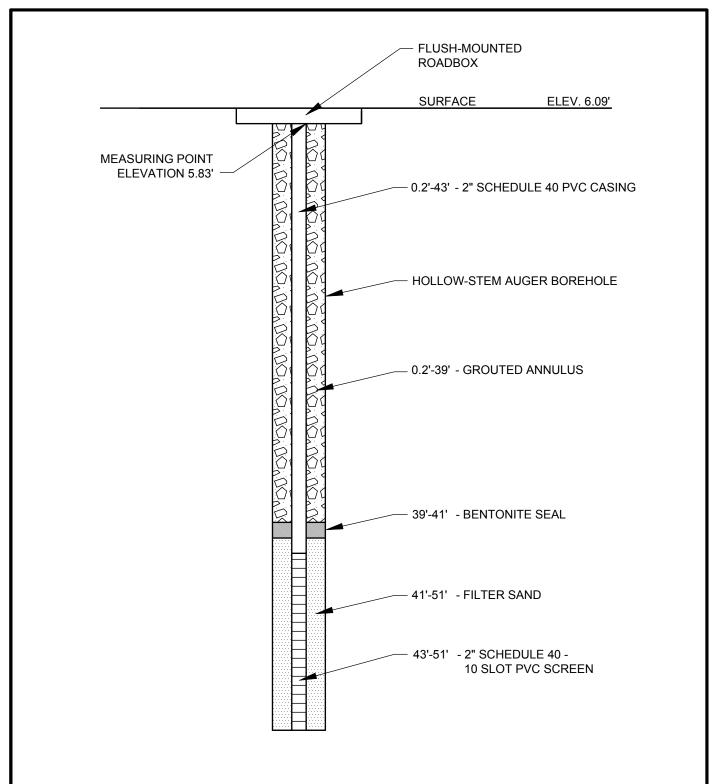
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INTERIM REMEDIAL INVESTIGATION REPORT
STUYVESANT FORMER MGP SITES
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September 2007



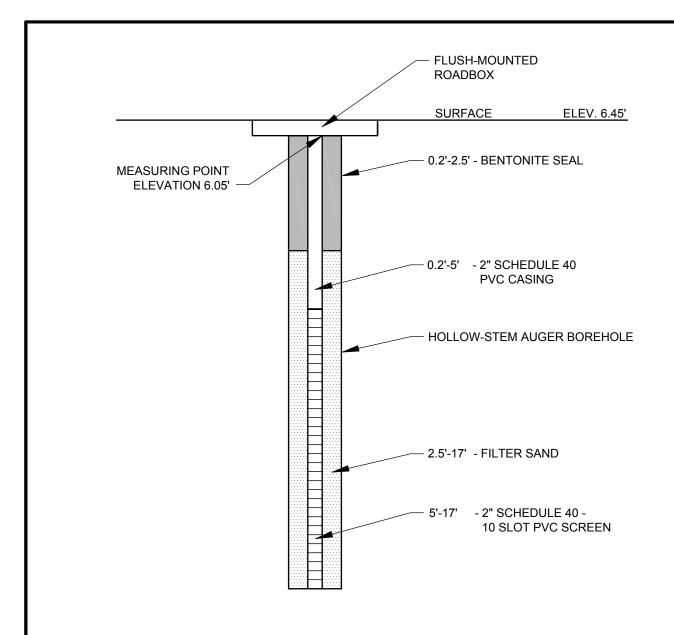
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INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



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- 4. SEE LOG ST17SB06 FOR BORING INFORMATION.

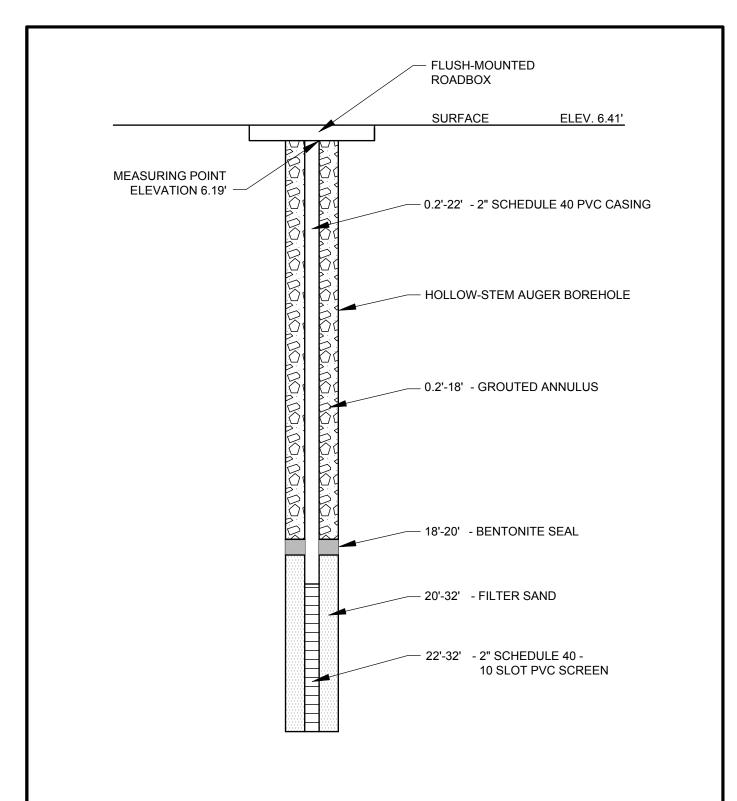
INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO. OF NEW YORK, INC.



WELL 17MWS06 CONSTRUCTION DETAILS

September 2007



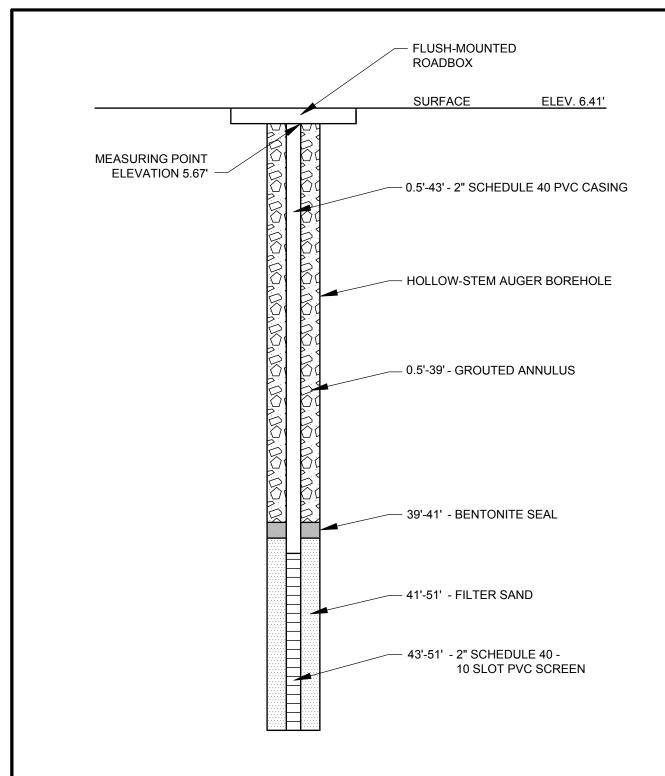
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- 4. SEE LOG ST17SB06 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT
STUYVESANT FORMER MGP SITES
NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



- 1. DRAWING NOT TO SCALE.
- 2. MEASUREMENTS ARE IN FEET BELOW GROUND SURFACE.
- 3. ELEVATIONS ARE IN NORTH AMERICAN VERTICAL DATUM (NAVD) 88.
- 4. SEE LOG ST17SB06 FOR BORING INFORMATION.

INTERIM REMEDIAL INVESTIGATION REPORT STUYVESANT FORMER MGP SITES NEW YORK, NEW YORK

CONSOLIDATED EDISON CO.
OF NEW YORK, INC.

Project 060660

September 2007



# OBSERVATION WELL INSTALLATION REPORT

Well No.
14MWS01
Boring No.
14MWS01

	A.	1011		TIOTI ILLI OI	1 X T		14MWS01	i
PROJECT	Stuyvesant Town - 14th	Street Stat	ion	H	&A FIL	<b>E NO.</b> 29455-0	11	
LOCATION	New York, New York			PR	ROJEC	T MGR. N. Van I	Dyke	
CLIENT	Consolidated Edison Co	mpany of	New York, In	ic. FI	ELD R	***************************************		
CONTRACTOR	Aquifer Drilling and Tes				ATE IN	STALLED 3/16/200	)4	
DRILLER	L. Adams					LEVEL 5.89		
Ground El.		Location	000 #10					
	5.64 ft Sanhattan Borough	Location	see plan	····		☐ Guard Pipe ☑ Roadway Bo		
	<u> </u>	<u> </u>					***************************************	
SOIL/ROCK	BOREHOLE			Type of protective cover/lock		Locking expa	ındable plug	
CONDITIONS	BACKFILL							
	0.0			— Height/Depth of top of guard	pipe/ro	adway box	0.0	ft
	CONCRETE			above/below ground surface				
	1.5			— Height/Depth of top of riser p	oine		0.42	ft
				above/below ground surface	P			
				J				
							_	
	GROUT			Type of protective casing:		Ste	el	
				Length			1.0	ft
				Inside Diameter			8.0	in
	3.7							
				— Depth of bottom of guard pip	e/roadv	way box	1.0	ft
	BENTONITE					·		
	DENTONIE			Type of S	aale	Top of Seal (ft)	Thickness (ft)	
	5.0					•		•
	5.0			Concre		0.0	1.5	
				Grout		1.5	2.2	—
	FILTER SAND	L1		Bentonite	Seal	3.7	1.3	
						t		
				Type of riser pipe:		Schedule	40 PVC	
				Inside diameter of riser pi	ipe		2.0	in
				Type of backfill around ri	_	Sand/Bento	nite/Grout	
				- J P + 01			<u></u>	_
				— Diameter of borehole			9.0	:
				— Diameter of Dorenole			8.0	in
		+						
				— Depth to top of well screen			7.0	ft
				Type of screen		Schedule	40 PVC	
				Screen gauge or size of op	enings		0.010	— in
		L2		Diameter of screen			2.0	— in
						#1 Filte		'''
				Type of backfill around scree	eti.	#1 Fille	r Sand	
			Production of the control of the con					
				—Depth of bottom of well scree	n		17.0	ft
		L3		— Bottom of Silt trap			19.0	ft
			_   ,	— Depth of bottom of borehole			19.0	— ft
N/A	ttom of Exiporation)			-P Section of Box on Oil				
	depth from ground surface in feet)			(Not to S	Scale)			
	7.0 ft +		10.0	ft + 2.0	ft	= 19.0	ft	
Ris	er Pay Length (L1)	Lengt	h of screen (L			Pay lengt		
	ee "Test Boring Report 14M	WD01/14P	H001" for soil					

# OBSERVATION WELL INSTALLATION REPORT

Well No.
14MWD01
Boring No.

		STA	LLATIO.	N REPORT		14PH001	
PROJECT	Stuyvesant Town - 14th	Street Static	n	H&A FII	LE NO. 29455-0	011	
LOCATION	New York, New York			PROJEC	T MGR. N. Van	Dyke	
CLIENT	Consolidated Edison Con		ew York, Inc.	FIELD R	***************************************		
CONTRACTOR	Aquifer Drilling and Tes	ting, Inc.		·····	STALLED 3/16/20	04	
DRILLER	L. Adams			WATER	LEVEL <u>6.03</u>		
Ground El.	5.53 ft	Location	see plan		Guard Pipe		
	anhattan Borough				✓ Roadway B	iox	
SOIL/ROCK	BOREHOLE		Type of	protective cover/lock	Locking exp	andable plug	
CONDITIONS	BACKFILL	_					
	0.0	-↓ r		Depth of top of guard pipe/re	oadway box	0.0	ft
			above/b	elow ground surface			
		_ _					
	CONCRETE			Depth of top of riser pipe		0.31	ft
			above/b	pelow ground surface			
	1.5	_					
			Type of	protective casing:	St	eel	
			Len	gth		1.0	ft
			Insi	de Diameter		8.0	in
	GROUT						
			Depth o	of bottom of guard pipe/road	way box	1.0	ft
				Type of Seals	Top of Seal (ft)	Thickness (ft)	1
				Concrete	0.0	1.5	
FILL				Grout	1,5	17.5	
	19.0	LI		Bentonite Seal	19.0	1.0	
	BENTONITE				1		
	20.0	_	Type of	riser pipe:	Schedule	e 40 PVC	
			Insi	de diameter of riser pipe		2.0	in
			Тур	e of backfill around riser	Sand/Bente	onite/Grout	
			3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5				
			→ Diamet	er of borehole		8.0	in
		11					
	FILTER SAND		☐ ☐ Depth t	o top of well screen		22.0	ft
			Type of	screen	Schedule	e 40 PVC	
			Scre	en gauge or size of openings		0.010	in
		L2	Diar	neter of screen		2.0	in
			Type of	backfill around screen	#1 Filte	er Sand	
			Depth o	of bottom of well screen		32.0	ft
		+					
		L3	Bottom	of Silt trap		34.0	ft
34.5	34.5	_    [_	Depth o	of bottom of borehole		34.5	ft
	tom of Exlporation) depth from ground surface in feet)			(Not to Scale)			
() - amount for the	22.0 ft +		0.0 ft +	2.0 ft	= 34.0	ft	
Rise	er Pay Length (L1)		of screen (L2)	Length of silt trap (L3)	Pay leng		
COMMENTS: Se	e "Test Boring Report 14MV			S.			

# OBSERVATION WELL INSTALLATION REPORT

Well No. 14MWS02 Boring No.

	IN	<b>ISTA</b>	LLA	ΓΙΟΝ RI	<b>EPORT</b>		Boring No. 14GH013	
PROJECT	Stuyvesant Town - 14th	Street Station	n		H&A FIL	E NO. 2945:		
LOCATION	New York, New York				PROJEC	r MGR. N. Va	ın Dyke	
CLIENT	Consolidated Edison Co	mpany of Ne	w York, Inc		FIELD R			
CONTRACTOR	Aquifer Drilling and Tes	sting, Inc.			DATE IN	STALLED 3/18/	2004	
DRILLER	L. Adams				WATER	LEVEL <u>5.23</u>	w	
Ground El. El. Datum M	7.19 ft Ianhattan Borough	Location	see plan			☐ Guard P ☑ Roadway		
SOIL/ROCK	BOREHOLE			Type of protective	e cover/lock		xpandable plug	
CONDITIONS	ı			Type of protective	c cover/lock	Locking c	xpandaoic piug	_
CONDITIONS	0.0		_	— Usight/Donth of t	top of guard pipe/ro	adway bay	0.0	ft
	CONCRETE	$\dashv$ $\vdash$	<u> </u>	above/below grou		adway box		''
				Ø				
	1.5	- +	r	— II.: - I.//D /I 6/			0.50	P.
				— Height/Depth of t above/below grou	• • •		0.50	— ft
				<b>5</b>				
	BENTONITE				_			
				Type of protective	e casing:		Steel	
				Length			1.0	ft
	5.0			Inside Diamet	er		8.0	in
				— Denth of bottom (	of guard pipe/roady	vav hox	1.0	ft
					or game properties	,		
	**				Type of Seals	Top of Seal (ft)	Thickness (ft)	<u> </u>
				_	Concrete	0.0	1.5	
				_	Bentonite Seal	1.5	3.5	
				_	Grout	20.0	27.0	
				m		G I . I	1 40 DVG	
				Type of riser pipe		Sched	ule 40 PVC	—
FILL	FILTER SAND				er of riser pipe	5 US	2.0	in
				Type of backfi	ill around riser	Sand/Be	ntonite/Grout	
							0.0	
				— Diameter of borel	hole		8.0	in
		+					7.0	P4
				— Depth to top of w	en screen		7.0	ft
	20.0			Type of screen		Sched	ule 40 PVC	
		$\neg \mid \mid \mid$		Screen gauge	or size of openings		0.010	— in
		L2		Diameter of sc	creen		2.0	 in
			<b>-</b>	Type of backfill a	round screen	#1 F	ilter Sand	
	GROUT			• •				_
25.0				—Depth of bottom of	of well screen		17.0	ft
GLACIAL				•				_
LACUSTRINE		L3		— Bottom of Silt tra	ıp		19.0	ft
			_   _	— Depth of bottom of	-		27.0	'` ft
27.0	ttom of Exhporation)	' '	اــهنــــــــــــــــــــــــــــــــــ	F 0. 20000III				
	depth from ground surface in feet)			_	(Not to Scale)			
Ric	7.0 ft + er Pay Length (L1)		0.0 of screen (L2)		2.0 ft of silt trap (L3)	= 19.0 Pay le	ft	
	ee " Test Boring Report 14M				. c. on usp (D5)	i ay ic	-8	
	<u> </u>							

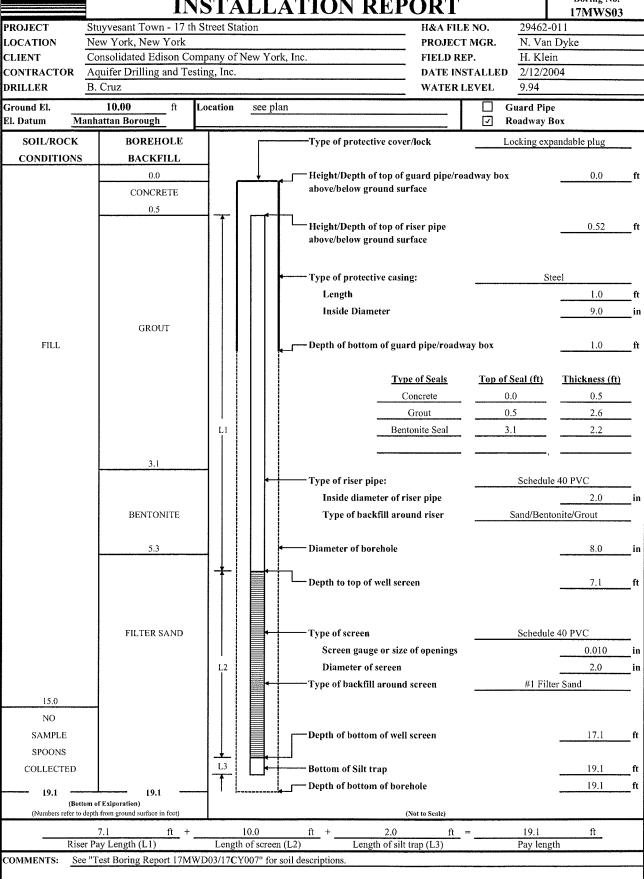
# OBSERVATION WELL INSTALLATION REPORT

Well No.
14MWD02
Boring No.

	IN	<b>IST</b> A	LLA	TION R	<b>EPORT</b>		Boring No. 14MWD02	2
PROJECT	Stuyvesant Town - 14th				H&A FIL	E NO. 29455		····
LOCATION	New York, New York				PROJECT	ΓMGR. N. Var	n Dyke	
CLIENT	Consolidated Edison Co	mpany of N	lew York, In	c.	FIELD RI	EP. P. Falo	e	
CONTRACTOR	Aquifer Drilling and Tes	ting, Inc.			DATE IN	STALLED 3/25/2	004	
DRILLER	V. Champagne				WATER	LEVEL 5.90		
Ground El. El. Datum <u>M</u>	6.39 ft anhattan Borough	Location	see plan			☐ Guard Pij ☑ Roadway		
SOIL/ROCK	BOREHOLE			Type of protecti	ve cover/lock	Locking ex	pandable plug	
CONDITIONS				, i		<u> </u>	F	
	0.0		ļ ,	— Height/Denth of	top of guard pipe/ro	adway box	0.0	ft
	CONCRETE	— Ր	<del></del>	above/below gro		namy box		
	1.5			_				
	1.3			— Height/Depth of above/below gro	top of riser pipe ound surface		0.56	ft
	GROUT			— Type of protecti	ve casing:		Steel	
				Length			1.0	ft
				Inside Diame	eter		8.0	in
				— Depth of bottom	ı of guard pipe/roadw	vay box	1.0	ft
	16.0				Type of Seals	Top of Seal (ft)	Thickness (ft)	
		$\neg \mid \mid \mid$			Concrete	0.0	1.5	
					Grout	1.5	14.5	
	BENTONITE	LI			Bentonite Seal	16.0	3.0	
	BENTONIE				Dolltoning Sour	10,0		_
	19.0			— Type of riser pip	pe:	Schedu	le 40 PVC	
				Inside diame	ter of riser pipe		2.0	in
				Type of back	fill around riser	Sand/Ber	itonite/Grout	
				— Diameter of bore	ehole		8.0	in
		+		— Depth to top of v	well screen		22.0	ft
	FILTER SAND			— Type of screen		Schedu	le 40 PVC	
				Screen gauge	e or size of openings		0.010	 in
		L2		Diameter of s	screen		2.0	 in
			-	Type of backfill	around screen	#1 Fi	lter Sand	
		** 14 45 45 45 45 45 45 45 45 45 45 45 45 45	Annual Control of the					adaments'
				—Depth of bottom	of well screen		32.0	ft
		L3		— Bottom of Silt tr	ар		34.0	ft
N/A	34.5	1 [		— Depth of bottom	of borehole		34.5	ft
(Bot	tom of Exiporation)		•					
(Numbers refer to	depth from ground surface in feet)				(Not to Scale)			
Rica	22.0 ft + er Pay Length (L1)		10.0 n of screen (L2	ft +	2.0 ft h of silt trap (L3)	= 34.0 Pay len	ft_	
	e " Test Boring Reports 14C				ii or one trup (153)	1 dy 1011	5 ct x	
	2 100 Dornig Reports 140	v.i dilu i		con accompandio.			<b>*************************************</b>	

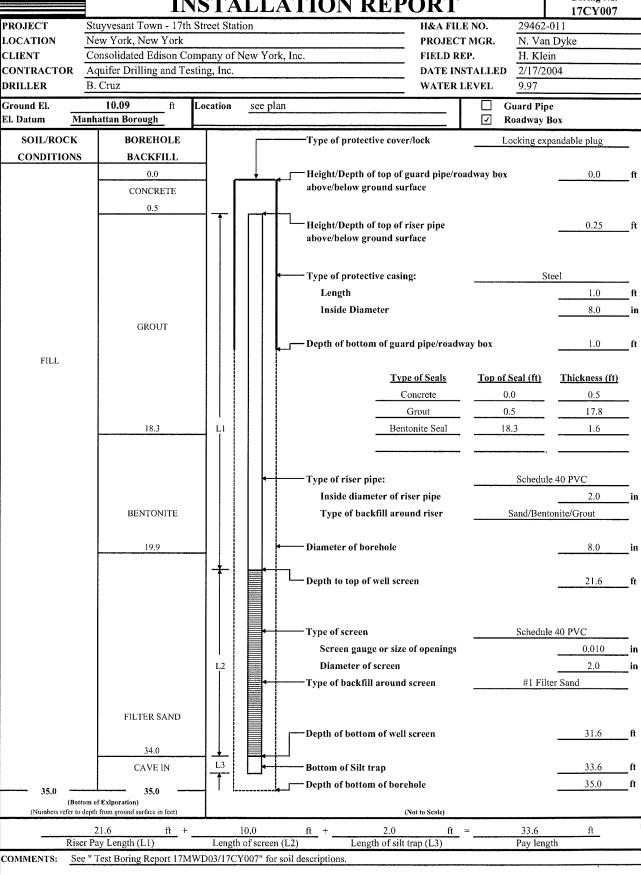
# OBSERVATION WELL INSTALLATION REPORT

Well No.
17MWS03
Boring No.
17MWS03



## OBSERVATION WELL INSTALLATION REPORT

Well No.
17MWD03
Boring No.



# OBSERVATION WELL INSTALLATION REPORT

Well No.
17MWS04
Boring No.

		<u> </u>	LATION RE	PORT		17MWS04
PROJECT	Stuyvesant Town - 17 St	reet Station		H&A FILI	E NO. 29462-0	001
LOCATION	New York, New York			PROJECT		
CLIENT	Consolidated Edison Con		York, Inc.	FIELD RE	<del>-</del>	
CONTRACTOR	Fenley & Nicol Environ	mental, Inc.		DATE INS		04
DRILLER	M. Mede			WATER L		
Ground El. El. Datum <u>M</u>	10.03 ft Ianhattan Borough	Location se	ee plan		☐ Guard Pipe ☑ Roadway B	
SOIL/ROCK	BOREHOLE		Type of protective co	over/lock	Locking expa	andable plug
CONDITIONS	BACKFILL					
	0.0		Height/Depth of top	of guard pipe/roa	adway box	0.0ft
	CONCRETE		above/below ground	surface		
	1.0					
			Height/Depth of top above/below ground			0.36 ft
			Type of protective ca	asing:	Ste	eel
			Length			1.0ft
			Inside Diameter			<u>8.0</u> ir
	GROUT		Depth of bottom of g	guard pipe/roadw	ay box	1.0 ft
				Type of Seals	Top of Seal (ft)	Thickness (ft)
			1	Concrete	0.0	1.0
			<u> </u>	Grout	1.0	3.0
		LI		Bentonite Seal	4.0	1.0
				Semonte Bear		
					,	10.5710
	4.0	-	Type of riser pipe:		Schedule	
	BENTONITE		Inside diameter of		g tro	2.0 in
	5.0	$\dashv \mid \mid \mid \mid$	Type of backfill a	iround riser	Sand/Bento	onite/Grout
			Diameter of borchole	e		<u>8.0</u> in
			Depth to top of well	screen		7.0 ft
			Type of screen		Schedule	40 PVC
			Screen gauge or s	size of openings		0.010 in
	FILTER SAND	L2	Diameter of scree	en		2.0 in
			Type of backfill arou	ınd screen	#1 Filte	er Sand
		L3	Depth of bottom of v	vell screen		17.0 <b>ft</b>
	# # # # # # # # # # # # # # # # # # #	1 <del></del>	<b>-</b>	arahala		
NA -	20.5	┥╵┡	Depth of bottom of b	осепоне		20.5 ft
	ttom of Exlporation) o depth from ground surface in feet)			(Not to Scale)		
Ris	7.0 ft + er Pay Length (L1)	10.0 Length of s		o ft silt trap (L3)	= 19.0 Pay lengt	<u>ft</u> h
	ee "Test Boring Report 17M"					

# OBSERVATION WELL INSTALLATION REPORT

Well No.
17MWD04
Boring No.

	IN	STAL	LATION RE	POR I		17GH001
	Stuyvesant Town - 17th S	Street Station		H&A FILI		
· ·	New York, New York			PROJECT	***************************************	
CLIENT	Consolidated Edison Com		York, Inc.	_ FIELD RE		
	Fenley & Nicol Environm	nental, Inc.	<del>,</del>	DATE INS WATER I		)4
	M. Mede			WATER L		
Ground El. El. Datum Ma	10.08 ft Inhattan Borough	Location see	plan		<ul><li>☐ Guard Pipe</li><li>☑ Roadway B</li></ul>	
SOIL/ROCK	BOREHOLE		Type of protective co	ver/lock	Locking expa	andable plug
CONDITIONS	BACKFILL		VI - 1			, , , , , , , , , , , , , , , , , , , ,
	0.0	┪ ↓	Height/Depth of top	of guard pipe/roa	adway box	0.0 ft
	CONCRETE	1	above/below ground			
	1.5					
			Height/Depth of top of above/below ground			ft
			Type of protective ca	sing:	Ste	el
			Length			1.0ft
			Inside Diameter			8.0 in
	GROUT		Depth of bottom of g	uard pipe/roadw	ay box	ft
				vpe of Seals	Top of Seal (ft)	Thickness (ft)
FILL			-	Concrete	0.0	1.5
				Grout	1.5	15.0
		Li	<u>B</u>	entonite Seal	16.5	2.0
İ						
			Type of riser pipe:		Schedule	40 PVC
	16.5		Inside diameter of	f riser pipe		2.0 in
	BENTONITE		Type of backfill a	round riser	Sand/Bento	nite/Grout
	18.5					
			Diameter of borehole	:		8.0 in
			Depth to top of well s	creen		ft
	FILTER SAND		1 1			
			Type of screen		Schedule	40 PVC
			Screen gauge or s	ize of openings		in
	,	L2	Diameter of scree	n		in
			Type of backfill arou	nd screen	#1 Filte	r Sand
			Depth of bottom of w	elI screen		32.0 <b>ft</b>
		L3	Bottom of Silt trap			34.0 ft
		<b>│</b> ┯┊┕	Depth of bottom of be	nrehole		34.0 ft
34.0 —	34.0 ——	┤ '	Depth of bottom of be	or enote		<i>34.0</i> It
	om of Extporation) depth from ground surface in feet)			(Not to Scale)		
	22,0 ft +	10.0	ft + 2.0	ft		ft
	r Pay Length (L1)	Length of sc		ilt trap (L3)	Pay lengt	h
COMMENTS: See	"Test Boring Report 17MW	D04/17GH001"	for soil descriptions.			

# OBSERVATION WELL INSTALLATION REPORT

Well No.
19MWS05
Boring No.

	$\mathbf{I}$	NSTA	LLA	TION REP	ORT		Boring No. 19MWS0:	
PROJECT	Stuyvesant Town - 19th	Street Stati	on		H&A FIL	E NO. 29463-0		
LOCATION	New York, New York				PROJECT	***************************************		
CLIENT	Consolidated Edison Co	mpany of N	lew York, Inc		FIELD RI			
CONTRACTOR	Aquifer Drilling and Tes					STALLED 3/17/20		
DRILLER	L. Adams	8,			WATER	***************************************		
Ground El. El. Datum <u>M</u>	10.69 ft anhattan Borough	Location	see plan			☐ Guard Pipe ☑ Roadway B		
SOIL/ROCK	BOREHOLE			Type of protective cover	/lock	Locking exp	andable plug	,
CONDITIONS				rype or protective cover	, iock	Booking oxp	andaoic prag	
	0.0	1	1 -	— Height/Depth of top of g	uard nine/ro	adway hox	0.0	ft
	GROUT	<b>⊣</b> Ր		above/below ground sur		uunuj box	0.0	
				Ü				
	1.0	┨┯╽					0.53	c.
	BENTONITE			— Height/Depth of top of r above/below ground sur			0.53	ft
	3.5			Type of protective casing	g:	St	eel	
				Length			1.0	ft
				Inside Diameter			8.0	in
			·│ │ ┡╌	—Depth of bottom of guar	d pipe/roadw	vay box	1.0	ft
				Type	e of Seals	Top of Seal (ft)	Thickness (ft)	`
					Grout	0.0	1.0	2
					onite Seal	1.0	2.5	
:					onite Seat	1.0		
			-	Type of riser pipe:		Schedule	e 40 PVC	
				Inside diameter of ris	ser pipe		2.0	 in
	FILTER SAND			Type of backfill arou		Sand/Bent	onite/Grout	
		* * * * * * * * * * * * * * * * * * *		Diameter of borehole			8.0	in
		+		— Depth to top of well scre	en		5.5	ft
				— Type of screen		Schedule	e 40 PVC	
				Screen gauge or size	of openings		0.010	 in
		L2		Diameter of screen			2.0	 in
				Type of backfill around	screen	#1 Filt	er Sand	
			Personal April 1999   Personal April 1999	.,,		1.404.400		
		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		—Depth of bottom of well	screen		15.5	ft
		L3		— Bottom of Silt trap			17.5	ft
			<u> </u>	— Depth of bottom of bore	hole		17.5	ft
N/A (Bott	17.5 tom of Exiporation)	┤ ' ፟፟		p.m. or someth or solle				
	depth from ground surface in feet)			(I	Not to Scale)			
	5.5 ft +		10.0	ft + 2.0	ft		ft	
	er Pay Length (L1)		of screen (L2		trap (L3)	Pay leng	th	
COMMENTS: Se	e "Test Boring Report 19M"	WD05/19GF	1001" for soil c	lescriptions.				

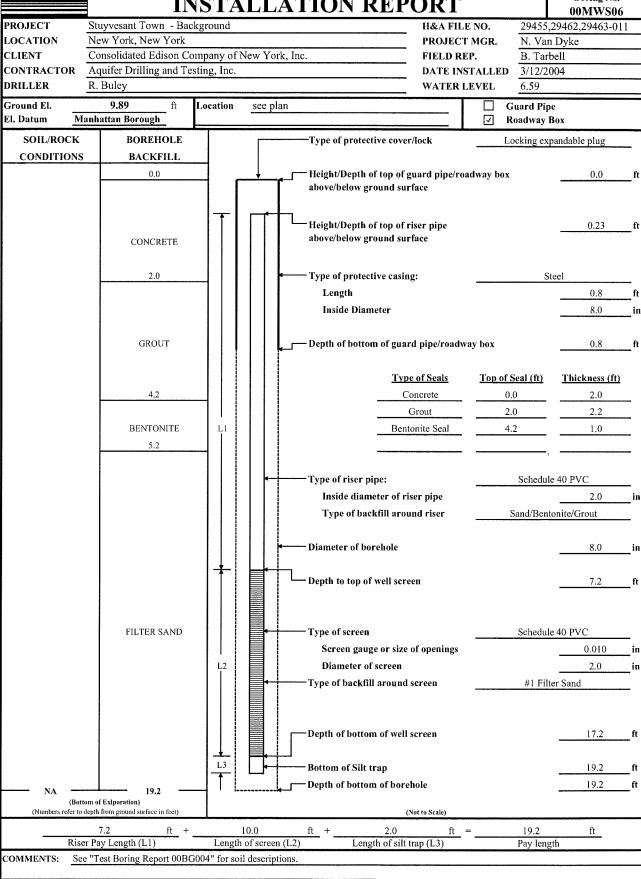
## OBSERVATION WELL INSTALLATION REPORT

Well No.
19MWD05
Boring No.

INSTALLATION REPORT 19GH001 PROJECT Stuyvesant Town 19th Street Station H&A FILE NO. 29463-011 LOCATION New York, New York PROJECT MGR. N. Van Dyke CLIENT Consolidated Edison Company of New York, Inc. FIELD REP. J. O'Brien Fenley & Nicol Environmental, Inc. 3/5/2004 CONTRACTOR DATE INSTALLED DRILLER WATER LEVEL 9.12 M. Meade Ground El. 10.93 Location see plan **Guard Pipe** Manhattan Borough El. Datum  $\overline{\mathbf{A}}$ Roadway Box SOIL/ROCK **BOREHOLE** Type of protective cover/lock Locking expandable plug CONDITIONS BACKFILL 0.0 Height/Depth of top of guard pipe/roadway box above/below ground surface CONCRETE 1.5 Height/Depth of top of riser pipe 0.41 above/below ground surface Type of protective casing: Length 1.0 fŧ GROUT **Inside Diameter** 8.0 in Depth of bottom of guard pipe/roadway box 1.0 ft Type of Seals Top of Seal (ft) Thickness (ft) 0.0 Concrete FILL Grout 1.5 16.5 Bentonite Seal 18.0 1.0 Type of riser pipe: Schedule 40 PVC BENTONITE Inside diameter of riser pipe 19.0 Type of backfill around riser Sand/Bentonite/Grout Diameter of borehole 8.0 in Depth to top of well screen 20.5 ft 26.0 FILTER SAND ORGANIC Type of screen Schedule 40 PVC DEPOSITS 0.010 Screen gauge or size of openings in 2.0 L2 Diameter of screen in Type of backfill around screen #1 Filter Sand 29.0 GLACIAL LACUSTRINE Depth of bottom of well screen 30.5 L3 **Bottom of Silt trap** 33.0 Depth of bottom of borehole (Bottom of Exiporation) (Numbers refer to depth from ground surface in feet) 32.5 ft 10.0 2.0 <u>ft</u> + Riser Pay Length (L1) Length of screen (L2) Length of silt trap (L3) Pay length See "Test Boring Report 19MWD05/19GH001" for soil descriptions. COMMENTS:

# OBSERVATION WELL INSTALLATION REPORT

Well No.
00MWS06
Boring No.
00MWS06



# OBSERVATION WELL INSTALLATION REPORT

Well No.
00MWD06
Boring No.
00MWD06

	11	<u> 1219</u>	بابا	ATION RE	PORT		00MWD06	6
PROJECT	Stuyvesant Town Housi	ng Develop	ment -	Background	H&A FIL	E NO. 29455,2	29462,29463-01	1
LOCATION	New York, New York				PROJEC			
CLIENT	Consolidated Edison Co		New Yo	rk, Inc.	FIELD R			
	Aquifer Drilling and Te L. Adams	sting, Inc.			DATE IN WATER	STALLED 3/15/20 LEVEL 8.38	04	
					WATER			
Ground El.  El. Datum Ma	10.08 ft	Location	see pl	lan		☐ Guard Pipe ☑ Roadway B		
SOIL/ROCK	BOREHOLE			Type of protective	cover/lock		andable plug	
CONDITIONS	BACKFILL		l				<u> </u>	_
	0.0	_	<u> </u>	Height/Depth of to	p of guard pipe/re	oadway box	0.0	ft
				above/below groun	nd surface			_
	CONCRETE			Ļ				
	1.0			Height/Depth of to			0.27	ft
				above/below groun	id surface			
				Type of protective	casing:	Ste	eel	
				Length			0.8	ft
				Inside Diamete	r		8.0	in
				Depth of bottom of	f guard nina/roads	way hay	0.8	ft
	GROUT			Depth of Bottom of	guaru pipe/roau	vay box	0.0	'`
					Type of Seals	Top of Seal (ft)	Thickness (ft)	ı
					Concrete	0.0	1.0	
					Grout	1.0	17.0	
		Ļi			Bentonite Seal	18.0	1.0	
				<u> </u>				
				7		,		
	18.0	$-\parallel \parallel \parallel$		Type of riser pipe:		Schedule		<del></del>
	BENTONITE			Inside diameter		0. 1/5	2.0	in
	19.0	$- \cdot $		Type of backfill	l around riser	Sand/Bento	onite/Grout	
				├── Diameter of boreho	ole.		8.0	in
				Diameter of borent	oie			
				Depth to top of wel	ll screen		22.0	ft
								_
				Type of screen		Schedule	: 40 PVC	_
			ACTIVITIES OF THE PROPERTY OF	Screen gauge o	r size of openings		0.010	in
		L2		Diameter of scr	een		2.0	in
	FILTER SAND			Type of backfill are	ound screen	#1 Filte	er Sand	
							22.0	4.
				Depth of bottom of	well screen		32.0	ft
		L3		Bottom of Silt trap			34.0	ft
			Ц	Depth of bottom of			34.0	'` ft
NA (Botto	om of Exiporation)	┦ ' ፟		F o. 20110111 01	·			
	depth from ground surface in feet)				(Not to Scale)			
D:	22.0 ft +		10.0		2.0 ft of silt trap (L3)		ft	
	r Pay Length (L1) e " Test Boring Report 00B0		of scree	<del></del>	и вистар (L3)	Pay leng	.11	
			000011	> AMV	<u> </u>			

## OBSERVATION WELL INSTALLATION REPORT

Well No.
00MWS07
Boring No.
00MWS07

	1.	NOIA	LLA	HON K	LPUKI		00MWS07	7
PROJECT	Stuyvesant Town Hou	sing Develo	pment - Back	ground	H&A FII	E NO. 29455,2	29462,29463-0	11
LOCATION	New York, New York				PROJEC	T MGR. N. Van	Dyke	
CLIENT	Consolidated Edison (	Company of	New York, Iı	nc.	FIELD R	EP. B. Tarb	ell	
CONTRACTOR	Aquifer Drilling and T	Sesting, Inc.			DATE IN	STALLED 3/2/200	4	
DRILLER	R. Buley				WATER	LEVEL 17.91		
Ground El.	<b>20.83</b> ft	Location	see plan			☐ Guard Pipe		
	anhattan Borough					Roadway B		
SOIL/ROCK	BOREHOLE			Type of protecti	ve cover/lock	Locking exp	andable plug	
CONDITIONS	BACKFILL			,, ,				
	0.0		1 -	— Height/Denth of	top of guard pipe/ro	adıyay hay	0.0	ft
	CONCRETE	$\dashv$ 1		above/below gro		admay box		
				Ü				
	1.5	<b>─</b>  ∓		**********			0.00	
				— Height/Depth of above/below gro	top of riser pipe		0.30	ft
				anove/netow gro	unu surrace			
				Type of protecti	ve casing:	St	eel	
				Length			0.8	ft
				Inside Diame	eter		8.0	in
				Depth of bottom	of guard pipe/roady	vay box	0.8	ft
					Type of Seals	Top of Seal (ft)	Thickness (ft)	1
	GROUT				Concrete	0.0	1.5	
	J. J. J. J. J. J. J. J. J. J. J. J. J. J				Grout	1.5	11.5	
		LI			Bentonite Seal	13.0	1.0	
				Type of riser pip		Schedule	e 40 PVC	
				Inside diame	ter of riser pipe		2.0	in
	13.0			Type of back	fill around riser	Sand/Bente	onite/Grout	
	BENTONITE			— Diameter of bor	ehole		8.0	in
	14.0	+_						
		II		— Depth to top of v	vell screen		15.0	ft
				Type of screen		Schedule	40 PVC	
				Screen gauge	or size of openings		0.010	— in
		L2		Diameter of s	screen		2.0	in
	FILTER SAND			Type of backfill	around screen	#1 Filte		
			CONTRACTION  CONTR	., F				
				—Depth of bottom	of wall screen		25.0	ft
				Depth of Bottom	or well screen		23.0	''
		L3		D-44 0031:			27.0	e,
		1 1 1		- Bottom of Silt tr	•		27.0	—ft
NA	27.0		<b>-</b>	Depth of bottom	ot borehole		27.0	ft
	tom of Exiporation) depth from ground surface in feet)				(Not to Scale)			
(	15.0 ft		10.0	ft +	2.0 ft	= 27.0	ft	<del></del>
Rise	er Pay Length (L1)		h of screen (L2		h of silt trap (L3)	Pay leng		
	e " Test Boring Report 00							

# OBSERVATION WELL INSTALLATION REPORT

Well No.
00MWD07
Boring No.
00MWD07

	1.	<u> 1914</u>	LLAII	UN K	EPURI		00MWD07	7
PROJECT	Stuyvesant Town Hou	sing Develor	oment - Backgrou	nd	H&A FIL		29462,29463-01	. 1
LOCATION	New York, New York		<u> </u>		PROJEC'	<del></del>		
CLIENT	Consolidated Edison C		New York, Inc.		FIELD R	***************************************		
CONTRACTOR	Aquifer Drilling and T	esting, Inc.				STALLED 3/3/200	4	
DRILLER	R. Buley				WATER			
Ground El. El. Datum <u>M</u>	20.89 ft anhattan Borough	Location	see plan			☐ Guard Pipe ☑ Roadway B		
SOIL/ROCK	BOREHOLE		Ту	pe of protective	e cover/lock	Locking exp	andable plug	
CONDITIONS	BACKFILL							
	0.0		не	ight/Depth of t	top of guard pipe/ro	oadway box	0.0	ft
	CONCRETE		ab	ove/below grou	ınd surface			
	4.0		3 1 1	ight/Depth of t ove/below grou	top of riser pipe ind surface		0.25	ft
			Ту	pe of protective	e casing:	St	eel	
				Length			0.8	ft
				Inside Diamet	ter		8.0	in
								_
	GROUT		l l l De	pth of bottom (	of guard pipe/roadv	way box	0.8	— <sup>ft</sup>
					Type of Seals	Top of Seal (ft)	Thickness (ft)	
					Concrete	0.0	4.0	
				_	Grout	4.0	24.4	
				-	Bentonite Seal	28.4	1.2	_
				_				_
	28.4			_		,		_
	BENTONITE		Ту	pe of riser pipe	e:	Schedule	: 40 PVC	
	29.6			Inside diamete	er of riser pipe		2.0	in
				Type of backfi	ill around riser	Sand/Bento	onite/Grout	
			Di	ameter of borel	hole		8.0	in
		+						
			<b>■</b>   <b>└</b> -De	pth to top of w	ell screen		30.6	ft
			Period Control					
			Ту	pe of screen		Schedule	: 40 PVC	
				Screen gauge	or size of openings		0.010	in
	FILTER SAND	L2		Diameter of so	creen		2.0	— in
			Ту	pe of backfill a	round screen	#1 Filte	er Sand	_
			De l	pth of bottom o	of well screen		40.6	ft
		+						
		L3		ttom of Silt tra	-		42.6	ft
NA	43.0 -	[_	De	pth of bottom o	of borehole		43.0	ft
	tom of Exiporation) depth from ground surface in feet)				(Not to Scale)			
	30.6 ft	<b>-</b>	10,0 ft	+	2.0 ft	= 42.6	ft	
Rise	er Pay Length (L1)		of screen (L2)		of silt trap (L3)	Pay leng		
COMMENTS: Se	e "Test Boring Report 00E	3G001" for so	il descriptions.					

## Appendix C

**GEI Valve Replacement Project Summary Report** 

#### **Addendum to Interim Remedial Investigation Report**

## Stuyvesant Town Former Manufactured Gas Plant Sites

East 14<sup>th</sup> Street Station (NYSDEC Site #V00535) East 17<sup>th</sup> Street Station (NYSDEC Site #V00541) East 19<sup>th</sup> Street Station (NYSDEC Site #V00542) New York, New York

VCA Index D2 -0003-02-08

#### Valve Replacement Project Observation Summary Report

#### Submitted to:

Consolidated Edison Company of New York, Inc.

#### Submitted by:

GEI Consultants, Inc. 455 Winding Brook Drive Glastonbury, CT 06033 860-368-5300

September 2007 Project #060660-1-1001

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		yvesant Town Former MGP Sites and Valve Project "Areas"	
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		a 2 – East 20 <sup>th</sup> Street Loop: Valve Excavation Observations	
		a 8 – East 14 <sup>th</sup> Street Loop: Valve Excavation Observations	

 $H: WPROC\ Project \ CON-ED\ Stuyves ant Town\ Interim\ Remedial\ Invest\ Report\ A-Valve\ Summary\ Report\ Valve\ Summary\ Report\ Project\ Proje$ 



i

## **Abbreviations and Acronyms**

AKRF Environmental Consultants

Con Edison Consolidated Edison Company of New York, Inc.

Emilcott Emilcott Associates, Inc.
GEI GEI Consultants, Inc.

Langan Engineering and Environmental Services, P.C.

MGP Manufactured Gas Plant

NYSDEC New York State Department of Environmental Conservation

OM&M Operational, Maintenance and Monitoring (Plan)

PPE Personal Protection Equipment

Phase 1 Phase 1 Group, Inc.
RETEC The RETEC Group, Inc.
RI Remedial Investigation
Rose Rose Associates, Inc.
SC Site Characterization

VCA Voluntary Cleanup Agreement

#### **MEASUREMENTS**

bg Below Grade



### **Executive Summary**

In 2006 and 2007, an underground valve replacement program was conducted at the Stuyvesant Town property located in Manhattan, New York. The capital-improvement work entailed the excavation, removal and replacement of 58 water and hydrant valves beneath the approximately 61-acre residential campus. A number of the valves were located in or adjacent to the Stuyvesant Town former manufactured gas plant (MGP) sites, for which a Voluntary Cleanup Agreement (VCA) between the Consolidated Edison Company of New York, Inc., (Con Edison) and the New York State Department of Environmental Conservation (NYSDEC) exists. As a result, Con Edison contracted GEI to serve in an observational role during the subsurface project activities and document field observations regarding general subsurface conditions and potential environmental impacts in order to augment the findings of previous investigation work at the property. This report provides a summary of the project scope and findings, as pertains to environmental conditions associated with the former MGP sites, and as such, has been included as Appendix A of the Interim Remedial Investigation Report submitted to the NYSDEC in September 2007.

The valve excavations were grouped into five "areas": Area 2, the East 20<sup>th</sup> Street Loop, where the former East 19<sup>th</sup> Street Station was located; Area 4, the First Avenue Loop; Area 5, the Center Oval; Area 6, the Avenue C Loop, where the former East 17<sup>th</sup> Street Station was located; and Area 8, the East 14<sup>th</sup> Street Loop, west of the former East 14<sup>th</sup> Street Station.

MGP-type impacts were observed in soil and/or groundwater outside of the former MGP sites and respective investigation areas. These impacts were observed in excavations along the Avenue C Loop and the East 20<sup>th</sup> Street Loop roads, beyond the former station and investigation areas for the East 17<sup>th</sup> Street and East 19<sup>th</sup> Street Stations respectively. The fill within these areas is highly variable in content and contains significant historic building and roadway debris that may have originated on and/or off site. Although the impacts observed within and/or beneath the fill may or may not be associated with former operations at the property and are variable and localized in degree and extent, the presence of these impacts may require additional investigation.

MGP-type impacts were also observed in soils at one location along the First Avenue Loop. Given the background borings in the vicinity, the observations made during the other excavations along the First Avenue Loop, and the limited impacts detected at this one location, additional investigation of the area is not deemed necessary at this time.

Observations support previous findings that indicate MGP-related residuals, where present, are generally confined to site soils deeper than 5 feet below grade (bg) and would be exposed



ADDENDUM TO INTERIM REMEDIAL INVESTIGATION REPORT CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. STUYVESANT TOWN FORMER MGP SITES SEPTEMBER 2007

only during significant construction events that would be managed under appropriate soil and groundwater management plans and a site-specific worker and community health and safety plans, such as the protocol followed during this project and summarized in this report.

Finally, observations made during the East 14<sup>th</sup> Street Loop excavations support previous findings that indicate subsurface impacts related to the former East 14<sup>th</sup> Street Station do not appear to extend to the west of the former station footprint.



## 1. Introduction

This report was prepared for Consolidated Edison Company of New York, Inc. (Con Edison) by GEI Consultants, Inc. (GEI). This summary report presents observations made during capital-improvement work conducted in 2006 and 2007, at and adjacent to the Stuyvesant Town former manufactured gas plant sites located in Manhattan, New York. Commissioned by the former property owner, MetLife<sup>®</sup>, the work involved the replacement of underground water valves located throughout the Stuyvesant Town residential campus. Due to the fact that a number of valves were located within and/or adjacent to the former East 14<sup>th</sup> Street, East 17<sup>th</sup> Street and East 19<sup>th</sup> Street Station sites, Con Edison requested that GEI serve in an observational role during the valve excavation work. As such, GEI recorded and photo documented field observations made during the course of the project and was kept apprised of the characterization results and disposal amounts for soil and water shipped and disposed off-site.

This summary report was prepared for submission to the New York State Department of Environmental Conservation (NYSDEC) as an addendum (Appendix A) to the Interim Remedial Investigation (RI) Report submitted to the NYSDEC on September 11, 2007. The findings described herein supplement those presented in the Interim RI Report and provide additional information on the property subsurface soil and groundwater.



### 2. Site Setting and Background

The Stuyvesant Town residential campus occupies Block 972, Lot 1 in the Borough of Manhattan within the City, County, and State of New York. Located in the Lower East Side section of Manhattan, the property comprises nearly 61 acres and is bounded by and extends from East 14<sup>th</sup> Street north to East 20<sup>th</sup> Street and from First Avenue east to Avenue C (see Figure 1.) When constructed in the 1940s, Stuyvesant Town replaced the former buildings, industries and streets within its 18-block footprint, including three former manufactured gas plant (MGP) holder stations that were once owned and operated by predecessor companies of Con Edison. As illustrated in Figure 2, the three former MGP holder stations were located on non-contiguous parcels that together occupied approximately 4 acres in total: the East 14<sup>th</sup> Street Station, which was located at the northwestern corner of East 14th Street and Avenue C; the East 17<sup>th</sup> Street Station, which was located across the northern portion of the presentday Avenue C Loop Road; and the East 19th Street Station, located between East 20th Street and the present-day East 20<sup>th</sup> Street Loop Road. The three stations had been built on land created on fill brought into the area in the mid 1800s to extend the shoreline of the Lower East Side and operated from the mid 1800s until the early part of the 20<sup>th</sup> century. For the East 17<sup>th</sup> Street and East 19<sup>th</sup> Street Stations, the sites were converted to other industrial uses (i.e., garages and vehicle maintenance shops) by others before the development of Stuyvesant Town in the mid 1940s.

In 2002, Con Edison entered into a Voluntary Cleanup Agreement (VCA) with the NYSDEC to address potential environmental conditions of concern associated with the former MGP sites. Pursuant to VCA Index #D2-0003-02-08, dated August 25, 2002, site characterization and remedial investigation activities were conducted for the former East 14<sup>th</sup> Street Station (NYSDEC Site #V00535), East 17<sup>th</sup> Street Station (NYSDEC Site #V00541) and the East 19<sup>th</sup> Street Station (NYSDEC Site #V00542). The site characterization (SC) work was performed by Haley & Aldrich, Inc., and documented in a SC Report (October 2004/revised April 2005), which was submitted and approved by the NYSDEC. GEI conducted remedial investigation activities in 2006, pursuant to the NYSDEC-approved RI Work Plan (GEI, February 2006) and March 6, 2006 soil vapor and air sampling addendum. The RI scope was developed to provide supplemental information to the SC Report and a 2003 indoor air and soil gas sampling report by The RETEC Group, Inc. (RETEC), in order to assess whether remedial actions are necessary and, if so, to support analysis of remedial alternatives and selection of a remedy.

In September 2007, Con Edison submitted an Interim RI Report to the NYSDEC. The Interim RI Report presents a comprehensive discussion of documented site conditions



ADDENDUM TO INTERIM REMEDIAL INVESTIGATION REPORT CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. STUYVESANT TOWN FORMER MGP SITES SEPTEMBER 2007

through the combined presentation of the previous SC findings and recent RI data and includes this summary report as an appendix.



### 3. Project Scope and Methods

On June 19, 2006, the construction phase of the underground valve-replacement project for Stuyvesant Town commenced. GEI observed project-related excavation activities conducted at the Stuyvesant Town property from mid-June 2006 through early November 2006. The water-valve replacement project continued on the Peter Cooper Village property in November 2006 and was completed in June 2007, during which time several remaining perimeter valves at Stuyvesant were also completed. A separate report on the observations at the Peter Cooper Village property has been submitted to the NYSDEC and New York State Department of Health.

### 3.1 Project Description

The valve-replacement project entailed the excavation and replacement of subsurface hydrant and water valves located throughout the complex, mainly within and along property access roads. Metropolitan Insurance and Annuity Company, an affiliate of MetLife®, owned the property at the time of the project bid and award and during the majority of the project implementation at Stuyvesant Town. Rose Associates, Inc. (Rose) managed the capitalimprovement project on behalf of MetLife<sup>®</sup>. The Phase 1 Group, Inc. (Phase 1) of Staten Island, New York, was the underground utilities contractor for the valve-replacement work. Due to potential environmental concerns related to area-wide historic fill and the former MGP sites within both the Stuyvesant Town and Peter Cooper Village campuses, MetLife<sup>®</sup> contracted Langan Engineering & Environmental Services (Langan) of New York, New York, to provide environmental oversight of the subsurface activities. AKRF Environmental Consultants (AKRF) of New York, New York, provided environmental oversight of the work at Stuyvesant Town following transfer of property ownership to PCV ST Owner LP and ST Owner LP in late 2006. Emilcott Associates, Inc. (Emilcott) of Chatham, New Jersey, provided environmental health and safety monitoring during subsurface project activities, including community air monitoring.

For the Stuyvesant Town campus, the project targeted 39 water valves and 19 hydrant valves located beneath the property. The hydrant and water valves were grouped into five main "areas" based on their location and the engineering specifications provided by Dagher Engineering, PLLC, of New York, New York (see Figure 2). The five "Areas" and the order in which they were addressed are as follows:

- Area 6 Avenue C Loop
- Area 4 First Avenue Loop
- Area 2 East 20<sup>th</sup> Street Loop
- Area 5 Center Oval (addressed concurrent with Area 2)
- Area 8 East 14<sup>th</sup> Street Loop



In addition, excavation for the replacement of two steam lines traversing the East 20<sup>th</sup> Street Loop and repair of a corner of the 21 Stuy Oval foundation wall were also performed during the valve-related activities. These excavations were located within Area 2 and were conducted as part of the Area 2 valve-related activities.

The valve-replacement activities included excavation, removal and replacement of the valves, installation of concrete vaults around water valves and restoration of affected roadways, pedestrian paths, and landscaping. An Operational, Maintenance & Monitoring (OM&M) Plan was implemented by Langan, and later by AKRF, during the project. The environmental management of the project is described further in the sections below.

### 3.2 Soil and Groundwater Management

Soil and groundwater handling during subsurface activities was directed by Langan, and later by AKRF, and included characterization and segregation management of excavated materials for re-use or off-site disposal and characterization of groundwater for disposal. A protocol for the management of soil and groundwater at the excavations was established before work began and was implemented during the project activities. This protocol consisted of the following:

- All excavated soil exhibiting visual and olfactory evidence of impacts (MGP and/or petroleum) would not be reused as on-site fill but would be characterized and properly disposed off site.
- All other excavated soil was reused as on-site fill where possible. Any excess soil
  was characterized and properly disposed off site.
- Soils exhibiting potential contaminant impacts were stockpiled on plastic or direct-loaded into lined roll-off containers for waste characterization and proper disposal. Soil piles and roll-offs containing potential soil impacts were covered with plastic or tarps while staged at the site and prior to off-site transport on trailers or dump trucks.
- All groundwater in the areas of the former gas holder site, in an excavation with observed evidence of soil impacts, or exhibiting a sheen was assumed to be impacted and, where required for the work, was pumped into on-site Baker<sup>TM</sup> tanks for characterization and disposal.

On behalf of the property owner, Langan directed soil and groundwater management, conducted waste characterization sampling and prepared waste disposal paperwork during the majority of the Stuyvesant Town valve project. AKRF took over environmental management responsibilities with the sale of the property in late 2006.



#### 3.3 Environmental Health and Safety Management

Emilcott instituted community and worker air monitoring when visual and or olfactory evidence of contaminant impacts were encountered during subsurface activities conducted by Phase 1 or its subcontractors. Based on observed environmental conditions, Emilcott also informed Phase 1 and its subcontractors of the need to upgrade personal protective equipment (PPE) (e.g., don Tyvek suits and rubber boots) and implement decontamination zones and procedures (e.g., cordon off a corridor to a decontamination area and provide boot wash and PPE changes).

#### 3.4 Field Observation

As previously indicated, GEI was asked by Con Edison to serve in an observational role during the subsurface project activities since a portion of the project work was slated for areas within or adjacent to the former MGP holder station sites. Con Edison requested that GEI document any field observations regarding general subsurface conditions and potential environmental impacts at all the excavation locations on the property. The information obtained would augment the findings reported in the comprehensive Draft RI Report and provide additional knowledge into the feasibility of potential remediation of subsurface MGP-related residuals. GEI maintained a field log throughout the project, attended weekly contractor and project meetings and provided site-specific information, as necessary, to aid in the field assessment of environmental conditions and soil and groundwater management. As such, GEI served as Con Edison's on-site representative during the project work.

RETEC observed the 2007 activities at Stuyvesant Town on behalf of Con Edison, since they were observing the work at the Peter Cooper Village during that time. RETEC's observations have been included in this report.



### 4. Observation Summaries

The following is a summary of field observations made by GEI or RETEC during subsurface valve activities. The summary focuses on general subsurface conditions and visual and olfactory evidence of impacts observed during the field activities. In addition, information on waste characterization and disposal is also provided, as it relates to potential contaminant impacts. Specific soil and groundwater characterization data were maintained by Langan, and later AKRF, during the project and are presently retained by PCV ST Owner LP and ST Owner LP, the current property owner. The summary is presented by "area," and Figures 3 through 6 show the respective valve excavation locations with general environmental observations also illustrated.

#### 4.1 Area 6 - Avenue C Loop

The valves grouped within Area 6 were located within or in close proximity to the Avenue C Loop (see Figure 3). They include Valves 7 through 12, Valves 14 through 20, Valve D and Hydrant Valves H5, H6, H7, and H21 for a total of 18 valves. The footprint of the former East 17<sup>th</sup> Street Station traverses a portion of the northern section of the Avenue C Loop; a number of the valve excavation locations were within or adjacent to the former station footprint, as shown on Figure 3.

In general, fill materials consisting of sands, gravels, concrete and brick fragments were encountered in the hydrant and water valve excavations along the Avenue C Loop. Historic intact and partial building foundations and related debris, and a complex network of active and abandoned utilities, were encountered within the water valve excavations, which extended approximately 12 to 14 feet below grade (bg) and required shoring and significant hand clearance work to access and replace the associated underground valves. The hydrant valve excavations near and along the Avenue C Loop were smaller in area and shallower in depth than the water valve excavations and extended approximately 5.5 to 7 feet bg; no contaminant-related impacts or groundwater infiltration were observed in the hydrant valve excavations along the Avenue C Loop.

As illustrated on Figure 3, stained soils and MGP-type odors were observed in the interconnected excavations for Valves 9-12 and the excavation for Valve 14. Stained soils and petroleum-type odors were observed in the excavation for Valve 20. Depths of excavation are shown on Figure 3 and averaged approximately 13 feet bg at these locations. The MGP-type impacts were generally observed within the bottom 2 to 3 feet of the excavations for Valves 9-12 and Valve D, while the observed impacts appeared variable from approximately 3.5 feet bg to depths of excavation for Valves 14 and 20. Groundwater



infiltration within the excavations occurred between 9 and 11 feet bg. Within excavations where soil staining and associated odors were observed, the groundwater exhibited sheens consistent with the observed impacts.

In total, approximately 330 tons of non-hazardous characterized soils were removed from the valve excavations within Area 6 and transported off site to Clean Earth of Philadelphia, Inc., for disposal. Of that total, approximately 275 tons were transported as soils with potential MGP-related impacts and 55 tons were transported as soils with potential petroleum-related impacts. Other materials excavated during the valve replacement work were characterized as historic fill and were either re-used on site as backfill material or transported to Clean Earth of Carteret, Inc., for disposal. Approximately 150,000 gallons of groundwater were transported to AB Oil Service, Ltd., of Bohemia, New York, or Clean Water of New York, Inc., of Staten Island, New York, for disposal.

#### 4.2 Area 4 – First Avenue Loop

The valves grouped within Area 4 were located within or in close proximity to the First Avenue Loop (see Figure 4). They include Valves 30, 31, 31A and 32, and Hydrant Valves H12, H13, H15 and H16 for a total of 8 valves excavated. There are no known former MGP sites located on or adjacent to the First Avenue Loop. Conditions encountered during the valve and hydrant excavations were anticipated to be typical of urban background and characteristic of site-wide fill materials.

With the exception of the Valve 31 excavation, no evidence of MGP- or petroleum-type impacts were observed in the soils or groundwater encountered during the First Avenue Loop valve activities. Disturbed fill materials were similar to those observed within the Avenue C Loop excavations. Stained soils and a moderate MGP-type odor were detected along the northeastern sidewall of the Valve 31 excavation at 10.5 feet bg. Since the observed impacts were encountered near the vertical and horizontal extent of the valve excavation, no impacted soils were removed from the excavation. No other impacts to soil or groundwater were observed within any of the other valve excavation locations along the First Avenue Loop. Excess soils from the First Avenue Loop excavations were characterized as non-hazardous historic fill and transported to Clean Earth of Carteret, Inc., for disposal.

## 4.3 Areas 2 and 5 – East 20th Street Loop and Center Oval

The valves grouped within Area 2 were located within or in close proximity to the East 20<sup>th</sup> Street Loop (see Figure 5). They included Valves 21 through 29, Valve A and Hydrant Valves H17 through H20 for a total of 14 valves excavated. Five excavations were located near the former station footprint. In addition, two excavations (Excavations 20SM and 21SM) were conducted across the Loop road as part of underground steam line rehabilitation



activities, and an additional excavation (Excavation 21FW) near the northern corner of the 21 Stuy Oval building was conducted to repair a section of foundation wall.

As stated earlier, the four hydrant valves around the center Oval (Area 5) were replaced concurrent with the Area 2 valve work. Hydrant Valves H8 and H9 are shown on Figure 3, and H10 and H11 are shown on Figure 4.

In general, fill materials encountered within the Area 2 excavations were similar to those encountered within the excavations along the Avenue C and First Avenue Loop roads. Evidence of a historic roadway and partial building foundations and related piping were encountered in a number of the valve excavations. As with the other areas, the hydrant valve excavations in Area 2 and around the center Oval (Area 5, shown on Figures 3 and 4) extended 5.5 to 7 feet in depth. Two excavations were conducted across the Loop road at its southeastern and southwestern corners for the rehabilitation of underground steam lines. These excavations extended to depths of 8 to 10 feet bg. Groundwater was encountered in the southeastern steam line excavation (Excavation 20SM) at approximately 9 feet bg. No contaminant-related impacts were encountered in the hydrant valves in Area 2 and Area 5 or in the steam line excavations within Area 2.

As illustrated in Figure 5, stained soils and MGP-type odors were observed in the excavations for Valves 21, 22 and 23 and in the interconnected excavations for Valves 24-27. This group of excavations extended to an average depth of 13 feet bg. Creosote-preserved wood piles, stained soils and both MGP- and petroleum-type odors were observed in the excavations for Valves 21-23 between 12 and 13 feet bg, and a visible sheen with brown, product-like globules were observed on the groundwater that accumulated near the bottom of these excavations. The interconnected excavations for Valves 24-27 exhibited stained soils at approximately 8 to 10 feet bg, and groundwater infiltration was observed at approximately 7 feet bg and exhibited both a sheen and brown, product-like globules. Stained soils and odors were observed at approximately 5 feet bg in the excavation for Valve A. Groundwater was observed at approximately 4.5 feet bg, but was attributed to perched water within the fill that may have been the result of a leaking water pipe.

During pump-out of groundwater from the Valves 24-27 excavations to a mobile Baker tank, a spill event occurred on August 17, 2006, and was reported to the NYSDEC. Spill Number 060572 was opened for the building address at 524 East 20<sup>th</sup> Street. Approximately 10 gallons were estimated to have spilled onto the adjacent ground due to a loose hose connection. The affected soils were excavated and placed in a roll-off container for subsequent disposal. Approximately 1.5 cubic yards of soil were removed as a result. Langan reported the spill and provided confirmation to the NYSDEC on the remedial action taken. Mr. Sangesland, the NYSDEC Case Manager, informed Langan that the spill file would be closed as a result.



Petroleum-type staining and odors were noted in the excavation conducted for the 21 Stuy Oval foundation repair (Excavation 21FW). The excavation was conducted to a depth of approximately 11 feet bg, and groundwater infiltration was observed from 8.5 feet bg to the excavation depth.

In total, approximately 468 tons of non-hazardous characterized soils were removed from the valve excavations within Area 2 and transported off-site to Clean Earth of Philadelphia, Inc., for disposal. Of that total, approximately 415 tons were transported as soils with potential MGP-related impacts and 53 tons were transported as soils with potential petroleum-related impacts. Other materials excavated during the valve replacement and ancillary work were characterized as historic fill and were either re-used on-site as backfill material or transported to Clean Earth of Carteret, Inc., for disposal. Approximately 56,000 gallons of groundwater were transported to Clean Water of New York, Inc., of Staten Island, New York, for disposal.

### 4.4 Area 8 – East 14th Street Loop

The valves grouped within Area 8 were located within or in close proximity to the East 14<sup>th</sup> Street Loop (see Figure 6). They included Valves 1 through 6, Valve 2A, Valves 33 through 35, Valve B, and Hydrant Valves H1, H3 and H4 for a total of 14 valves excavated. A number of valve excavations were located along the eastern extent of the East 14<sup>th</sup> Street Loop and were within 500 feet of the western limit of the former East 14<sup>th</sup> Street Station footprint. Based on investigation locations and results for the former station site, no MGP-related impacts were expected to be encountered within the Area 8 valve excavations.

Fill materials encountered within the Area 8 excavations were similar in type to those found during the excavations along the Avenue C and First Avenue Loop roads. No evidence of MGP-related impacts to soil or groundwater was observed during the valve excavations conducted within Area 8. As shown on Figure 6, petroleum-related staining and moderate odors were encountered at approximately 10.5 feet bg in the excavations for Valves 3-6, which were within close proximity to one another. Minor amounts of groundwater accumulated within these excavations and were observed to infiltrate at variable depths between 10.5 and 12 feet bg, the bottom of the excavations. Soils with observed petroleum-type impacts were transported as non-hazardous materials to Clean Earth of Philadelphia, Inc. Other soils from the East 14<sup>th</sup> Street Loop excavations were characterized as non-hazardous historic fill and excess historic fill were transported to Clean Earth of Carteret, Inc., for disposal.



#### 5. Conclusions

Field observations and analytical results from the valve replacement project provided the following supplemental information to the findings of the previous SC and RI activities performed at the Stuyvesant Town residential campus:

- MGP-type impacts were observed in soil and/or groundwater outside of the former MGP sites and respective SC and RI areas. These impacts were observed in excavations along the Avenue C Loop and the East 20<sup>th</sup> Street Loop roads, beyond the former station and investigation areas for the East 17<sup>th</sup> Street and East 19<sup>th</sup> Street Stations respectively. The presence of these impacts may require additional investigation.
- MGP-type impacts were observed in soils at one location along the First Avenue Loop, near the bottom of the 12-foot excavation. Given the background borings in the vicinity and the observations made during the other excavations along the First Avenue Loop, additional investigation of the area is not deemed necessary at this time.
- Observations support previous findings that indicate MGP-related residuals, where present, are generally confined to site soils deeper than 5 feet bg and would be exposed only during significant construction events that would be managed under appropriate soil and groundwater management plans and a site-specific worker and community health and safety plans.
- Observations indicate that the fill beneath the site is highly variable in content and contains significant historic building and roadway debris that may have originated on and/or off site. Impacts observed within and/or beneath the fill may or may not be associated with former operations at the property and are variable and localized in degree and extent. This is especially true of the impacts observed along the East 20<sup>th</sup> Street Loop and First Avenue Loop.
- Observations made during the East 14<sup>th</sup> Street Loop excavations support previous findings that indicate subsurface impacts related to the former East 14<sup>th</sup> Street Station do not appear to extend to the west of the former station footprint.



11

#### References

GEI Consultants, Inc. (2007). "Interim Remedial Investigation Report, Stuyvesant Town Former Manufactured Gas Plant Sites," prepared for Consolidated Edison Company of New York, Inc., September.

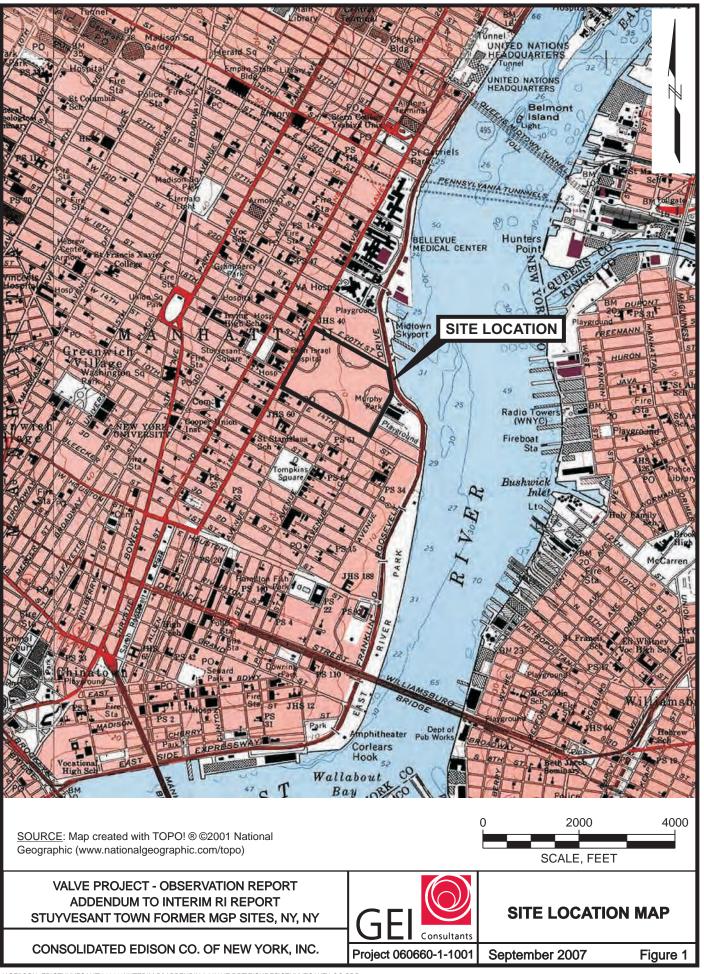
Haley & Aldrich, Inc. (2005). "Site Characterization Report, Former Consolidated Edison Manufactured Gas Plants, Stuyvesant Town Housing Development," prepared for Consolidated Edison Company of New York, Inc., October 2004, revised April 2005.

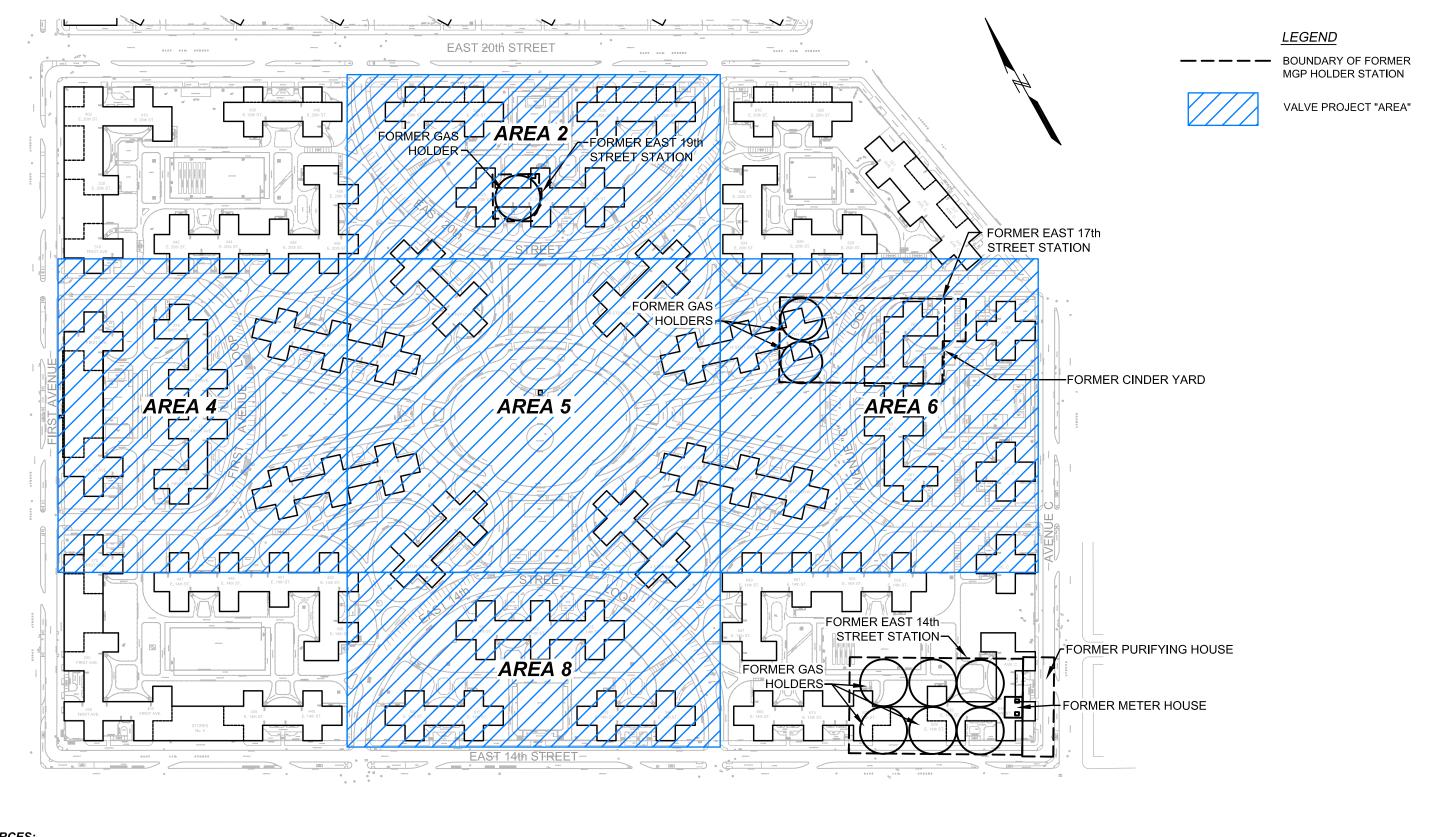
The RETEC Group, Inc. (2003). "E.14<sup>th</sup> Works and E.17<sup>th</sup> and E.19<sup>th</sup> Street Stations, Report of Evaluation of Indoor Air and Soil Gas Sampling," prepared for Consolidated Edison Company of New York, Inc., October 7.



## **Figures**

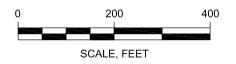






#### **SOURCES:**

- 1. FIGURE 2: SITE PLAN AND MGP FACILITIES, PREPARED FOR CONSOLIDATED EDISON COMPANY OF NEW YORK, INC., FORMER CONSOLIDATED EDISON MANUFACTURED GAS PLANTS WITHIN STUYVESANT TOWN, NEW YORK, NEW YORK, PREPARED BY HALEY & ALDRICH, SCALE: 1" = 60', DATED OCTOBER, 2004.
- 2. DRAWING Nos. P-101 THROUGH P-105, PREPARED FOR STUYVESANT TOWN UNDERGROUND VALVE REPLACEMENT STUYVESANT TOWN PETER COOPER VILLAGE, PREPARED BY DAGHER ENGINEERING, PLLC (DE PROJ. No. 1174), N.T.S., DATED MARCH 29, 2006.



**VALVE PROJECT - OBSERVATION REPORT** ADDENDUM TO INTERIM RI REPORT STUYVESANT TOWN FORMER MGP SITES, NY, NY

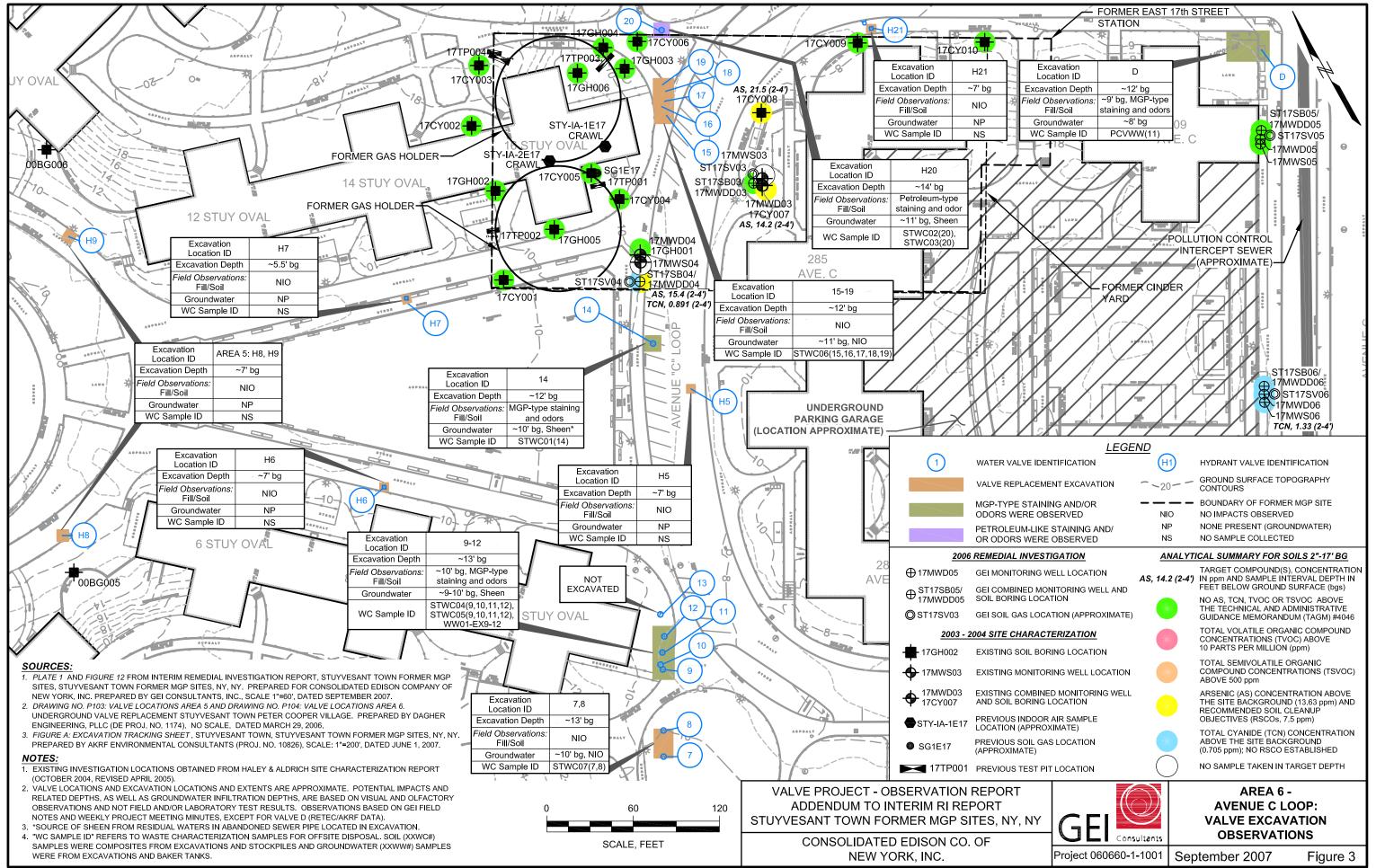
> CONSOLIDATED EDISON CO. OF NEW YORK, INC.

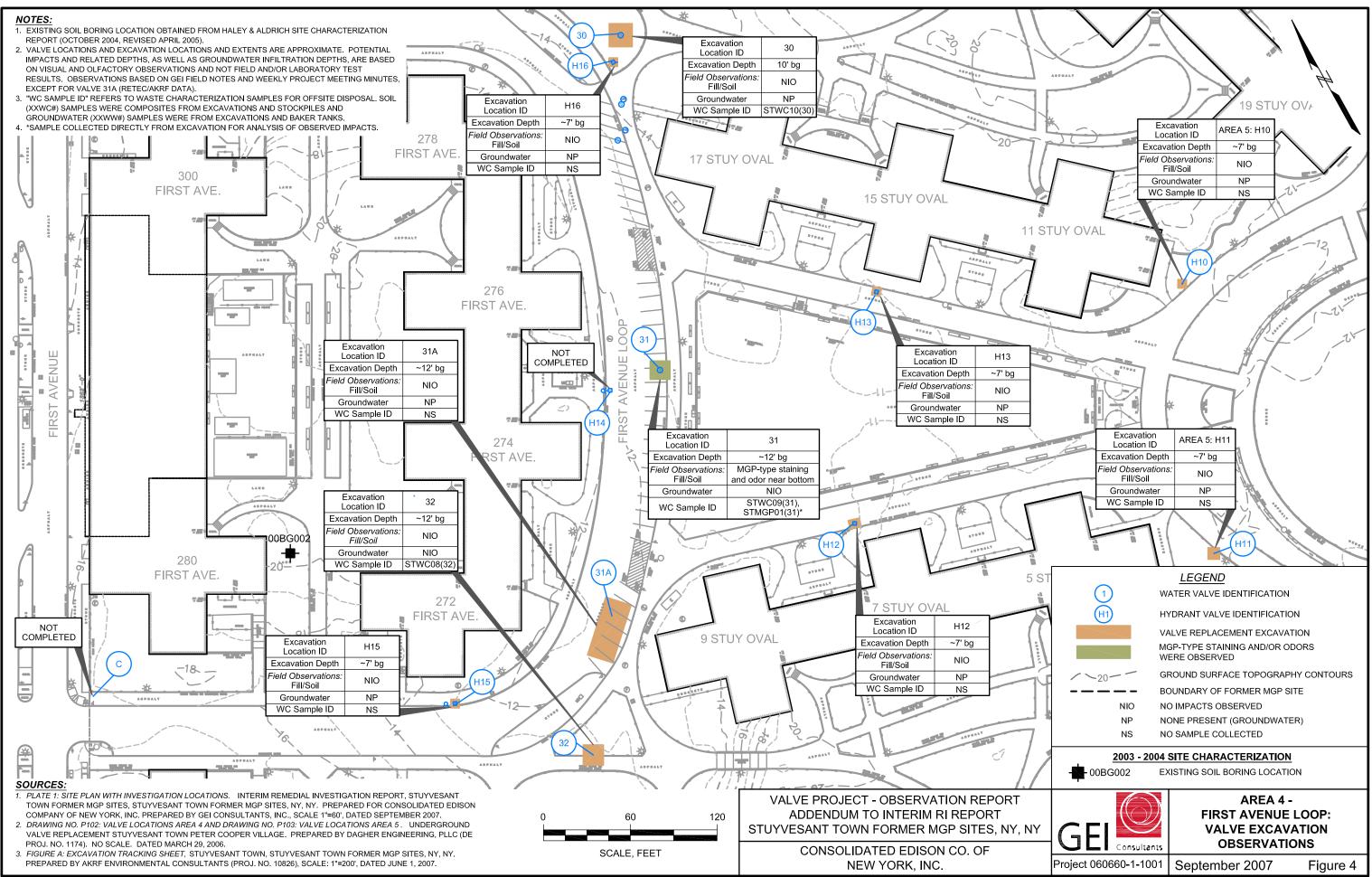


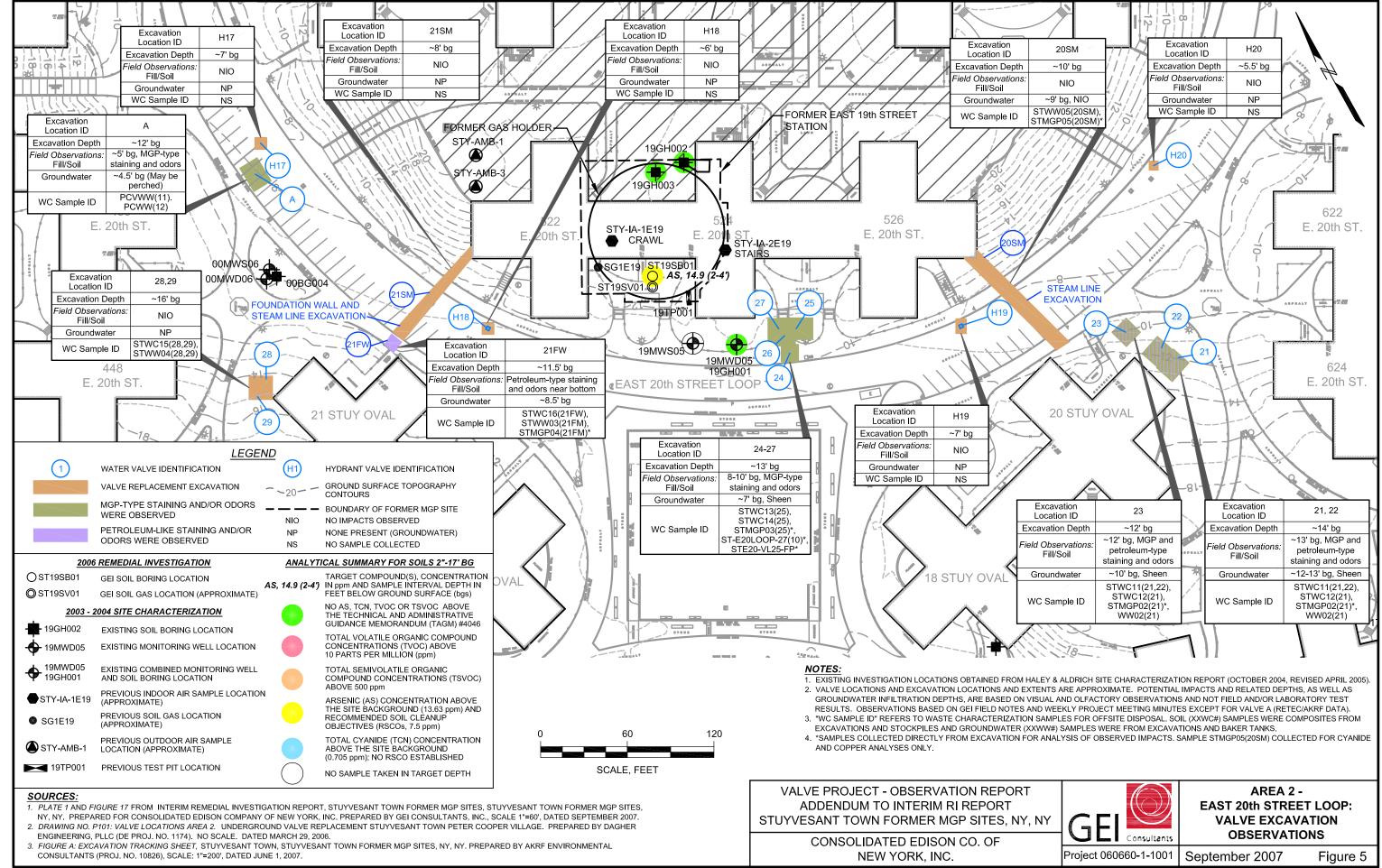
STUYVESANT TOWN **FORMER MGP SITES AND VALVE PROJECT "AREAS"** 

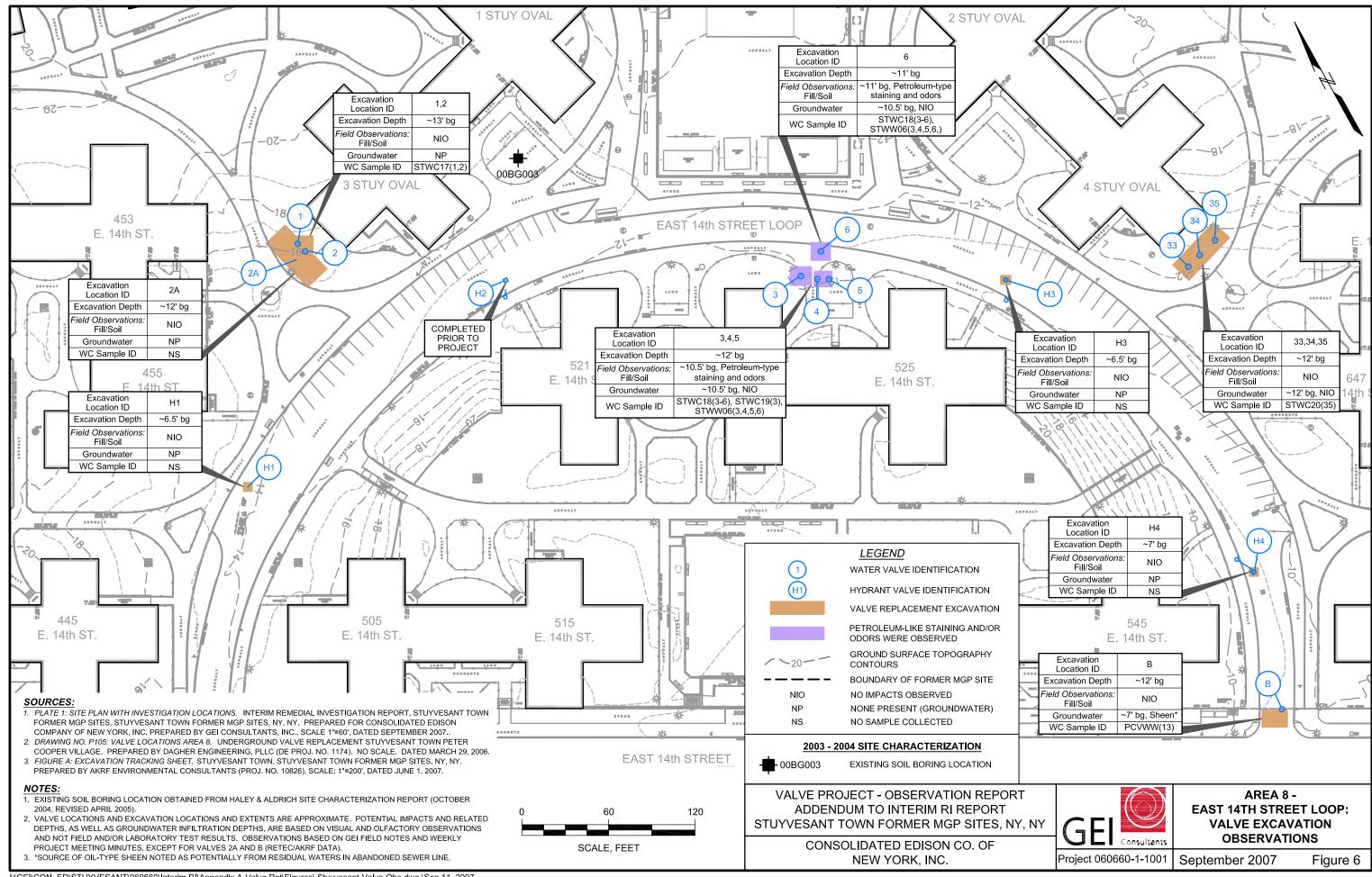
Project 060660-1-1001 | September 2007

Figure 2









## Appendix D

## **Groundwater Sampling Forms**





Well ID: 14

14MW-S01

Client:	CoEdison				[	Date:	8/21/0	18 Tir	ne: Start <u>/</u> '	240_am/gm)		
Project N		9-164-2	40						Finish 1	255 am/pm		
Site Loca	tion: St	ıytown	NY, NY							<del></del>		
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b. Acc	eptance C	riteria d	defined (	see workplan	)							
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- pH		_	I.0 unit	- ORP	<u>+</u> 10n	nV						
- Sp. (	Cond.	3%	b	- Drawdown	< 0.3'							
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1245		21.15	8 95	1.36	0.50	-116	2.08		7.86	14		
1255	0.5		9,03	1.36	0.44	-132	4,25		7.87	61		
10 20	1.9	20 67 8	3,03	1.30		1-14/	4,0		7.87	[1]		
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										<del></del>		
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14MW-S0		1L Gla		1			one		SVOC+20	1		
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Well ID: 14MW-D01

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Site Location: Stuytown NY, NY	<del>-</del>		<del></del>
Weather Conds: Sunny ~80	Collector(s):	J. Gowan/G. Tallentire	
		J. COMMING. TUNONING	<del></del>
1. WATER LEVEL DATA: (measured from Top of Ca a. Total Well Length 33.98 c. Length of Water b. Water Table Depth 6.40 d. Calculated Syste	Column $\angle 1.50$ (a-b)		neter/Material
2. WELL PURGE DATA a. Purge Method: Peristaltic Pump			
- pH <u>+</u> 1.0 unit - ORP <u>+</u>	)% 10m∨ 0.3'		
c. Field Testing Equipment used: Make	Model	Serial	Number
Horiba	U22	//8	~50
Lamont	2020	/8 8	79-0300
Volume Geopump 2			010000
Time Removed Temp. pH Spec. Cond. Do	ORP Turbidity	Flow Rate Drawdown	Color/Odor
(24hr) (Liters) (°C) (μS/cm) (mg	/L) (mV) (NTU)	(ml/min) (feet)	
1210 10,05921.04 7.72 1.10 1.9		6.38	Ct/ none
1215 0.256 21.09 7.78 1.10 0.7		6.37	C/ none
1226 0.5 C RIO17,42 1.11 0.6		6.86	CINONE
12 <b>35</b> / G 2 0/7.39 1.39 0.5		6.36	14//00/97
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·		<del>-</del>	<del> </del>
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d. Acceptance criteria pass/fail  Has required volume been removed  Has required turbidity been reached  Have parameters stabilized  If no or N/A - Explain below.	No N/A	. <b>.</b>	(continued on back)
3. SAMPLE COLLECTION: Method: Peristaltic	Pump		<del></del>
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14MW-D01	HCL	8260 VOC+10	1230
14MW-D01 1L Glass 1	None	8270 SVOC+20	
14MW-D01 1L Glass 1	None	8270 PAHs SIM	
14MW-D01 500 mL Plastic 1	HNO3	Total Metals	
HMW-D01 500 ml. Plastic 1	HNO3	Disselved Metals	
14MW-D01 500 mL Plastic 1	NaOH	9012 CN	1246
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Well ID: 14MW-DD01

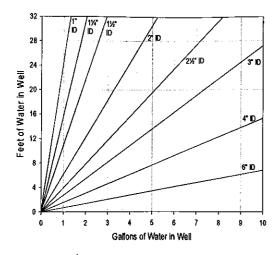
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1. WATER LEVEL DATA: (measured from Top of Casing) a. Total Well Length 52 . 22 c. Length of Water Column 45.83(a-b)  b. Water Table Depth 6.37 d. Calculated System Volume (see back)  Casing Diameter/M										
2. WELL PURGE DATA a. Purge Method: Peristaltic Pump										
b. Accaptance Criteria defined (see workplan)  - Temperature 3% -D.O. 10%  - pH + 1.0 unit - ORP + 10mV  - Sp. Cond. 3% - Drawdown < 0.3'										
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	Volume		_	Lam Geopu			2020			9-0300
Time	Removed	Temp	pH -	Spec. Cond.	DO DO	ORP	Turbidity	Flow Rate	Drawdown	Color/Odor
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14MW-DD0		IL Gla	ass	1			one		PAHs SIM	
14MW-DD0		00 mL F		1			103		tal Metals	
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12:10								350	5.64	STATIC
1215		22 19	6.6	0-999	1.92	106	4.45	и	5.66	PUMP ON
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Signature								Date		

#### Purge Volume Calculation



Volume /	Linear F	t. of Pipe
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued f	•									
Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pН	Spec. Cond.	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (mt/min)	Drawdown (ft)	Color/Odor
12:15	-	21.90	6.36	0.929	1.37	115	3.61	N	м	CLEAR
12:30	·, <u>-,-</u>	21.80	6.39	0.914	1.25	113	416	И	и	и
12:35		21.79	6.48	0.906	1.17	106	2-17	и	И	n
12-43		21.76	681	0.905	0.93	<b>60883</b>	7.28	п	n	И
12:30		21.68	6.95	0 995	0.00	32	6.10	n	n	и
1255		21.71	7.12	1.01	0.00	-62	4-11	n	n	и
1300		21.67	7-36	1.32	0.00	-125	7.79	n	п	п
1305	·	RE)	va	DP	LOW	4 SA	MPL	ED A	FIER	15MINS
									·	



Well-ID: -1-IIW-DD62

14MW502

							_			
Client: Project N	CoEdiso	on 59-164-2	240			)ate:	122/08	. Ti		135 @mpm
						/	•		Finish_	<i>1(55</i> <b>€</b> m/pm
Site Loca Weather			NY, NY			<b>.</b>				
vveamer	Conas:	zun	ik y	N80°	(	Collector(s	):	J. Gowan/G	. Tallentire	
a. Tot	al Well Le	ngth	18.77	ured from Top c. Length of d. Calculated	Water Coli	ımn <u>13.</u>		2.18	Casing Dian	neter/Material
2 WELL	. PURGE I	DATA		-						
	ge Method		ristaltic E	Pumn						
u u.	90	<u> </u>	ristarcio i	шір						
	perature	3%	6 1.0 unit	(see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m <sup>1</sup> < 0.3'	v				
c Field	d Testing	Fauinm	ent use	d Ada	aka.		Madal			
O. 1 ICH	a resuity	cquipiti	ient aset	d: ∞ Ma Hor			Model			Number
			-				U22			725
	Volume		-	Lam Geopu			2020			
Time	Removed	Temp	<u>pH</u> -	Spec. Cond.	mp 2 DO	OPP	Turbidite	Flour Bata	Dearran	T 0.1. /0.1
(24hr)	(Liters)	(°C)	r bii	Spec. Cond. (μS/cm)		ORP (m)()		Flow Rate		Color/Odor
1136			9.57	(,38	(mg/L) 1, 24	(mV) -168	(NTU) - 11.0	<u>(mvmin)</u>	(feet)	17 /
1140	0.25	24 69	9.56	1.76	0.48	-192			5,58	clear/rene
1145	0,5		9.70	1,13	0.95	-210	2,79	<del> </del>	5,50	11
1150	1.0		9.74	1,06	0.83	-214	1.82	<del>                                     </del>	<u> 558</u>	()
1155	1,5	23.18		1,03	0,77	-218	1.47	<del></del>	5,59	<del></del>
					<u> </u>	- 68	14.7		8,60	- 1/
	eptance c				Yes No	N/A				(continued on back)
Has	s required	volume	been re							(
	required			eached						
	e parame									
	If no or N/	А - Ехр	lain belo	ow.		_				
. SAMPL	LE COLLE	CTION	l: N	/lethod: <u>Peri</u>	staltic Pum	ıp				<del></del>
Samal- IC		_4_!~-	T	N 45						
Sample ID		ntainer		No. of Contain	ners	Preser		Analysis		Time
4MW-DD	02 4	40 mL V		2		H(			VOC+10-	1200
4MW-FD		1L Gla		1		No			SVOC+20	
4MW-IID 4MW-IID		IL Gla		1		No			PAHs SIM	
4MW-100	UZ 3L	00 mL P		l		HN			al Metals	
4MW-DD		00 mL P				HN			ved Metals	
4MW-DD		00 mL P				Nac			012 CN	
		00 mL P	IMSTIC	<u>i</u>		Na(	)H	9012 A	menable CN	<u> </u>
4mw 50	10									

14 MW 592 Ulu	r)					
14MW-DD02(dup	40 mL VOA	2		HCL	8260 VOC+10	120R
14MW-DD02(dup		1		None	8270 SVOC+20	
14MW-1000(dup		1		None	8270 PAHs SIM	
14MW-11002(dup		1		HNO3	Total Metals	
-14MW-02(dup		1		- HNO3	Dissolved Metals	
14MW-102(dup		1		NaOH	9012 CN	
14MW-DD02(dup	500 mL Plastic	1		NaOH	9012 Amenable CN	7
5				j)		•
Comments	Sampled	For duy	af	14MU	v802	
Broke	r cap		1W80	2		
Signature		<u> </u>	<u></u>	•	Date	



Well ID: -15m2-302

Client: Project No Site Local Weather		9-164-2 iytown l	NY, NY	~ 80°		ate:	1/08	Tin	ne: Start Finish Tallentire	am/pm am/pm
				ured from Top c. Length of			(a-b)		Casing Diam	eter/Material
b. Wat	ter Table E	epth 🐔		d. Calculated	l System V	olume (see	back)			
2. WELL	2. WELL PURGE DATA a. Purge Method: Peristaltic Pump									
- Temį - pH	eptance C perature Cond.	3%	.0 unit	see workplan) -D.O ORP - Drawdown	10% <u>+</u> 10m¹ < 0.3¹	v				
c. Field	d Testing E	Equipm-	ent used	d: Ma	ake		Model		Serial	Number
			_	Hor			U22	1600 40	++*	<del>5 0</del>
	Volume		-	Lam Geopu			2020	1487-02	<del></del>	<del>0#\$#</del> 0 <del>00 6/ 6</del>
Time	Removed	Temp.	<u>рН</u>	Spec. Cond.	DO	ORP	Turbidity	Flow Rate		Color/Odor
(24hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	
				<del> </del>	•	<del></del>				
										<b></b>
Has Has	ceptance c s required s required ve parame If no or N/	volume turbidit ters sta	been re y been r bilized	emoved eached	Yes No	N/A				(continued on back)
3. SAMP	LE COLLE	CTION	<b>1</b> : 1	Method: Per	istaltic Pun	np				- F
Sample IE 14MW-S0		ntainer 40 mL V		No. of Conta	niners	Presei He	vation CL	Analysi 826	s Req. 0 VOC+10	Time
14MW-S0		1L Gl		1		No	ne		SVOC+20	
14MW-S0		1L Gla		1			one		PAHs SIM	
14MW-S0		00 mL F		1			103	_	tal Metals	
14MW-S0 14MW-S0		00 mL F 00 mL F		1 1			IO3 OH		olved Metals 012 CN	
14MW-S0		00 mL F		1	<u></u>		OH		Amenable CN	<del></del>
Comment	Λ	4	øt	sample	? du			prod		well
Signature	8		M				e	Date	08/21	108



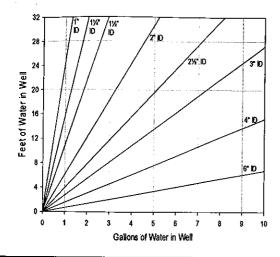
Well ID: -14MW-D02

-											
Client:	CoEdison	<u>.                                    </u>			Dı	ate:		Tin	ne: Start	am/pm	
Project No	lo: <u>0</u> 1869	9-164-24	40			· ——			Finish	am/pm	
Site Loca	ation: Stu	ıytown N	NY, NY								
Weather	Conds:				с	ollector(s)	: <u> </u>	J. Gowan/G.	Tallentire		
a. Tota	tal Well Len	ngth		ured from Top c. Length of t	Water Colu	imn			Casing Dian	neter/Material	
	b. Water Table Depth d. Calculated System Volume (see back)										
<b>-</b>	2. WELL PURGE DATA a. Purge Method: Peristaltic Pump										
b. Acceptance Criteria defined (see workplan)  - Temperature 3% -D.O. 10%  - pH ± 1.0 unit - ORP ± 10mV  - Sp. Cond. 3% - Drawdown < 0.3'											
c. Field	ld Testing E	:quinm	ent user	d: Ma	ake		Model		Serial	l Number	
J. 1 IGI	. samy t	-1	4061	u. Ivie Hor			U22		Julia		
			-	Lam			2020				
	Volume		-	Geopu	ump 2						
<u>Time</u>	Removed	Temp.	pH _	Spec. Cond.		ORP		Flow Rate		Color/Odor	
(24hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)		
		$\Box$		<del></del>	<b></b>		<u> </u>			<u> </u>	
1	H-	igg	<u> </u>	<del>-</del>	$\vdash$		<b>—</b>	<del>                                     </del>	<del> </del>	<b></b>	
<del> </del>	<del>                                     </del>	$\longmapsto$	<u> </u>	<del> </del>	<del>                                     </del>	<b> </b>	<del></del>	<del>                                     </del>	<del></del>	+	
1	+	$\longmapsto$		<del>                                     </del>	$\vdash$	-	<del></del>	<del> </del>	<del>                                     </del>	+	
<del>                                     </del>	<del>                                     </del>	<del>                                     </del>		<del>                                     </del>	<del>                                     </del>	<del>-</del>		<del>                                     </del>	<del>                                     </del>	<del>                                     </del>	
	1	$\vdash \vdash \vdash$	<del></del>	1	<del>                                     </del>			1		†	
d. Acc	ceptance cr	riteria n	ass/fail	•	Yes No	N/A	<del>\                                    </del>		<del> </del>	(continued on back)	
Ha: Ha:	is required vis required to the second vision of N//	volume turbidity ters sta	been re y been re ibilized	emoved reached							
3. SAMP	PLE COLLE	CTION	i: !	Method: Per	istaltic Pum	ip					
Sample ID	D Coi	ntainer	Туре	No. of Conta	iners	Prese	rvation	Analysi	is Reg.	Time	
14MW-D0	02 4	40 mL V		2			CL	•	60 VOC+10		
14MW-D0	02	1L Gla	ass	1			one	8270	0 SVOC+20		
14MW-D0	02	1L Gla	ass	1		No	one	8270	PAHs SIM		
14MW-D0	02 _50	00 mL P	Plastic	1		HN	VO3	То	tal Metals		
14MW-D0	02 50	00 mL P		1			VO3	Disso	olved Metals		
14MW-D0		00 mL P		1			ОН		0012 CN		
14MW-D0	02 50	00 mL P	lastic	1		Na	ЮН	90 <u>12</u> /	Amenable CN		
Comment	is <u>Co</u>	uld	re	st ope	1 WE	ell,	60/ts	are	round	led	
Signature	Pi	750	M	vt				Date	08/2	2/08	
~.g.,u.u.a							<del></del>	<del></del>	<del></del>	<del></del>	

Well	ID:
* * • • • • • • • • • • • • • • • • • •	10.

Client:	COW	ED			D:	ate: <u>9 /</u>	N 108	Tim	ie: Start	am/pm	
Project N Site Loca Weather	ntion:	PCSUNN		) <b>{</b>	c	ollector(s)	: <u>ν</u>	IPO L	Finish	am/pm   	
1. WATE	R LEVEL	DATA:	: (meası	ured from Top	of Casing	1)					
a. Tot	al We <b>ll</b> Ler	ngth <u>¼</u>	1.52	c. Length of	Water Colu	mn <u>42-7</u>	7 <u>5</u> (a-b)	,	Casing Diam タルォ	eter/Material ア <b>ソ</b> ム	
				d. Calculated	l System V	olume (see	back) 6	·97 Ga	11		
	. PURGE D			LOW	FLOW	<u> </u>				<u> </u>	
	perature	3%	6 1.0 unit	(see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m\	/	Ľ	DU = <b>14</b> M	PQ 11: 1WDD02	15 -092908-	- Du f
c. Fiel	d Testing I	Equipm	nent used	d: Ma	ake		Model		Serial	Number	
			_		MOTTE	. ·	2020		028		
	Volume		_		WUBA		0x22	$\mathcal{D}$	089	743	
Time (24hr)	Removed (Liters)	Temp.	_ <u>Hq</u> _	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor	
									6.77		
10:20		<u> </u>							<b>7</b> - 620	STATIC	; }
0:25		<i>2</i> 3:35	7.46	1.55	5.80	-140	97.3	350	G 169	PUMP ON	
10:30		23-69	7.46	1.55	6.00	-139	121	И	8.16	CLOUDY	l
d Ac	<u>l</u> ceptance c	ritoria r	nase/fail		Yes No	N/A	l			(applianced as books	
	s required	-				N/F	`		1	(continued on back)	
	s required					Ħ					
	ve parame If no or N	ters sta	abilized			. 🗖					
3. SAMP	LE COLLE	ECTION	N: N	Method:						<u> </u>	
Sample II	002-092	ntainer 9 <i>1</i> %	Type	No. of Conta	niners 2		rvation H W	Analysis	s Req.	Time 11:05	
	Ч		NA		1		-		SUDC.	Ч	
	4		11A	A1. 4			A 1 4 10		4+131M		
	<del>V</del>		50080		<u> </u>		4N03		METHLS	<u> </u>	
Comment	ts		500 P	ay 1	<del> </del>		NaoH		CN	<b>V</b> 1	
	<u></u>			<del></del> .							

#### Purge Volume Calculation



Volume /	Linear F	t. of Pipe
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	<u>1</u> .4688	<u>5</u> .5600

(continued f	•			,,,,					·	
Time (24 hr)	Volume Removed (Liters)	Temp (°C)	рН	Speci Cond (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
0:35		23.64	7.49	1.56	5.22	-145	78.9	и		1
0:40		24:14	7 48	1.55	5.07	-145	5507	и	8.84	<u> </u>
10.45		24.10	7·U8	1.5%	4.13	-148	30.6	N	9.20	u
10:50		23.95	7.47	1.54	2-56	-149	25.8	и	9.41	и
10:55		23.70	7-119	1.54	2.59	-151	22.7	n	9.55	И
<u>#:00</u>		23.94	7.49	1.54	2.58	-150	18.2	u	9.61	И
		_								
						_				
						-				
		-								
						-				
								_		
								-	-	



Well ID: MW-36

Client: Project No	CoEdisor	ı 9-164-2	40		D	ate: 08/	20/08	Tin	ne: Start Finish	am/pm am/pm	
Site Local		ıytown l	NY, NY			Collector(s)	· 	J. Gowan/G.		ampm	
a. Tota	al Well Ler	ngth <u>I 3</u>	<u>,80</u>	red from To c. Length of d. Calculate	Water Colu	ımn <u>۵۰⊸۲</u>		.36	Casing Diam	eter/Material	
2. WELL	PURGE D	DATA	_		•						
- Temp - pH	eptance C perature Cond.	3%	.0 unit	see workplan -D.O. - ORP - Drawdow	10% <u>+</u> 10m	v					
c. Field	d Testing f	Equipm	ent used -	Но	fake oriba		Model U22		#8	Number OO	725
	Volume		_		mont oump 2		2020		46X1	<u>-4003</u> 000471	
Time	Removed	Temp	<u>рН</u> -	Spec. Cond		ORP	Turbidity	Flow Rate		Color/Odor	
(24hr)	(Liters)	(°C)	511	(μS/cm)	. <u>90</u> (mg/L)	(mV)	(NTU)	(ml/min)	(feet)	Coloi/Cdoi	
(2-7/11)	(EROID)	T (3)		(µe/em/	(mg/L)	T (,,,,,,	(1.07	[	(.00.)	T	
								<u>-</u>			
	ceptance c				Yes No		١			(continued on back)	
	s required										
	s required			eached							
Hav	ve parame										
	If no or N/	A - Exp	olain bek	ow.							
3. SAMP	LE COLLE	ECTION	4: I	Method: Pe	eristaltic Pur	np	<del></del>			<u> </u>	
Sample IE MW-36		ntainer 40 mL V		No. of Con	tainers		rvation CL		0 VOC+10	Time	
MW-36		1L Gl	ass	. 1		No	one		SVOC+20		
MW-36		1L Gl		1			one		PAHs SIM		
MW-36		00 mL I		1			103		tal Metals		
MW-36		00 mL I		1			103		olved Metals		
MW-36		00 mL F 00 mL F		<u>l</u>			OH OH		012 CN Amenable CN		
MW-36 Comment			1	sampla	d due		OH R	10011101	7	ack.	
	Blines			nce on f	y 30lone	hen s	mpleo	bo for	n alph	o hell.	
	No !	20175	On	and.		<del></del>					
	<del></del>		<u></u>	WATER OF					/	1- ~	
Signature	<u></u>	à	ll	Ment	<del>,</del>	<u>-</u>		Date	08/20	0/08	



Well ID: NW-36

Client:	Con	Ediso	n		D	ate:9-	26-20	08 Tim		100 am/pm
Project N	o:	0180	9-16	4-240					Finish	am/pm
Site Loca	tion:	STULL	rsan	+ Town			<b>.</b>			
Weather	Conds:	MARI	over	cont rain	winde	collector(s)	SKO	och		
					~ 10 m	15 mpt	<u> </u>			
			-	ared from Top	-		/		Casing Diam	eter/Material
a. Tot	ai Well L	ength/	3,99	c. Length of	Water Colu	<u> روز (</u> nmn	(a-b)			<i>y</i>
							1	-/ :	2"/	PVO
b. Wa	ter Table	Depth _	3.23	d. Calculated	System V	olume (see	back) //	1 (Single		
2. WELL	PURGE	DATA		in the same			,	Von	concic),	
a. Pur	ge Metho	od: <i>10</i>	w-A	ten		1	<u> </u>			
					•	٠,		,		
				(see workplan)	10%			•		
- rem - pH	perature		6 1.0 unit	-0.0. - ORP	+ 1070 + 10m	V				
-	Cond.	3%		- Drawdown	A 100 A 100	<i>*</i>		1		
- op. (	Jona.	37	U	Biawaowii	and the same		14 <b>4</b>			
c. Fiel	d Testing	j Equipm	ent use	d: - <mark>M</mark> a	aKe <sup>†</sup>		-Medel-	្តជា	Serial	Number
			_	Kopump	-geofe	ch, ho	ytha U	-22, lut	will do	Ие,
			_	Solinist	water	mitur		····	· · · · · · · · · · · · · · · · · · ·	
	Volume				5.0	000	<b>T</b> 1.1.1.15.	Flanc Data	Drawdawa	0-1(0-1
<u>Time</u> (24hr)	(Liters)	ed <u>Temp</u> (°C)	<u>. pH</u>	Spec. Cond. (µS/cm)	<u>DO</u> (mg/L)	<u>ORP</u> (mV)	(NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor 8/
1108	16	<u> </u>	6.42	11.83	2.80	-32	58.7	~250ml	4.61	plack Cfirst of
1113	N31		6.71	1.84	0.77	-)4	73.8	~25261/	4.70	clear
1118		23.4		1.84	0.54	-94	72.6	-250ml	4,74	clear
//23		. \$3.32		1.85	0.49	-/02	5711	2250ml	4.75	char
1/28	11,25 90			1.84	0.47	-110	49,2	rsome	4.80	clear.
	21,750			1.84	0.49	-115	39.0	~250 al.	4, 23	Clear
1138	41.9 ga	1 73.46	7,09	1.84	0,48	-/20	\$3,3	250ml	4,85	Clear
	ceptance				Yes No	N/A	١,			(continued on back)
	s require			· ·		!	4.			
	s require			reached	님 님	ᆝ				
На	ve paran				⊔ ⊔					
	it no or	N/A - Ex	piain bei	OW.						
			<del></del>		<u> </u>				<u> </u>	
3. SAMP	LE COL	LECTIO	N:	Method:	103		*		,	
0. 0										
Sample II	D . (	Containe	r Type	No. of Conta	ainers	Prese	rvation	Analysi	s Req.	Time
MW-3		ampe	2-11	PAH-	SIM					
	(up)	ambe	N-1L	SVOC						
	Hel 1	10m/1	oa yai	Tr Voc						
<i>N</i>	204									
Commen	Ship	= 1.4	DAOW	wed.						·
JUIN 11011	~ <del>(V/V)</del>	- My	ecourt	UV LEC				-	<i>i</i> .	
					_					
								_		. 6
Cignoture								Date		



Well ID: 14MW-DD03

Client:	CoEdisor	n 9-164-2	40		D	ate:8	120/08	Tir	ne: Sta	rt <u>1-</u>	700 am/m	}
Site Locat			NY, NY			,	•		FILL	sn_/_	<u>7/ら</u> am/pm	
Weather (	-		MY.	N 80°	—	collector(s)		J. Gowan/G.	Tallentin	re		1
			4019	b U		_	•	v. comune c.	Tuttonti			İ
a. Tota	al Well Lei	ngth	55.81	red from Top c. Length of d. Calculated	Water Cold	ımn <u>90.</u>		C. 19	Casing		eter/Material	
2. WELL a. Purç	PURGE D		ristaltic P	ump								
	perature	3%	s 1.0 unit	see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m\	v						
c. Field	d Testing I	Eguipm	ent used	1: M	ake		Model		9	Serial	Number	
	·				riba		U22	$M^{\circ}$	850°	30	775	
			_		ont		2020		<del>0 -</del>	15	89-0300	-
	Volume		_	Geopt	ımp 2				Bo		0610	-
<u>Time</u>	Removed	Temp.	<u>Hq</u>	Spec. Cond.	DO	ORP	Turbidity	Flow Rate			Color/Odor	1
(24hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet			<b>-</b>
1700		22,93	127	5,70	3,63	429	3418		6.3		cloudy / Sligh	H MEP
1165	0,25	24.11	7.50	14.3	1,22	-238	15.8		0.		11	1
17 0	0.60	23.89	7.52	16.3	0.78	-251	16.9		6.13	, 3	1/	1
1715	1.0	23.66	7.47	16.8	0.75	-246	29.9		6.		1/ -	1
												1
											•	]
												]
	eptance c				Yes No	N/A					(continued on back)	
	required					<b>₽</b>						
	required			eached		<b>₹</b> 3.						
	e parame											
	If no or N/	A - Exp	lain beid	)W.								
					<b>⊗</b>					-		
3. SAMPL	E COLLE	ECTION	4: N	Method: Per	istaltic Pum	пр						
Sample ID		ntainer	-	No. of Conta	iners	Preser	vation	Analysi	s Req.		Time	
14MW-DD(	)3 '	<u>40 mL \</u>	/OA	2		H	CL		) VOC+1		1720	
14MW-DD0		1L Gla		1			ne		SVOC+			
14MW-DD0		1L Gla		1		No			PAHs S			-
14MW-DDC		00 mL P		1		HN			al Metals			
IAMW-DD(		00 mL P					03-		lved Met	als		-
14MW-DD0		00 mL P		1		Nat			012 CN			•
14MW-DD0	13 50	00 mL P	lastic	1		Na	OH	9012 A	menable	CN	<u> </u>	
Comments	<u> </u>							·				
			//									•
Signature_		-//	M/n/	You				Date _	8/	20	108	
		//							′	- 1	r	



Well ID: MW-10

Client: CoEdison Project No: 01869-164-240 Site Location: Stuytown NY, NY Weather Conds: Stuytown NY, NY	Date:	J. Gowan/G.	rinish 110 Tallentire	
1. WATER LEVEL DATA: (measured from T a. Total Well Length 14.15 c. Length.c	of Water Column <u></u>		Casing Diamet <b>ヱ゜゚゚゙゚゚゚゚ ア</b> ゾ	er/Material
WELL PURGE DATA     a. Purge Method: Peristaltic Pump	eu System Volume (see a			<u></u>
b. Acceptance Criteria defined (see workpla - Temperature 3% -D.O. - pH <u>+</u> 1.0 unit - ORP - Sp. Cond. 3% - Drawdov	10% <u>+</u> 10mV			
•	Make	Model	Serial N	
	Ioriba amont	U22 2020	007 060	
	ppump 2	2020		<i>ि</i> ७ ४ ग
Time Removed Temp. pH Spec. Con-	d. <u>DO</u> ORP	Turbidity Flow Rate	Drawdown	Color/Odor
(24hr) (Liters) (°C) (µS/cm)	(mg/L) (mV)	(NTU) (ml/min)	(feet)	
1045 - 24.518.30 3.92		21.7	7.28 (	lear/slight MGP
1055 0.25 24.49 8.44 3.75	0.82 -147	817	7.34	11
1,00 0,75 24,368,64 3,76	0,72 -214	9.37	7.33	/1
1105 1.0 24.15 8.98 3.82	0,78 -221	8.93	7,35	11
	1 21, 2		1, 1,	
d. Acceptance criteria pass/fail	Yes No N/A		(0	ontinued on back)
Has required volume been removed				
Has required turbidity been reached Have parameters stabilized				
If no or N/A - Explain below.				
3. SAMPLE COLLECTION: Method: P	eristaltic Pump			_ _
Sample ID Container Type No. of Cor	ntainers Preserv	ation Analysi	s Rea.	Time
MW-10 40 mL VOA 2	HCI	· · · · · · · · · · · · · · · · · · ·	) VOC+10	1110
MW-10 1L Glass 1	Non	e 8270	SVOC+20	
MW-10 1L Glass 1	Non		PAHs SIM	
MW-10 500 mL Plastic 1	HNC		al Metals	<del></del>
MW-10 500 mL Plastic 1 MW-10 500 mL Plastic 1	HNC NaO		Ived Metals——— 012 CN	<del></del>
MW-10 500 mL Plastic 1	NaO:		menable CN	<del></del>
Comments				
Signature And And And And And And And And And And		Date	8/21/	08



Well ID: 14MW-D05

Client:	CoEdisor				[	Date: 🔿 වි	21/08	Tin	ne: Star	
Project N		9-164-2				·	•		Finish 🙋	<u>9/5</u> @m/pn
Site Loca			NY, NY							•
Weather	Conds: <u>C</u>	<u>lear</u>	~ 80	<u> </u>		Collector(s)	):	J. Gowan/G.	Tallentire	<del></del> .
				<u> </u>						
a. Tot	al Well Ler	ngth <u>3 /</u>	.55	red from Top c. Length of d. Calculated	Water Col	umn <u>26 .</u>		1.25	Casing Diam	neter/Material V C
	PURGE D		istaltic P	шпр						
	•									
				see workplan)						
	perature	3%		-D.O.	10%					
- pH		<u>+</u> 1	.0 unit	- ORP	<u>+</u> 10m	ıV İ				
- Sp. 0	Cond.	3%	,	- Drawdown	< 0.3'					
c. Fiel	d Testing I	Equipmo	ent used		ake		Model			Number
			_	Hot			U22 2020		1/8	
	Volume		-	Lan Geopi		*	2020			<u>- 0300</u>
Time	Removed	Temn	pH -	Spec. Cond.	DO	ORP	Turbidity	Flow Rate	Drawdown	Color/Odor
(24hr)	(Liters)	(°C)	<u> </u>	(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	Colorrodor
7900	0.054	24.13	7.40	3.56	3.16	1-159	21.4	(1118/118/1/	6.27	ClInone
905	0.254	24.63	7 42	3.55	0 92	-166	20.3		6.21	Clinone
0910	0.54	24.42	743	3.55	0.73	-168	21.4		6.30	Clinone
9915	i C.	24.38	7.42	3.50	0.63	-169	25 8		6.35	C//none
· · · · ·	,					<u> </u>		1		<del>                                     </del>
d. Acc	ceptance c	riteria p	ass/fail		Yes No	o N/A	4			(continued on back
	s required									
	s required			eached						
Ha	ve parame									
	If no or N/	А - Ехр	lain belo	W.						
. SAMP	LE COLLE	ECTION	l: N	/lethod: Per	istaltic Pur	тр				
Sample IE	) Co	ntainer	Type	No. of Conta	iners	Prese	rvation	Analysi	s Rea.	Time
4MW-D0		40 mL V	* *	2			CL		0 VOC+10	0920
14MW-D0		1L Gla	188	. 1		No	one		SVOC+20	1
I4MW-D0		1L Gla		1			one		PAHs SIM	
14MW-D0		00 mL P	lastic	1.			VO3	To	tal Metals	
4WW-DC	)5 5	00 mL P	lastic	<del></del>			VO3	- Disse	lved Metals	
4MW-D0		00 mL P		1			OH		012 CN	8920
4MW-D0	)5 5	00 mL P	lastic	1		Na	ОН	9012 A	menable CN	0920
_										
Comment	s									
	- 6	7	·		•				•	
Signature	$\sim$		\ //	ln/				Date	08/21	108
ngnature	$\overline{}$	<del> </del>	10					Date		



Well ID: 14MW-DD05

Client:	CoEdisor	1			Da	ate: 8/	21/08	Tin	ne: Start 9	SQ am/pm
Project N		9-164-2	40			7	<del>- 1</del>		Finish	
Site Loca			NY, NY	-		•				
	Conds:		114	~ 75°	— с	ollector(s	<b>)</b> :	J. Gowan/G.	Tallentire	
							·			
a. To b. Wa	ER LEVEL tal Well Le ater Table I	ngth <u>u</u> Depth_	7.15	ured from Top c. Length of d. Calculated	Water Colu	imn <u>41.</u>		_	Casing Diar アル	meter/Material
a. Pu	rge Method	i: Per	ristaltic P	ump						
- Төп - рН	ceptance Caperature	3%	.0 unit	(see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m\ < 0.3'	/				
c. Fie	ld Testing	Equipm	ent user	d: Ma	ıke		Model		Seria	l Number
00	ia i ootii ig	_9=,5		Hor			U22			725
				Lam		·	2020			074
	Volume		_	Geopu						2000 471
<u>Time</u>	Removed	Temp.	pH _	Spec. Cond.	DO	ORP	Turbidity	Flow Rate		
(24hr)	(Lie and	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	
<b>550</b>	-	23,60	3.99	9,34	1,32	-156	6,52		5,28	Clear lorgani
855	0.25	2394	9.29	6.17	0.77	-175	14,4		9.27	1
900	015	23.85	9.51	6.72	0.60	-190	14.3		9,28	
905	0.75		9.60	<b>6.9</b> 6	0.56	-197	13,6		5.28	
910	1.0	23,65	9.69	7.05	0.48	-203	8.54		9.28	N
	<del>                                     </del>		1				<u>'</u>			<del>                                     </del>
Ha Ha	cceptance of as required as required ave parametric or N	volume turbidit eters sta	e been re y been r abilized	emoved eached	Yes No	N// 留 □	<u>}</u>			(continued on back)
Sample I		ECTION ontainer 40 mL V	Туре	No. of Conta	staltic Pum	Prese	rvation	Analysis	-	Time
4MW-DI 4MW-DI		1L Gl		2 1			CL		SVOC+10 SVOC+20	915
4MW-DE		IL Gl		<u>1</u> 1			one one		PAHs SIM	<del></del>
4MW-DI		00 mL F		<u>1</u>			NO3		al Metals	<del></del>
4MW-DI		00 mL F		<u>_</u> 1			VO3		ai Meiais ved Metals	
4MW-DE		00 mL I		1			OH		012 CN	
AMW DE		00 ml I		1			OH		manahla CNI	1.

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
14MW-DD05MS	40 mL VOA	2	HCL_	8260 VOC+10	919
14MW-DD05MS	1L Glass	. 1	None	8270 SVOC+20	1
14MW-DD05MS	1L Glass	1	None	8270 PAHs SIM	
14MW-DD05MS	500 mL Plastic	1	HNO3	Total Metals	
14MW-DD05MS	500 mL-Plastic		HNO3	Dissolved Metals	
14MW-DD05MS	500 mL Plastic	1	NaOH	9012 CN	
14MW-DD05MS	500 mL Plastic	1	NaOH	9012 Amenable CN	
14MW-DD05MSI	40 mL VOA	2	HCL	8260 VOC+10	_
14MW-DD05MSI	1L Glass	1	None	8270 SVOC+20	
14MW-DD05MSI	1L Glass	1	None	8270 PAHs SIM	
14MW-DD05MSI	500 mL Plastic	1	HNO3	Total Metals	
14MW-DD05MSI	500 mL Plastic	<u> </u>	HNO3		
14MW-DD05MSI	500 mL Plastic	. 1	NaOH	9012 CN	T
14MW-DD05MSI	500 mL Plastic	1	NaOH	9012 Amenable CN	W

<u> </u>			
nature	John Dow	Date	8/21/08



Well ID: 17MW-\$03

Client:	CoEdison					ate: 07	120/0	Tim	ne: Start		am/pm
Project No		164-240	) II '						Finish 15	40	am/pm
Site Locat		town NY,		60.0		^_!! <u>+</u> /_\			T-114'		
vveatner (	Conds: Su	sany_	09	80	'	Collector(s)	·	J. Gowan/G.	1 allentire	<del></del>	
b. Wate 2. WELL a. Purg b. Acce - Temp - pH	er Table De PURGE DA ge Method:_ eptance Crit perature	ATA Peristal teria defin 3% +1.0 u	stic Pu	ee workplan) - <b>D</b> .O. - ORP	10% ± 10m	/olume (see			Casing Diam	eter/Ma	aterial
- Sp. C	ond.	3%		- Drawdown	< 0.3'						
c. Field	I Testing Eq	uioment :	used	Ms	ıke	-	Model		Serial	Numbe	er
Q. 1 IGIG	r rooming Eq	(dipinonit )	4604	Hor	·=		U22			725	
				Lam			2020		462		9003
	Volume		_	Geopt	ımp 2				600	200	3471
<u>Time</u>	Removed T	emp. p	<u>H</u> _	Spec. Cond.	<u>DO</u>	ORP	Turbidity	Flow Rate	Drawdown	Colo	r/Odor
(24hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)		
1525	0.0542			1.23	1.72	-124	3.28		4.60		lore
1330	0.5063	0.00 8.	<u>61</u>	1.82	1 29	1-129	3.29		9.81		one
1335		<u>9 938                                   </u>		1.82	1.24	<del></del>	3.18		9.92	01/	uore
1540	1.54 2	10-01 8-	2.7	1.81	1.38	-135	3 33	<u>-</u>	10.07		
						<del> </del>		· · · ·		ļ	
-		•	-	<del></del>							
Has Has Hav	eptance crit required vo required tu re paramete If no or N/A	olume bee irbidity be irs stabiliz	en re en re ed	moved ached	Yes N					(continue	d on back)
3. SAMPL	E COLLEC	CTION:	N	lethod: Per	istaltic Pu	mp					÷·
Sample ID	Conf	tainer Typ	e	No. of Conta	iners	Prese	rvation	Analysis	s Req.	Tin	10
17MW-S03	3 40	mL VOA		2		H	CL		0 VOC+10	154	19
17MW-S03		1L Glass		1			one		SVOC+20		
17MW-S03		1L Glass		1			one		PAHs SIM		
17MW-S03		mL Plasti		1	<u>-</u> -		103		tal Metals		
47MW-S0		mL Plasti					<del>103</del>		lved-Metals—	14-4	Art.
17MW-S03 17MW-S03		) mL Plasti ) mL Plasti		1 1			OH OH		012 CN Amenable CN	154	<u> </u>
Comments		, int. 1 iast						70121	The state of the s		
Signature_		•						Date			



Well ID: 17MW-D03

Client:	CoEdison			-	Da	ate: <u>8</u> /	20/08	Tin		52 <u>6</u> am/pm
Project No		9-164-2				1	1		Finish <u>/</u>	540 am/pm
Site Local		iytown l	NY, NY							
vveatner (	Conds:	Sun	<u> </u>	N 75°		ollector(s):		J. Gowan/G.	lallentire	
a. Tota	al Well Len	igth <u>3</u>	3.34	red from Top c. Length of	Water Colu	mn <u>23.4</u>	<del></del>			neter/Material
b. Wat	ter Table D	epth 7	1.99	d. Calculated	l System Ve	olume (see	back)	5.8Z		
	PURGE D ge Method		istaltic P	ump						
b. Acc	eptance C	riteria c	lefined (	see workplan)						
	perature	3%		-D.O.	10%					
- pH			.0 unit		<u>+</u> 10m\	/				
- Sp. C	Cond.	3%		- Drawdown	_					
•										
c. Field	d Testing E	Equipm	ent used		ake		Model			Number
			_	Hor			U22	<del> </del>		
	Valuma		-	Lam			2020			9-0300
Time	Volume Removed	Tamp	pH -	Geopt Spec. Cond.	μπρ <i>2</i> <u>DO</u>	ORP	Turbidity	Flow Rate		Color/Odor
(24hr)	(Liters)	(°C)	<u> 211</u>	(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	Coloi/Odoi
<u> </u>	(2.1010)		6.64	3.11	2.0	-139	9.39	(11.13.77111.7	11.17	clear/organic
1530	0.25	19.95	6.61	3,01	3.17	~143	4,50		11,27	11
1535	0,5		6.62	3,04	6.58	-147	3.96		11,31	
3540	1,9		6,62	3,00	6.30	-15/	3,47		11.36	11
·			-	-						
		nito al o	/5-:1		Vaa Na	NI/A				
	ceptance c s required				Yes No Ø □	N/A Ø	•			(continued on back)
	s required									
	ve parame					Ħ				
	If no or N/			ow.		_				
	. – . –		_		`					
3. SAMP	LE COLLE	ECTION	4: r	Method: Per	istaltic Pun	np	<del></del>			
Sample ID	) Co	ntainer	Type	No. of Conta	inere	Preser	vetion	Analysi	s Rea	Time
17MW-D0		40 mL V	• .	2	1111013	H	=		0 VOC+10	1545
17MW-D0		1L Gla		1		No			SVOC+20	1
17MW-D0		1L Gl		1			ne		PAHs SIM	
17MW-D0	)3 5	00 mL F	lastic	1		HN	O3	To	tal Metals	
17MW DC		00 <del>mL 1</del>		<del></del>		HN			lved Metals	
17MW-D0		00 mL F		1		Na Na			012 CN	<del></del>
_17MW-D0	)3 5	00 mL F	Plastic	1		Na	OH	9012 A	Amenable CN	<u> </u>
Comment	s									
		1					•			•
		Nal	ν						131	1
Signature		Mh	صل	~~				Date	6/2	0/08
•				· <del>· · · · · · · · · · · · · · · · · · </del>		·			7	



Well ID: 17MW-DD03

Client: Project N	CoEdison		40	_	D:	ate: <u>0</u> 8	3/20/	<u>08</u> Tin	ne: Start <u>Ì ?</u> Finish <u>/ ?</u>	
Site Loca		)-164-24	40 NY, NY						Fillish	ani/pin
	Conds: 5	iytowii i	N1, IN1	. 769	<del></del> -	ollector(s)		J. Gowan/G.	Tallentire	
VVGalilei	O01103	<b>₩</b>	<del>7 ~</del>	<u>/ / i                                 </u>	`	ollector(3)		o. Comano.	Tanonino	
a. Tota	al Well Len	gth <u>5</u>	1.2	red from Top c. Length of t	Water Colu	ımn <u>42.</u>	<u> </u>			neter/Material
2. WELL	PURGE D	ATA								
	_									
				see workplan)						
	perature	3%		-D.O.	10%					
- pH			.0 unit	- ORP	<u>+</u> 10m\	V				
- Sp. 0	Cond.	3%	)	<ul> <li>Drawdown</li> </ul>	< 0.3'					
c. Fiel	d Testing E	Equipme	ent used	i: Ma Hor	ake iba		Model U22			Number 760
			_	Lam	iont		2020		155	39-0300
	Volume			Geopu	ımp 2					6000610
<u>Time</u>	Removed	Temp.	pН	Spec. Cond.	<u>DO</u>	ORP	<u>Turbidity</u>	Flow Rate		Color/Odor
(24hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	<del> </del>
1315		19,46	7.31	1,47	3,08	436	32.5		10.13	clear/none
1320		19,44		1.45	413	-81	32		19.21	i j
1325	0,5		7.22	1.46	0.99	~108	29.9		10,75	11
330	0175	17.46	7.23	1,49	0.9)	-124	37,3		10.92	1//
1335	1,6	1942	7,24	1.55	0,83	-132	36.7		10-99	1/
						<del>                                     </del>	-			
d. Ac	ceptance c	riteria p	ass/fail		Yes No	N/A	\			(continued on back)
	s required					極			-	,
	s required t					$\Box$				
Ha	ve parame	ters sta	bilized							
	If no or N/	A - Exp	ilain bek	ow.						
3. SAMP	LE COLLE	CTION	<b>1</b> : 1	Method: Per	istaltic Pun	np				<u>_</u>
Sample II	) Co	ntainer	Type	No. of Conta	ainers	Prese	rvation	Analysi	s Rea.	Time
17MW-DD		40 mL V		2			CL		0 VOC+10	1340
17MW-DD		IL Gla		1		Ne	one	8270	SVOC+20	1
17MW-DD	_	1L Gla		1		No	one	8270	PAHs SIM	<u> </u>
17MW-DD	03 50	00 mL F	Plastic	1		H	1O3		tal Metals	
17MW-DD	03 50	00 mL F	lastic			HD	JO3	Disso	lved Metals	
17MW-DD		00 <u>m</u> L F	_	, 1		Na	OH		012 CN	
17MW-DD	03 50	00 mL F		. 1		Na	OH	9012 A	Amenable CN	<u> </u>
Comment	ts		<i>s</i> i	·					<u></u>	•
<del></del>										
					·					
Signature			Jen	LAO	~			Date	8,	120/18
									•	,



Well ID: 17MW-\$04

Client: CoEdison		Da	te: <u>8/</u>	20/08	Tin	ne: Start <u>9</u> 2	
Project No: <u>01869-164-240</u>			•	,		Finish <u>7</u>	<u>ч</u>
Site Location: Stuytown NY	<u>, NY</u>						
Weather Conds:	/ N 10°	C	ollector(s)	·	J. Gowan/G.	Tallentire	<del>_</del>
1. WATER LEVEL DATA: (r a. Total Well Length (8.5	neasured from Top % c. Length of V	of Casing) Water Colur	) nn 9, 0	6 (a-b)		Casing Diam	eter/Material
b. Water Table Depth 9					.48	211	OVC_
2. WELL PURGE DATA a. Purge Method: Perist							
b. Acceptance Criteria def	fined (see workplan)						
- Temperature 3%	-D.O.	10%					
<b>,</b>	unit - ORP	± 10mV	,				
- Sp. Cond. 3%	- Drawdown	< 0.3'					
op. cond.	• •	0.0					
c. Field Testing Equipmen	ıtused: `Ma	ake	/	Model		Serial	Number
	Hor			U22			775
	Lam			2020			89-0300
Volume	Geopu		000	To and to the c	Class Data	و سو	2000741
Time Removed Temp.	pH Spec. Cond.	<u>DO</u>	<u>ORP</u>		Flow Rate		Color/Odor
(24hr) (Last (°C)	(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(feet)	Tolong/on h
7 7 7 7 7	7.90 4.89	1.86	60)	12.6		11.44	clear/nene
925 0.28 19.04 8	121 4.90	1.20	18_	6.04		11.81	<del>'''</del>
		1.28	26	4.18		11.98	
935 0.75 18.929		1:38	<del>- /</del>	4.62		12.05	,,,
140 1.0 19.719	38 4.45	11 20	<del>-7</del>	שמים		10.00	
d. Acceptance criteria pas	ss/fail	Yes No	N/A				(continued on back)
Has required volume b			<b>₽</b>	•			
Has required turbidity b	een reached						
Have parameters stabi							
If no or N/A - Expla	in below.						
3. SAMPLE COLLECTION:	Method: Per	istaltic Pum	p			•	· · ·
Sample ID Container T	ype No. of Conta	niners	Prese	vation	Analysi	s Req.	Time
17MW-S04 40 mL VC	)A 2		H	CL		0 VOC+10	945
17MW-S04 1L Glass	1		No	one		SVOC+20	
17MW-S04 1L Glass				one		PAHs SIM	
17MW-S04 500 mL Pla				<u>1O3</u>		tal Metals	<u> </u>
17MW-S04 500 mL Pla				103		ived Metals	
17MW-S04 500 mL Pla				OH		012 CN	945
17MW-S04 500 mL Pla	stic 1	_	Na	OH	9012 A	Amenable CN	945
Comments V	Il recharge	s ver	4 5/0	me[1			
		·-					
Signature /	Door				Date	8/20,	108
/						• •	



Well ID: 17MW-D04

Client: CoEdison Project No: 01869-164-240	Date: 08/2	20/08	Time: Start 10	
Site Location: Stuytown NY, NY Weather Conds: Synny 80	Collector(s):	. J. Gowa	n/G. Tallentire	
1. WATER LEVEL DATA: (measured from To a. Total Well Length 34.29 c. Length of b. Water Table Depth 9.80 d. Calculate 2. WELL PURGE DATA a. Purge Method: Peristaltic Pump	op of Casing) f Water Column_ ટપ્ર	19 (a-b)	Casing Diam	
b. Acceptance Criteria defined (see workplater of the second of the seco	10% <u>+</u> 10mV			
	<b>//ake</b> oriba	Model U22	1185	
	mont pump 2    DO ORP (mg/L) (mV)   7.9 8 - 1(9)   1.22 - 145   0.93 - 160   0.91 - 171	2020  Turbidity Flow F (NTU) (ml/m) 6 3 2-34 1 94 1-31		- 4003 06/6 Color/Odor Cl/Mapoda Cl/Mapoda Cl/Mapoda
d. Acceptance criteria pass/fail Has required volume been removed Has required turbidity been reached Have parameters stabilized If no or N/A - Explain below.	Yes No N/A			(continued on back)
	eristaltic Pump			Time
Sample ID Container Type No. of Con 17MW-D04 40 mL VOA 2	Н	CL	alysis Req. 8260 VOC+10	Time
17MW-D04         1L Glass         1           17MW-D04         1L Glass         1           17MW-D04         500 mL Plastic         1	No No HN	one 8	8270 SVOC+20 8270 PAHs SIM Total Metals	
47MW D04         500 mL Plastie         1           17MW-D04         500 mL Plastic         1           17MW-D04         500 mL Plastic         1		OH '- HO	9012 CN 012 Amenable CN	1100



Well ID: 17MW-D04

Client: CoEdison		Time: Start 104	
Project No: 01869-164-240	<del>_</del>	Finish 165	5 <u>5</u> am/pm
Site Location: Stuytown NY, NY Weather Conds: Survey So	Collector(s): J. G	owan/G. Tallentire	
1. WATER LEVEL DATA: (measured from Top of Ca. Total Well Length 34.29 c. Length of Water b. Water Table Depth 9.80 d. Calculated Systems	r Column(a-b)	Casing Diame	eter/Material
WELL PURGE DATA     a. Purge Method: Peristaltic Pump			
- pH <u>+</u> 1.0 unit -	0% 10mV 0.3'		
c. Field Testing Equipment used: Make Horiba	Model U22	_//85	
Lamont	2020		-4003
Volume Geopump 2	6 655 T 1177 FI	30600	
<del> </del>	O ORP Turbidity Flo		Color/Odor
	g/L) (mV) (NTU) (r 981-1(96.3	nl/min) (feet)	CIIMAPOdo
	22 - 145 2-34		CIMAP Odo
	93 -160 1.94		almar ods
1055 17.97 7.73 1.50 0.		10.51	5.7.1 <b>5</b> 7.4. 000
,		10.51	<del></del>
d. Acceptance criteria pass/fail Yes	No N/A		(continued on back)
Has required volume been removed Has required turbidity been reached Have parameters stabilized  If no or N/A - Explain below.			
3. SAMPLE COLLECTION: Method: Peristaltic	···•		<del>-</del>
Sample ID Container Type No. of Containers		Analysis Req.	Time_
17MW-D04 40 mL VOA 2	HCL	8260 VOC+10	1100
17MW-D04 1L Glass 1	None	8270 SVOC+20	
17MW-D04 1L Glass 1	None	8270 PAHs SIM	<del></del>
17MW-D04 500 mL Plastic 1	HNO3	Total Metals	<u> </u>
1 TIVEN DOI	HNO3	Dissolved Motals 9012 CN	
17MW-D04 500 mL Plastic 1	NaOH NaOH	9012 CN 9012 Amenable CN	1100

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
17MW-D04(dup)	40 mL VOA	2	HCL	8260 VOC+10	100
17MW-D04(dup)	1L Glass	1	None	8270 SVOC+20	1
17MW-D04(dup)	1L Glass	1	None	8270 PAHs SIM	
17MW-D04(dup)	500 mL Plastic	1	HNO3	Total Metals	V
17MW-D04(dup)	-500 mL Plastic		HNO3	Dissolved Metals	
17MW-D04(dup)	500 mL Plastic	1	NaOH	9012 CN	1600
17MW-D04(dup)	500 mL Plastic	1	NaOH	9012 Amenable CN	<b>1</b>
Comments	Cap brok	en in we	U		
Signature A	0//			Date 08/20/	08

. V



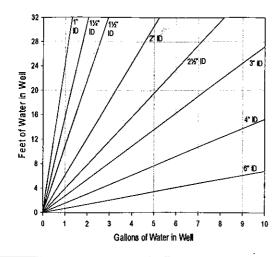
Well ID: 17MW-DD04

Client: CoEc Project No: 0 Site Location: Weather Conds:	1869-164-240 Stuytown NY, NY			ate:	140	Tim J. Gowan/G.	Finish	200 am/m 220 am/m			
1. WATER LEVEL DATA: (measured from Top of Casing) a. Total Well Length 49.75 c. Length of Water Column (a-b)  Casing Diameter/Material											
	ole Depth <u> </u>					281					
2. WELL PURGE DATA a. Purge Method: Peristaltic Pump											
b. Acceptance - Temperature - pH - Sp. Cond.	<u>+</u> 1.0 unit	-D.O.	10% <u>+</u> 10m\	V ,							
c. Field Testing Equipment used: Make Model Serial Number											
	_	Hor			U22		118				
Volu		Lam Geopu			2020		158 150	6001619			
	ved Temp. pH	Spec. Cond.	DO	ORP	Turbidity	Flow Rate		Color/Odor			
(24hr) (14hc	(°C)	(μS/cm)	<u>= -</u> (mg/L)	(mV)	(NTU)	(ml/min)	(feet)				
1200 -	20,92 7.67	0.814	6.16	43	16,70		8.34	cler-/none			
1295 0.25		1.36	2,41	48	71.80		8.40	71			
1218 0,5		1,54	1.64	35	12,20		8,41	./1			
1215 0.79		1.55	1,39	9	8,48		8.40	11			
1220 1.0	18,50 7.23	1.36	1.43		18,1		8.40	н			
				<del> </del>							
Has requi Has requi Have para	ce criteria pass/fail ired volume been re ired turbidity been r ameters stabilized or N/A - Explain bel	emoved eached	Yes No ☑ □ ☑ □	N/#	\ \			(continued on back)			
3. SAMPLE CO	DLLECTION:	Method: Per	istaltic Pun	np							
Sample ID	Container Type	No. of Conta	ainers		rvation	Analysi	s Req.	Time			
17MW-DD04	40 mL VOA	2	_		CL		) VOC+10	1225			
17MW-DD04	1L Glass	1			one		SVOC+20				
17MW-DD04	1L Glass	1			one		PAHs SIM				
17MW-DD04	500 mL Plastic	1			1O3		al Metals	<del></del> _			
17MW-DD04 17MW-DD04	500 mL Plastic 500 mL Plastic	<u> </u>			NO3 NOH		<del>ived Metals –</del> 012 CN				
17MW-DD04	500 mL Plastic	1	*		OH		menable CN				
Comments	Joo Hill I rastro										
Signature	Joh D	<del>00</del> ~				Date	8/20	/08			

Well ID:
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Client: Project N		WB	D180	N	D	ate: 9	129/01	2 т	ime: Start Finish	am/pm
Site Loca		9.7							rinish_	am/pm
Weather	_		2 p 4,	70+	(	Collector(s)	: <u> </u>	PUL	M	
1. WATE	R LEVEL	DATA:	(meası	ured from Top	of Casin	g)				
				c. Length of			) <u>/</u> (a-b)			neter/Material
b. Wat	ter Table [	Depth 🙎	5.05	d. Calculated	d System V	olume (see	back)	1.6264	11	100
	PURGE D		L	ow Fi	ow					
- Temp - pH	b. Acceptance Criteria defined (see workplan)  - Temperature 3% -D.O. 10%  - pH +1.0 unit - ORP +10mV  - Sp. Cond. 3% - Drawdown < 0.3'									
c. Field	d Testing I	Equipm	ent used	i: Ma HOR	ake 18 A		Model UX 22	Ð	Seria	l Number
	Malaura a		_	· VA	MOTT	2	2020	5		
Time (24hr)	Volume Removed (Liters)	Temp.	<u>pH</u> –	Spec. Cond. (μS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	e Drawdown (feet)	Color/Odor
70 710								(**************************************		
13:42		22 AL	648	0.965	0.00	100			6-05	STATIC
1347		20.08	0.40	<u> </u>	12.00	-8-7-	439	300	6.34	PUMPON
		20. 4							0 0 0	7 0 70.7 0.0
355		C8 82	6-47	0.857	0,00	-100	44-0	N	И	CHEAR
Has Has Hav	eptance c s required s required /e parame If no or N/	volume turbidit ters sta	been re y been re bilized	emoved eached	Yes No	N/A				(continued on back)
3. SAMPI	LE COLLE	CTION	l: N	flethod:		_				
	<u> 15-092</u>	ntainer 9 <i>06</i>	VOA	No. of Conta		Prese	vation HU	Analys	sis Req.	Time   1
ı.	<u>и</u>		ILA ILA		<del></del> .				6 VOC	<u> </u>
	<u>,                                     </u>	5	OPOlu				NacH		PAH	<u> 4</u>
Comments	и 5		n U	1			HNOZ		Metall.	n
				<del>-</del>					<del>-</del>	
Signature_		V,	pul					Date	9/21	loe

#### Purge Volume Calculation



Volume /	Linear F	t. of Pipe
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued	from front)		•		•	<u> </u>				
	Volume			4.7						
Time	Removed	Temp	pΗ	Speci; Cond.	DO	ORP	Turbidity	Flow Rate	Drawdown	Color/Odor
(24 hr)	(Liters)	(°C)		(μS/cm)	(mg/L)	(mV)	(NTU)	(ml/min)	(ft)	<u> </u>
1400		28:87	6.46	0.904	0-00	-104	41.6	И	И	и
7		1	•		A 7 M					
1405	1	28.85	6.46	0.937	2.00	-108	30-2	n	4	n
11.10		20.01	11.0	a.400	4		0 2 74	t a		n
1410	-	28.81	<u>6-46</u>	0.988	ત	-111	25.7	n	n	νι
1415	<u> </u>	20.21	1.47	0.938	и	-114	10-12	И	N	И
1410		CB. 10	<i>W</i> 4.1	0.7.30		- 119	10-12		<i>V</i> 1	<u> </u>
							-		:	
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Well ID: 17MW-S05

Oli - 1	0.54	-						···		
	CoEdisor		10			)ate:		Tir	ne: Start —	am/pm
Project N	lo: <u>01869</u>	y-164-24	137 3137						Liuisu	am/pm
Meather	ation: Stu	iytown f	YI,NY	•	<del></del>	^allector/s)	·	J. Gowan/G.	Tallantica	
* veatile!						JOHECKOI(S)		J. GUWAII/G.	1 4HCHHIC	
a. Tot	tal Well Ler	ngth		ured from Top c. Length of d. Calculated	Water Col	umn			Casing Diam	eter/Material
	PURGE D		istaltic I	oump						
- Tem - pH	perature	3% <u>+</u> 1	.0 unit	(see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m	v				
c. Fiel	ld Testing I	Equipme	ent use	d: Ma	ake		Model		Serial	Number
2,		dde		Hor			U22			
			-	Lan			2020			
	Volume			Geopi	ımp 2				,	
<u>Time</u>	Removed	Temp.	pH	Spec. Cond.	<u>DO</u>	ORP	Turbidity	Flow Rate	Drawdown	Color/Odor
(24hr)	4hr) (Liters) (°C) (μS/cm) (mg/L)						(NTU)	(ml/min)	(feet)	
	ļ <u>.</u>					ļ	<u> </u>			
		$\longmapsto$			<u> </u>					
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	<u> </u>	$\vdash \vdash \downarrow$		ļ		1				
	<u> </u>			<del>                                     </del>	ļ	-				
				1		1	-	ļ		
~ ^-	contance -	ritorio -	ann lenii	l	Voc. N	] N//	<u> </u>	L		(anathariad on tour
	ceptance c				Yes No		١			(continued on back)
	s required					: =				
	s required			eached		ᅥ				
на	ve parame			OW		ı L				
	If no or N/	- Exp	iain del	UW.						
3. SAMP	LE COLLE	ECTION	l <b>:</b>	Method: Per	istaltic Pur	mp				<del>_</del>
Sample II 17MW-S0		ntainer 40 mL V		No. of Conta 2		Prese H	rvation CL	Analysi 826	is Req. 0 VOC+10	Time
17MW-S0		1L Gla		1			one		SVOC+20	
17MW-S0		1L Gla		1			one	8270	PAHs SIM	
17MW-S0		00 mL P		1			103		tal Metals	
17MW-S0		00 mL P		1			103		olved Metals	
17MW-S0		00 mL P		1			ОН		012 CN	
17MW-S0	5 5	00 mL P	lastic	. 1		Na	OH	9012 A	Amenable CN	* •
Commen	ts <u>C</u>	DIS.	d	not o	pen	we	ell, s	20/1 <del>5</del>	round	ded
		<del>, 1</del> .	-							· · · · · · · · · · · · · · · · · · ·
Signature	· e	Da	le	Int		<del></del>		Date	08/2	2/08
•										1



Well ID: 17MW-D05

Water Conds:   Studing NY, NY   Weather Conds:   J. Gowan/G. Tallentire	Client: CoEdis				D.	ate: <u>\$</u> /	19/08	Tin	ne: Start 15		
Watter Level Data:				<u> </u>		/	/		Finish /	05 am/0m	
WATER LEVEL DATA: (measured from Top of Casing)   a. Total Well Length   2008   c. Length of Water Column   25,47 (a-b)   Casing Diameter/Material   7   PVC	_			1/00	<del>-</del> ,	Sallaatau/a\	_	L'Comme/C	Tallantina		
a. Total Well Length \$\( \frac{20.08}{\chi_{0.0}} \) c. Length of Water Column \$\( \frac{25.47}{(a-b)} \) Casing Diameter/Material \$\( \frac{10.00}{\chi_{0.0}} \) b. Water Table Depth \$\( \frac{1.61}{\chi_{0.0}} \) d. Calculated System Volume (see back)  b. Water Table Depth \$\( \frac{1.61}{\chi_{0.0}} \) d. Calculated System Volume (see back)  c. Well PURGE DATA  a. Purge Method: Peristaltic Pump  b. Acceptance Criteria defined (see workplan)  - Temperature \$\( 3\tilde{m} \) - D.O. 10%  - pH	veatilei Collus.	1/3112	114	1 85			·	J. GOWAIDG.	ranenthe		
### A Purge Method: Peristaltic Pump    D. Acceptance Criteria defined (see workplan)	a. Total Weli L	ength_ <u>3</u> s	2.08	c. Length of	Water Colu	imn <u>25,</u>	- 8	16	Casing Diam	neter/Material	
a. Purge Method: Peristaltic Pump  b. Acceptance Criteria defined (see workplan) - Temperature 3% - D.O. 10% - pH	b. Water Table	e Depth <u>4</u>	61	d. Calculated	1 System V	Olume (see	back) <u>4</u>	110			
- Temperature 3% - D.O. 10% - pH + 1.0 unit - ORP + 10mV - Sp. Cond. 3% - Drawdown < 0.3°  c. Field Testing Equipment used:			staltic P	итр						<del></del>	
C. Field Testing Equipment used:    Make	- Temperature	3%		-D.O.	10%	· <b>v</b>					
Horiba   U22   00 775     Lamont   2020   G60 74     Lamont   2020   G60 74     Compute   Prince   P	- Sp. Cond.	3%		- Drawdown	< 0.3'						
Lamont   Coopump 2	c. Field Testing	<del>-</del> , ,								4	
Volume			_								
Time   Removed   Temp   PH   Spec   Cond   DO   (RP   Turbidity   Flow Rate   Drawdown   Color/Odor   (RP   (RTU)	Volum	_	_				2020				
(24h)   (125)   (**C)   (185cm)   (mg/L)   (mV)   (NTU)   (ml/min)   (feet)		_	ρН —			ORP	Turbidity	Flow Rate	Drawdown		
	(24hr) (Litera	(°C)	Paris.							201011 0 101	
SAMPLE COLLECTION:   Method:   Peristaltic Pump   Method:   Peristaltic Pump   Method:   Metho			8.02	267				(		durklorging	
Second   1.0   1.7   1		27.21	8.10	2,37	_	-127			6.01	dack/organ	
d. Acceptance criteria pass/fail  Has required volume been removed Has required turbidity been reached Have parameters stabilized  If no or N/A - Explain below.    Continued on back    Continued on	695 0796				9.43	-142	60,1		6,20	Lighter/8ran	
d. Acceptance criteria pass/fail  Has required volume been removed  Has required turbidity been reached  Have parameters stabilized  If no or N/A - Explain below.    Container Type   No. of Containers   Preservation   S260 VOC+10   16 1 0	600 1.0 G	27.18	8,3)	2,44	0.47	-145	56.9		6.13	0,00	
Has required volume been removed Has required turbidity been reached Have parameters stabilized If no or N/A - Explain below.  SAMPLE COLLECTION: Method: Peristaltic Pump  Sample ID Container Type No. of Containers Preservation Analysis Req. Time 7MW-D05 40 mL VOA 2 HCL 8260 VOC+10 16 10 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 PAHs SIM 7MW-D05 500 mL Plastic 1 HNO3 Total Metals 7MW-D05 500 mL Plastic 1 HNO3 Dissolved Metals 7MW-D05 500 mL Plastic 1 NaOH 9012 CN 16 10 7MW-D05 500 mL Plastic 1 NaOH 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10	1605 1.250	- 27.12	8.34	2.45	0.42	-147	44.9		6.15	11	
Has required volume been removed Has required turbidity been reached Have parameters stabilized If no or N/A - Explain below.  SAMPLE COLLECTION: Method: Peristaltic Pump  Sample ID Container Type No. of Containers Preservation Analysis Req. Time 7MW-D05 40 mL VOA 2 HCL 8260 VOC+10 16 10 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 PAHs SIM 7MW-D05 500 mL Plastic 1 HNO3 Total Metals 7MW-D05 500 mL Plastic 1 HNO3 Dissolved Metals 7MW-D05 500 mL Plastic 1 NaOH 9012 CN 16 10 7MW-D05 500 mL Plastic 1 NaOH 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10											
Has required volume been removed Has required turbidity been reached Have parameters stabilized If no or N/A - Explain below.  SAMPLE COLLECTION: Method: Peristaltic Pump  Sample ID Container Type No. of Containers Preservation Analysis Req. Time 7MW-D05 40 mL VOA 2 HCL 8260 VOC+10 16 10 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 SVOC+20 7MW-D05 1L Glass 1 None 8270 PAHs SIM 7MW-D05 500 mL Plastic 1 HNO3 Total Metals 7MW-D05 500 mL Plastic 1 HNO3 Dissolved Metals 7MW-D05 500 mL Plastic 1 NaOH 9012 CN 16 10 7MW-D05 500 mL Plastic 1 NaOH 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10 7MW-D05 9012 Amenable CN 16 10	d Acceptance	criteria n	ace/fail	٠	Vec No	NI/Δ		L		(analismed as basis)	
Has required turbidity been reached Have parameters stabilized If no or N/A - Explain below.    SAMPLE COLLECTION: Method: Peristaltic Pump							•			(continued on back)	
Have parameters stabilized  If no or N/A - Explain below.    SAMPLE COLLECTION: Method: Peristaltic Pump	•					∺					
SAMPLE COLLECTION:   Method:   Peristaltic Pump						⊟					
Sample ID         Container Type         No. of Containers         Preservation         Analysis Req.         Time           7MW-D05         40 mL VOA         2         HCL         8260 VOC+10         /6 / 0           7MW-D05         1L Glass         1         None         8270 SVOC+20           7MW-D05         1L Glass         1         None         8270 PAHs SIM           7MW-D05         500 mL Plastic         1         HNO3         Total Metals           7MW-D05         500 mL Plastic         1         HNO3         Dissolycd Metals           7MW-D05         500 mL Plastic         1         NaOH         9012 CN         /6/10           300 mL Plastic         1         NaOH         9012 Amenable CN         /6/10				)W.		_					
7MW-D05         40 mL VOA         2         HCL         8260 VOC+10         16 0           7MW-D05         1L Glass         1         None         8270 SVOC+20           7MW-D05         1L Glass         1         None         8270 PAHs SIM           7MW-D05         500 mL Plastic         1         HNO3         Total Metals           7MW-D05         500 mL Plastic         1         HNO3         Dissolycd Metals           7MW-D05         500 mL Plastic         1         NaOH         9012 CN         16 10           7MW-D05         500 mL Plastic         1         NaOH         9012 Amenable CN         16 10	 3. SAMPLE COL	LECTION	: N	flethod: Per	istaltic Pum	np					
7MW-D05         40 mL VOA         2         HCL         8260 VOC+10         16 0           7MW-D05         1L Glass         1         None         8270 SVOC+20           7MW-D05         1L Glass         1         None         8270 PAHs SIM           7MW-D05         500 mL Plastic         1         HNO3         Total Metals           7MW-D05         500 mL Plastic         1         HNO3         Dissolycd Metals           7MW-D05         500 mL Plastic         1         NaOH         9012 CN         16 10           7MW-D05         500 mL Plastic         1         NaOH         9012 Amenable CN         16 10	Sample ID (	Container '	Type	No. of Conta	iners	Presei	vation	Analysi	s Rea.	Time	
7MW-D05         1L Glass         1         None         8270 SVOC+20           7MW-D05         1L Glass         1         None         8270 PAHs SIM           7MW-D05         500 mL Plastic         1         HNO3         Total Metals           7MW-D05         500 mL Plastic         1         HNO3         Dissolved Metals           7MW-D05         500 mL Plastic         1         NaOH         9012 CN         16 10           7MW-D05         500 mL Plastic         1         NaOH         9012 Amenable CN         16 10	•							-	•		
Total Metals	17MW-D05					No	ne			1	
TMW-D05   500 mL Plastic   HNO3   Dissolved Metals	17MW-D05	IL Glass 1									
7MW-D05 500 mL Plastic 1 NaOH 9012 CN 1610 7MW-D05 500 mL Plastic 1 NaOH 9012 Amenable CN 1610 Comments	17MW-D05									r	
7MW-D05 500 mL Plastic 1 NaOH 9012 Amenable CN / 6 / 0				<del></del>			_		<u> </u>	1	
comments											
	<u> </u>	300 mi, Pi	astic	1		Na	<u>OH</u>	9012 P	Amenable CN	1610	
ignature Date 8/19/08											
ignature Date 8/19/08											
	Signature		hA	om	_			Date	<u>B/19</u>	108	



Well ID: 17MW-DD05

Client:	CoEdison			* <u>.</u>		Date: <u>0</u> %	119/08	 Tin	ne: Start	545 am/pm	
Project No: 01869-164-240 Finish / 406 am/r											
Site Location: Stuytown NY, NY											
Weather C	Conds: <u>S</u>	$\sim$	7 )	SS .		Collector(s)	):	J. Gowan/G.	Tallentire		
1. WATER LEVEL DATA: (measured from Top of Casing) a. Total Well Length 50 00 c. Length of Water Column 45-76 (a-b) Casing Diameter/Material											
b. Wate	b. Water Table Depth 5.14 d. Calculated System Volume (see back) 7.47										
	2. WELL PURGE DATA a. Purge Method: Peristaltic Pump										
b. Acce - Temp - pH - Sp. Co	erature	3%	.0 unit	see workplan) -D.O. - ORP - Drawdown	10% <u>+</u> 10m	nV			f <sub>g</sub>		
c. Field	Testing E	quipme	ent used		ake riba	Model U22			Serial Number		
			_		nont		2020			9 - 0300	
	Volume		_		ump 2		2020			200474	
Time I	Removed	Temp	pH -	Spec. Cond.		ORP	Turbidity	Flow Rate		Color/Odor	
		(°C)	<u> </u>				(NTU)	(ml/min)	(feet)	1 Colui/Odol	
(24hr) 1545	(Liters)		7.12	(μS/cm) 4	(mg/L)   ろ. <i>4</i>	(mV)	123.6	(110/1100)	434	C/none	
350		26/6	760	7.85	0.40	-201	18.0		5.1	<del>  &gt;1//</del>	
1555			7.62	7.95	0.38	-204	17.3		3.1	a/nore	
1600		26.67	7.62	7 93	0.42	- 197	11.2			C/none	
		27.8	7.62	8.01	0.41	1-197	12.4	<del>                                     </del>		C/none	
1605	2.0u	27.8	1.02	0.01	1	1, 114	12.7			11/sone	
d Acce	eptance cr	iteria n	ass/fail	<del>-</del>	Yes N	o N/A	<u>.                                    </u>		<del> </del>	(continued on back)	
	required v			moved	ाष ।	Ĭ	•			(continues on each)	
	required t				Hi F	i H					
	e paramet			3431134	<b>₩</b>	i H					
	If no or N/			w							
3. SAMPLE COLLECTION: Method: Peristaltic Pump											
	_		_		_	_			_		
Sample ID		ntainer	• •	No. of Conta	ainers		rvation	Analysi	•	Time	
17MW-DD0		10 mL V		2		H	CL		0 VOC+10	<u> 1610 </u>	
17MW-DD0		1L Gla		!			one		SVOC+20		
17MW-DD0		1L Gla		1			one		PAHs SIM	<del></del>	
	/W-DD05								tal Metals	$\underline{\hspace{1cm}}$	
17MW-DD0									lved-Metals	11 10	
17MW-DD0		00 mL P		<u> </u>	<del>.</del>		OH		012 CN	<u>/6/0</u>	
17MW-DD0		00 mL P					<u>ЮН</u>		Amenable CN Lhen ou	1610	
Comments			ne	re kept	Soun	ary !	alam	even h	racri oc	ot side	
	<del></del>	the h	v.W.		<del> </del>						
	-6	<del>}</del>	//						7		
Signature_		til)	1/		<del></del>			Date	08/19,	108	