June 10, 2015

Mr. Henry Willems NYSDEC DER, Remedial Bureau C 625 Broadway, 11th Floor Albany, NY 12233-7014

Re: Former Sunbelt Equipment 25 Kent Ave. Brooklyn, NY 11249 NYSBCP Site # C224207 Supplemental Investigation Work Plan

Dear Mr. Willems:

Environmental Business Consultants (EBC) has prepared the following report to document the The results of a Supplemental Subsurface Investigation performer at Former Sunbelt Equipment Site located at 25 Kent Avenue, Brooklyn, NY (**Figure 1**). The work was performed in accordance with the Supplemental Investigation Work Plan (SIWP) dated May 21, 2015, and approved by the Department.

The work included fourteen soil borings (15B1-15B14) as specified in the SIWP plus two additional borings (15B4A and 15B15) which were added to provide additional information at depth due to refusal at three of the fourteen originally proposed boring locations. Additionally, EBC investigated a utility tunnel present on the west side of the Site adjacent to Kent Avenue. As per the SIWP.

Soil Borings

On May 27, 2015 and May 28, 2015, EBC installed a total of 16 soil borings. Thirteen (13) of these borings were installed to a depth of 30 feet below grade and three borings were installed to a depth of 8-10 feet below grade due to refusal. C² Environmental installed borings on the approximate eastern portion of the property using a track-mounted GeoprobeTM model 6620DT and Soil Mechanics installed borings on the western portion of the Site using a truck-mounted hollow-stem auger rig with a two-foot long split-spoon sampler. All work was conducted under the oversight of EBC field personnel and the NYSDEC Project Manager, Mr. Henry Willems.

Two borings (15B13 and 15B14) were installed to a depth of 30 feet in the vicinity of the former iron works area. Two borings (15B11 and 15B12) were installed to a depth of 30 feet below grade surface (bgs) in the vicinity of the former varnish works area. Eight borings (15B1-3, 15B4A, 15B5-6, 15B9-10 and 15B15) were installed to a depth of 30 feet bgs in the western portion of the Site in the vicinity of the former petroleum works area. Additionally, three borings (15B4 and 15B7-8) were installed to a depth of 8-10 feet bgs in the former petroleum works area because refusal was encountered. Boring locations 15B4A and 15B15

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were added to the fourteen proposed borings in order to collect additional information at depths due to refusal at 8-10 feet at boring locations 15B4, 15B7 and 15B8. Please see **Figure 2** for soil boring locations. Soil conditions from each of these locations are described in the following:

Former Iron Works Area (15B13 and 15B14)

Historic fill material was present at these two boring locations from the surface to a depth of approximately seven to ten feet bgs. Brown silt and sandy silt was present below the fill layer. Additionally, brown clay was present in both borings approximately 15 to 17 feet bgs. Clay was predominant in boring 15B14 to the terminal portion of the boring at 30 feet bgs. Brown sand was present beneath the clay layer from 17 to 28 feet bgs in boring 15B13. A reddish/brown layer of clay was encountered at the bottom of boring 15B13 from 28 to 30 feet. Based upon observed moisture content and the portion of recovered soils that were wet or saturated, depth to groundwater was estimated at approximately 10-13 feet bgs. Soil recovered from borings 15B13 and 15B14 from the surface to the terminal depth of 30 feet below grade did not exhibit any signs of petroleum impacts.

Former Varnish Works Area (15B11 and 15B12)

Historic fill material was present from the surface to a depth of approximately five feet bgs at boring location 15B12; however, no fill material was observed in boring location 15B11. The top five feet of boring 15B11 consisted of tan sand and brown silty sand. Brown silt was present from approximately five to nine feet bgs at both locations followed by wet, black-stained sand and silt exhibiting strong petroleum odors, sheen and moderate to high PID responses. Depth to groundwater was estimated at approximately 10 feet bgs. Petroleum impacted soil (*e.g.*, stained soils with petroleum odors and PID responses) extended from nine to fifteen feet bgs at 15B11 and from nine to twenty feet below grade at 15B12. Clean brown sand, followed by tan clay and sand mixtures were present from 15 to 30 feet bgs at 15B11. Clean brown sand followed by gray clay was present at 15B12 from 20 to 30 feet bgs.

Former Petroleum Works Area (15B1-10 and 15B15)

Historic fill material was encountered at each of these locations from surface to depths ranging from three to six feet below grade. Petroleum impacted fill material was encountered at boring locations 15B7, 15B8 and 15B9. Petroleum impacted soil was observed from zero to ten feet below grade at boring locations 15B7 and 15B8. However, refusal was encountered at ten feet bgs at both of these locations, so the extent of contamination could not be determined. Petroleum impacted soil was observed from zero to 15 feet bgs at 15B9. At the remaining boring locations in the Former Petroleum Works area, petroleum impacted soil was encountered beneath the fill material layer at depths as shallow as four feet bgs. Impacted soil extended to depths ranging from 8 to 12 feet bgs at boring locations 15B1, 15B2, 15B4 and 15B4A. Petroleum impacts were observed to depths ranging from approximately five to 30 feet bgs at boring locations 15B3, 15B5, 15B6, 15B10 and 15B15. Wet wood and wood fragments with a strong petroleum odor was recovered from the six to ten foot interval in borings 15B1, 15B2, 15B4, and 15B6. Gray fine-grained sand and silt mixtures with no wood and no evidence of petroleum impacts were present in deeper soil ranging from approximately eight to 22 feet bgs at boring locations 15B1, 15B2, 15B4, and 15B6. This eight to 22 foot interval

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HONE 631.504.6000 AX 631.924.2870 consisted of petroleum impacted gray sand and silt mixtures at boring locations 15B3, 15B5, 15B10 and 15B15. A layer of black/brown peat moss and compacted plant matter was encountered in borings 15B1, 15B2, 15B3, 15B4A, 15B5, 15B6 and 15B15 at depths ranging from 17 to 24 feet bgs. Gray and brown fine-grained sand and sandy silt were present below the layer of peat and compacted organics at all of the borings from this area (except for 15B4, 15B7 and 15B8, which hit refusal at eight to ten feet bgs and 15B15 which had a layer of brown clay at 25 to 30 feet bgs). The gray/brown fine-grained material extended to the bottom of each boring at 30 feet bgs.

Depth to groundwater varied at each location in the Former Petroleum Works area and was estimated from four to ten feet below grade. Depth to groundwater measurements were taken at several boring locations in this area through sections of the hollow-stem auger, once installed to 30 feet bgs. However, most measurements did appear to be accurate. This was likely due to the variable soil layers encountered including clay layers and also because groundwater was not allowed sufficient time to attenuate to its natural level before removing the hollow stem auger sections and mobilizing to the next boring location.

Boring logs for each soil boring location are provided in **Appendix A**. Additionally, photographs of soils recovered from borings are shown in **Appendix B**.

Utility Tunnel Excavation and Inspection

The location of a utility tunnel had been documented in previous investigative reports and was known to be present on the western side of the property adjacent to Kent Avenue. On May 28, 2015, a track mounted excavator was used to expose the top of the tunnel and determine how far onto the Site the utility tunnel extends by excavating to expose the end. The top of the tunnel was exposed for visual inspection and to determine the best way to seal it at the property line. An Environmental Professional (EP) documented the observations and measurements in a bound notebook along with photographs so that the tunnel can be represented on a scaled site plan. Photographs of the exposed utility tunnel can be viewed in **Appendix C**. The following summarizes observations made during the excavation of the utility tunnel area and preliminary decisions discussed in the field by the EP, the onsite NYSDEC PM, Mr. Henry Willems, the Owners Representative, Mr. Allan Konstam and the Remedial Engineer, Mr. Ariel Czemerinski.

A twenty foot by twenty foot excavation to a depth of approximately 8 feet below grade was exposed approximately four feet to the east of the property line adjacent to Kent Avenue. The excavation of this area revealed a brick structure, copious amounts of historic fill material and several 8-12 inch diameter metal pipes. Black-stained soil with a strong petroleum odor was encountered at approximately 4 feet below grade. No in-tact structures were observed; however, it is assumed based upon field observations that the brick structure and metal pipes were what comprised the historic utility tunnel. The tunnel appeared to be approximately 15 feet wide and extended approximately 20 feet into the property.



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Water was sprayed continuously over the excavation area in order to suppress dust from becoming airborne. The utility tunnel is present in an area with known elevated levels of lead and petroleum impacts.

As discussed with the RE and DEC, this area should be addressed and remediated during the early stages of development. A sidewalk closure permit will be required to further excavate this area as it is adjacent to Kent Avenue and there is a potential for undermining. Once the tunnel is exposed, it should be sealed with mortar at the property boundary to prevent any possible transfer of liquids from off-site sources, as it is anticipated that the utility tunnel connects the Site to the western portion of the former refinery. This contingency will be addressed in the support of excavation (SOE) document.

Should you have any questions or require further information, please do not hesitate to call either of the undersigned.

Very truly yours,

Robert Bennett Project Manager

Cc: C. Sosik, EBC A. Czemerinski, AMC T. Moskovits A. Konstam C. Krieger

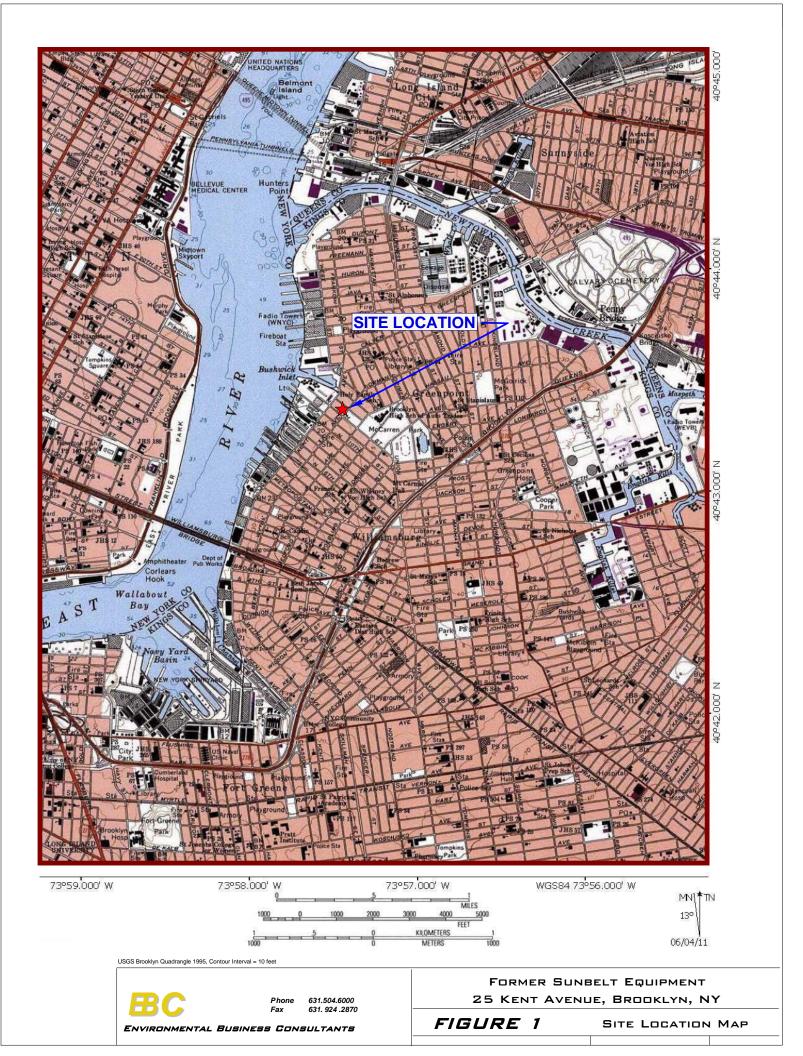


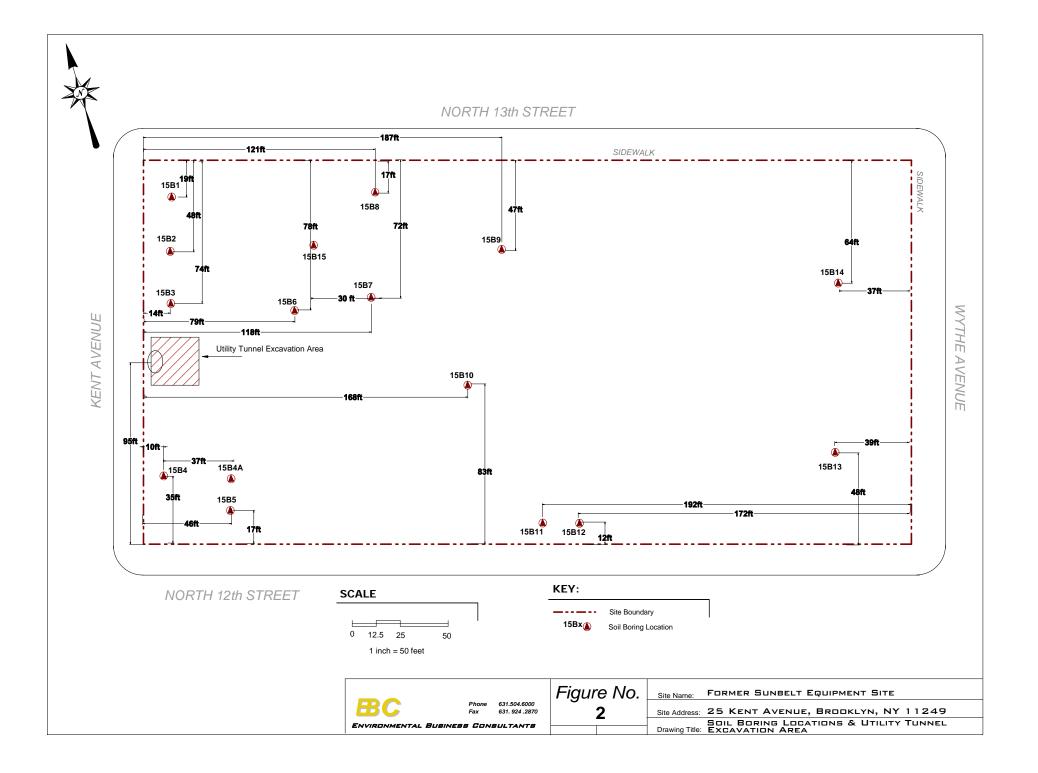
FIGURES



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Location:					the inte	ersection	Depth to Water Site Elevation Datum		
<u>O'()</u> Nie 19		t Avenue ar		13th Street			Data	DTM/	
Site Name		uinmont	Address	: Avenue, Bro		IV.	Date	DTW	Ground Elevation:
Former Su	nbeit Eq	upment	25 Kent	Avenue, bio	ΟΚΙΥΠ, Ν	A T	Groundwater depth		11' amsl
Drilling Co				Method:		40	2		
Soil Mecha	nics			Hollow stem	with 2				
				foot split spoon			8' 1"		Well Specifications:
Date Starte	ed:			Date Compl	leted:				Nie Wiell le stelle d
5/28/2015	Donth			5/28/2015 Geologist:				No Well Installed	
Completion Depth: 30 Feet				Robert Ben	nett				
1514B1 DEPTH				SAMPLES	non				
(ft below			Reco-	Blow			SOIL	DESCRIF	PTION
(NT	S)	grade)	very	per	PID				
(,	5	(in.)	6 in.	(ppm)				
	Kosososososososos								
		0-1	24		0.0		,		nd with red brick, ash, and asphalt
		1-2	-		0.0		nts (no o		
		_ 2-3 3-4	24		0.0		LL) brow hts (no o		nd with red brick, ash, and asphalt
		4-5			25.0	24"- we	t. dark o	irav staine	ed silty gravelly sand (strong
		5-6	24		35.0		um odor)		
		6-7	4		10.5		,		fragments (strong petroleum odor)
		7-8	4		NA		-	•	
		8-9	24		30.0				avelly silty sand with wood
		9-10			45.0 4.0	fragmer	<u>nts (stror</u>	ng petrole	eum odor)
		_ 10-11 _ 11-12	24		4.0			ilty sand ilty sand i	(petroleum odor) (po odor)
		12-13			0.0			ilty sand	
		13-14	24		0.0	2	st glay o	inty barra	
		14-15	24		0.0	24" - we	et gray s	ilty sand	(no odor)
		15-16	27		0.0				
		_ 16-17	24		0.0	24" - we	et gray s	ilty sand	(no odor)
		_ 17-18 18-19			0.0	24" 144	t arov o	ilty sand	(no odor)
		19-20	24		0.0	24 - W6	er gray s	iity sanu i	
		20-21	24		0.0	18" - we	et gray s	ilty sand	(no odor)
		21-22	24		0.0	6" - bla	ck/browr	n compac	ted peat/organics (no odor)
		22-23	24		0.0	24" - bla	ack/brow	vn comp <mark>a</mark>	cted peat/organics (no odor)
		23-24			0.0	04"	t ares -	and tra-	a ailt (na adar)
		_ 24-25 25-26	24		0.0	∠4° - W€	et gray s	anu, trace	e silt (no odor)
		26-27	<u> </u>		0.0	24" - we	et arav s	and, trace	e silt (no odor)
		27-28	24		0.0				
		28-29	24 0.0 12" - wet gray sand, trace silt (no odor)						
29-30 29-30 0.0 12" - brown fines silty sand (no odor)						nd (no odor)			
		_	-						
		—	-						
			1						



Location:	Northw	est corner	of the Sit	e adjacent to		Boring I		Depth to Water Site Elevation Datum		
Location.				13th Street.			Deptin	o water	One Elevation Datum	
		south of 1			πρρισπ	initiatory				
Site Name		5000110110	Address	•			Date	DTW	Ground Elevation:	
Former Su	-	uinment		Avenue, Bro	oklyn N	JY				
		aipmont	20 1011	Avenue, Brooklyn, NT			Groun	dwater	11' amsl	
Drilling Co	mpony			Method:			de	pth		
Soil Mech				Hollow stem auger with 2						
	anics				-		7'	10"	Well Specifications:	
Date Start	ed.	foot split spoon 7' 10" d: Date Completed:				Well Opeointeations.				
5/28/2015				5/28/2015	10100.				No Well Installed	
Completio				Geologist:						
30 Feet				Robert Ben	nett					
15	32	DEPTH		SAMPLES						
		(ft below	Reco-	Blow			SOIL	DESCRIF	PTION	
(NT	S)	grade)	very	per	PID					
,	,	,	(in.)	6 in.	(ppm)					
	Decension									
		0-1	24		0.0				gravelly silt with ash and concrete	
		1-2			0.0	fragme	nts (no c	odor)		
		2-3	24		0.0				silt with ash and concrete (no odor)	
		_ 3-4 4-5			12.0 45.0				ily sand (petroleum odor)	
		_ 4-5 5-6	24	-	45.0	-			silt (petroleum odor) (bottom 2" of	
		6-7			15.0		<u>y is wet)</u> trated o		silty sand with wood fragments	
		7-8	6		NA		um odoi		Sity saile with wood haghents	
		8-9	2		2.0	2" - wet	, gray st	ained silt	y sand with wood fragments	
		9-10	2		NA	(petrole	um odoi	r)	-	
		_ 10-11	24		6.0	24" - we	et, gray s	silty sand	(petroleum odor)	
		_ 11-12	- ·		10.0			ilty sand		
		12-13	24		0.0	24" - we	et gray s	ilty sand	(no odor)	
		13-14 14-15			0.0	24" 144	t arov o	ilty sand	(no odor)	
		15-16	24		0.0	24 - WG	si yiay s	iity sanu		
		16-17	0.4		0.0	24" - we	et grav s	ilty sand	(no odor)	
		17-18	24		0.0		3, 0	., <u>.</u>	× - /	
		18-19	24		0.0	24" - we	et gray s	ilty sand	(no odor)	
		19-20	<u>_</u>		0.0					
		20-21	24		0.0	24" - we	et gray s	ilty sand	(no odor)	
		_ 21-22 22-23			0.0	10"	t arou ci	Ity sand (no odor)	
		_ 22-23 23-24	24		0.0				no odor) icted peat/organics (no odor)	
		24-25	e t		0.0				idy silt) (no odor)	
		25-26	24		0.0	"g	gray i			
		26-27	24		0.0	24" - br	own/gra	y silty cla	y (no odor)	
		27-28	24		0.0					
		_ 28-29	24		0.0	24" - gr	ay sand	(no odor)		
		29-30			0.0					
		_								
		—								
		—								
		-								



					Boring							
Location:	West si	de of the S	Site adjac	ent to Kent A	Avenue.		Depth t	o Water	Site Elevation Datum			
Site Name	:		Address	:			Date	DTW	Ground Elevation:			
Former Su		uipment	25 Kent	Avenue, Bro	ooklyn, N	IY	Groundwater depth		11' amsl			
Drilling Co				Method:				F				
Soil Mecha	anics			Hollow sten		with 2						
Data Otari	1			foot split sp			14	' 4"	Well Specifications:			
Date Start 5/27/2015				Date Comp 5/27/2015	letea:				No Well Installed			
Completio				Geologist:			-		No weir installed			
30 Feet	n Depin.			Robert Ben	nett							
15E	22	DEPTH SAMPLES										
131	55	(ft below	Reco-	Blow			SOIL	DESCRIPTION				
(NT	S)	grade)	very	per	PID							
	-,	9.500,	(in.)	6 in.	(ppm)							
			,	<u> </u>								
		0-1	- 24		0.0	24"- (F	LL) brow	y sandy silt with red brick and concrete				
		1-2	24		0.0	fragme	nents (no odor) (FILL) brown gravelly sandy silt with red brick and co					
		_ 2-3 _	24		0.0							
		3-4		_	0.0		ments (no odor) (FILL) brown gravelly sandy silt with red brick and conc ments (no oder)					
		4-5	24		0.0							
		5-6	- 27		0.0	fragments (no odor) 18" - soaked wood (petroleum odor)						
		6-7		+	7.0		6"- saturated wood (petroleum odor)					
		7-8	6		NA	0 0010						
		8-9	10		8.5	10"- sa	turated w	vood (pet	roleum odor)			
		9-10	10	<u> </u>	NA							
		10-11	24		2.5	24" - w	et gray/b	rown silty	v sand (petroleum odor)			
		_ 11-12 12-13			10.8 15.0	24" or	turatad	alaak/ara	y gravelly sandy silt (petroleum odor)			
		13-14	- 24		30.0	24 - 56	aluraleur	Jiack/gra	y gravelly salidy slit (petroleuni odor)			
		14-15	0.1	-	10.0	24" - sa	aturated I	olack/gra	y gravelly sandy silt (petroleum odor)			
		15-16	24		12.0			<u>-</u>	, g,,			
		16-17	24		0.0				d (no odor) 6" -			
		_ 17-18 _			0.0	black/b	rown cor	npacted	peat/organics (no odor)			
		_ 18-19 _	24		2.0				n compacted peat (petroleum odor)			
		_ 19-20 20-21		+	3.0				mpacted peat (petroleum odor) mpacted peat (no odor)			
		21-22	- 24		0.0	24 - UI	y DIACK/L		npaciou pear (no odor)			
		22-23	0.4	1	0.0	10" - dr	v black/t	orown cor	npacted peat (no odor)			
		23-24	- 24		0.0	14" - dł	. gray si	lty sand,	no odor			
		24-25	24		0.0	24" - sa	aturated g	gray fines	s (sand/silt) (no odor)			
		_ 25-26 _		<u> </u>	0.0	0.1"		• •				
		_ 26-27 _	24		0.0	24" - gr	ay fine s	and, trac	e silt (no odor)			
		_ 27-28 28-29	+	+	0.0	18" - ar	av fine c	and trac	e silt (no odor)			
		29-30	- 24		0.0				-M grained sand (no odor)			
				1		e gru	,	<u></u>				
			_									



			15B4	Borin	g Log					
	hwest corner ent Avenue a			o the int	ersection	Depth to Water	Site Elevation Datum			
Site Name:		Address				Date DTW	Ground Elevation:			
Former Sunbelt I			Avenue, Bro	ooklyn, N	ΙY	Groundwater depth	12' amsl			
Drilling Company			Method:							
Soil Mechanics			Hollow ster	n auger	with 2					
			foot split sp			10' 5"	Well Specifications:			
Date Started:			Date Comp	leted:						
5/27/2015			5/27/2015				No Well Installed			
Completion Dept		Geologist:								
8 Feet	-	Robert Ben								
15B4	DEPTH		SAMPLES							
	(ft below	Reco-	Blow			SOIL DESCRIF	PTION			
(NTS)	grade)	very	per	PID						
		(in.)	6 in.	(ppm)						
	0-1	- 24		0.0		LL) brown sandy				
	_ 1-2 _			0.0		e and glass fragm				
	_ 2-3 _	24		0.0		LL) brown sandy				
	_ 3-4 _			0.0	concret	<u>te and glass fragments (no odor)</u> a. brown/black sandy gravelly silt (stron				
		24		0.8			dy gravelly silt (strong			
				4.0		um odor)				
	_ 6-7 _ _ 7-8 _	- 24		10.0			sandy gravelly silt			
	- /-0 -			10.0		petroleum odor) Isal at 8 feet bgs,	three attempts			
					- Reiu	isar at 8 reet bys,	inree allempis			
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				1	5B4A	Boring	Log			
_ocation:				te adjacent t 12th Street.	o the inte	ersection	Depth t	to Water	Site Elevation Datum	
Site Name			Address				Date	DTW	Ground Elevation:	
Former Su	inbelt Eq	uipment	25 Kent	Avenue, Bro	ooklyn, N	IY	Groundwater depth		12' amsl	
Drilling Co				Method:			40	pui		
Soil Mecha	anics			Hollow stem auger with 2						
				foot split spoon)' 5"	Well Specifications:	
Date Start				Date Comp	leted:			1		
5/28/2015				5/28/2015				No Well Installed		
Completio 30 Feet	n Deptn:			Geologist:	nott					
	•	DEDTU	1	Robert Ben						
15B4	A	DEPTH (ft below	Reco-	SAMPLES Blow			SOII	DESCRIF		
(NT	(2)	grade)	very	per	PID		SOIL	DEGORIE		
(141)	0)	grade	(in.)	6 in.	(ppm)					
			(11.)	0	(PPIII)					
0-1 <u>24</u> <u>0.0</u> 24"- (F						24"- (FI	LL) brov	vn silty sa	nd with red brick, ash, and asphalt	
		1-2	24		0.0	fragme	nts (no o	dor)		
		2-3	24		0.0	24"- (Fl	LL) brov	vn silty sa	nd with red brick, ash, and asphalt	
		3-4			0.0	fragmer	<u>nts (no c</u>	odor)		
		_ 4-5 5-6	24		25.0 35.0				ed silty gravelly sand (strong	
		6-7			10.5	<u>petrolet</u>	<u>um odor)</u>) Nood frac	ments (strong petroleum odor)	
		7-8	- 4		NA	Sitty	Sanay	wood nag	ments (strong petroleum odor)	
		8-9	24		30.0	24" - we	et, gray s	stained gr	avelly silty sand with wood	
		9-10	- 24		45.0	fragmer	nts (stroi	ng petrole	eum odor)	
		_ 10-11	24		4.0				(strong petroleum odor)	
		_ 11-12 _			0.0			ilty sand		
		_ 12-13 	24		0.0	24" - We	et gray s	ilty sand	(no odor)	
		13-14			0.0	24" - wa	at arav s	ilty sand	(no odor)	
		15-16	- 24		0.0	27 000	st gray 3	inty Sana i		
		16-17	- 24		0.0	24" - we	et gray s	ilty sand ((no odor)	
		17-18	24		0.0		0.1	•	· · ·	
		_ 18-19 _	- 24		0.0	24" - we	et gray s	ilty sand ((no odor)	
		19-20			0.0	4.0"	4	:14		
		_ 20-21 21-22	- 24		0.0	18" - We	et gray s	ilty sand ((no odor) ted peat/organics (no odor)	
		22-23			0.0				cted peat/organics (no odor)	
		23-24	- 24		0.0	2. 50	2010 0101			
		24-25	24		0.0	24" - we	et gray s	and, trace	e silt (no odor)	
		25-26	24		0.0				· · · ·	
		_ 26-27	24		0.0	24" - we	et gray s	and, trace	e silt (no odor)	
		27-28			0.0	10"	4 ~	and to -		
		28-29 29-30	24		0.0					
		23-30	}		0.0	12 - 01	ownine	s sity Sdl		
		_								
		_	4							
		1	1							



					15B5 E	Boring L	.oq		
Location:	of Kent	Avenue ar	nd North	te adjacent to 12th Street. uth of 15B4.	o the int Approxi	ersection		to Water	Site Elevation Datum
Site Name:			Address				Date	DTW	Ground Elevation:
Former Sur Drilling Con		uipment	25 Kent	Avenue, Bro	ooklyn, N	14	Groundwater depth		12' amsl
Soil Mecha	nics			Hollow sten foot split sp Date Comp	oon	with 2	17	" 3"	Well Specifications:
5/27/2015					ieleu.				No Well Installed
30 Feet	Deptil.			Geologist: Robert Ben	nett				
15B	5	DEPTH		SAMPLES				11	
(NTS	5)	(ft below grade)	Reco- very (in.)	Blow per 6 in.	PID (ppm)		SOIL	TION	
			(11.)	0 111.	(ppiii)				
		0-1	24		0.0 0.0	•		-	ilt with red brick fragments (no odor)
		2-3	24		0.0		,	-	ilt with red brick fragments (no odor)
		_ 4-5 _ 5-6 _ 6-7	24		20.0 30.0 30.0	0	5		(strong petroleum odor) (strong petroleum odor)
		7-8	24		35.0	24 - gið	19/010001	i Siity Sana	(strong petroleum odor)
		8-9 9-10	24		45.0 55.0				and (strong petroleum odor)
		_ 10-11 _ 11-12	24		45.0 55.0				and (strong petroleum odor)
		_ 12-13 _ 13-14	24		25.0 30.0				and (strong petroleum odor)
		_ 14-15 _ 15-16	24		30.0 35.0				and (strong petroleum odor)
		_ 16-17 _ 17-18	24		0.0	- black/	brown c	ompacted	and (strong petroleum odor) 6" peat moss (petroleum odor)
		_ 18-19 _ 19-20 _ 20-21	24		5.0 10.0 0.0			(sand/silt)	sandy silty clay (petroleum odor)
		21-22	24		0.0	0	5	· · ·	d (slight petroeluem odor)
		23-24	24		0.8		0		d (slight petroeluem odor)
		25-26	24		0.6		_		d (slight petroeluem odor)
		27-28	24		0.0			-	d (slight petroeluem odor)
	J		24		0.0				() ,



				15B	6 Bori	ng Log					
Location:		imately 79 est corner (and 78 feet	south of	f the	Depth t	o Water	Site Elevation Datum		
Site Name			Address				Date	DTW	Ground Elevation:		
Former Su		uipment		 Avenue, Bro	oklyn. N	ΙY		dwater			
Drilling Co				Method:			ł	pth	12' amsl		
Soil Mecha				Auger stem	drill ria	(truck-		201			
				mounted)	anning	(in doin	8' 4"		Well Specifications:		
Date Start	ed.			Date Completed:							
5/28/2015		5/28/2015					No Well Installed				
Completio				Geologist:							
30 Feet											
15E	36	DEPTH		SAMPLES							
101		(ft below	Reco-	Blow			SOIL DESCRIPTION				
(NT	S)	grade)	very	per	PID						
	-)	gradoj	(in.)	6 in.	(ppm)						
		l	()	U III.	(""")						
		0-1			0.0	24"- (F	LL) liaht	brown si	Ity sand with red brick		
	0.0000000000000000000000000000000000000	1-2	24		0.0			ash (no o	-		
		2-3	0.4		0.0	24"- (Fl	LL) liaht	brown si	Ity sand with red brick		
		3-4	24		0.0			ash (no o			
		4-5	2		0.0				gravel (no odor)		
		5-6	<u> </u>		0.0						
		6-7	24		18.0	24"- we	t, black/	brown sil	ty sand with 4" pocket of		
		7-8	27		25.0	wood a	t top of r	ecovery ((petroleum odor)		
		8-9	24		0.0	24" - w	et black/	brown fin	es (no odor)		
		9-10			0.0						
		_ 10-11 _	24		0.0	24" - w	et black/	brown fin	es (no odor)		
			-		0.0	0.4	- 1	96			
		_ 12-13 _ 13-14	24		0.0	24" - W	et gray s	lity sand	(no odor)		
		13-14			0.0	24" - 144	ot arov e	ilty cond	(no odor)		
		15-16	24		0.0	24 - W	el ylay s	iity sanu			
		16-17		1	0.0	20" - w	et arav s	ilty sand	(no odor) 4" -		
		17-18	24		0.0				peat (no odor)		
		18-19	24		1.0	24" - b	lack/brov	wn compa	acted peat (slight petroleum		
		19-20	24		2.0	odor)					
		20-21	24		0.0	24" - gr	ay/black	silty sand	d (no odor)		
		21-22	2 4		0.0						
		22-23	24		0.0	24" - gr	ay/black	silty sand	d (no odor)		
		23-24			0.0	o ("					
		_ 24-25	24		0.0	24" - gr	ay/black	silty sand	d (no odor)		
		25-26			0.0	0.4"	a /h ····	finest	o odov)		
		_ 26-27 27-28	24		0.0	24" - gr	ay/prowi	n fines (n	0 0007)		
		27-20	ł	-	0.0	24" - ~	av/brow	n fines (n	o odor)		
		29-30	24		0.0	24 - gi	ay/DIUWI	111162 (11			
	_			1	0.0						
			1								
			1								
			1								



				15B	7 Bori	ng Log					
Location:		imately 118 est corner		and 72 feet			Depth t	o Water	Site Elevation Datum		
Site Name			Address				Date	DTW	Ground Elevation:		
Former Su		uipment		Avenue, Bro	oklyn, N	14	Groundwater 12' amsl				
Drilling Cor	mpany:			Method:			uc	pui			
C ² Environi	mental			Geoprobe			Not De	Not Detected Well Specification			
Date Starte 5/28/2015	ed:			Date Completed: 5/28/2015					No Well Installed		
Completior	Depth:			Geologist:							
10 Feet	-			Greg Swirso	n						
15B	7	DEPTH		SAMPLES							
		(ft below	Reco-	Blow			SOIL	PTION			
(NTS	S)	grade)	very	per	PID						
			(in.)	6 in.	(ppm)						
		0	-								
							shed cor				
			_			18" - br	own san	d (petrole	eum odor)		
		to	40		609.0				/ silt with brick and wood		
						nayme	nents (petroleum odor)				
		5									
		- - -				24" - we	et staine	d black s	andy silt (petroleum odor)		
							27" - wet brown sand with rock (petroleum odor)				
		– to –	24		305.0						
		10									
			_			* - Refu	isal enco	ountered	at 10 feet bgs.		
			-								
			-								
			-								
			-								
			-								
		 	-								
			_								
		⊢									



			15	B8 Boring	g Log					
		121 feet e er of the S	east and 17 fe	eet south of	fthe	Depth to	o Water	Site Elevation Datum		
Site Name:		Addre				Date	DTW	Ground Elevation:		
Former Sunbelt Eq	luipment	25 Ke	ent Avenue, B	rooklyn, N	(Ground	dwater pth	12' amsl		
Drilling Company:			Method:	Geoprobe				Wall Crestingtions		
C ² Environmental Date Started:						etected	Well Specifications:			
5/28/2015	/2015 5/28/2015							No Well Installed		
Completion Depth:						-				
10 Feet			Greg Swi							
15B8	DEPTH	4	SAMPLE							
	(ft belo					SOIL I	DESCRIF	PTION		
(NTS)	grade)) very	/ per	PID						
		(in.)) 6 in.	(ppm)						
	0					<u> </u>				
	– to			1,150.0	29" - st	1" - crushed asphalt fragments 29" - stained black sandy silt with brick fragme (petroleum odor)				
	5									
	$\begin{bmatrix} t_0 \\ t_0 \\ t_1 \end{bmatrix} = \begin{bmatrix} t_0 $					12" - wet stained black sandy silt with brick fragments (petroleum odor)				
	10	_								
	E				* - Refi	usal enco	untered a	at 10 feet bgs.		
	-	_								
	_ to									
	F 45									
	_ 15	_								
	to	_								
	Ļ									
	20									
	Ľ									
	to	_								
	F	-								
	25									
	Ľ									
	to	_								
	-	_								
	30									
	E									
	to									
	F	_								
	35									



northwest corner of the Site. Date DTW Site Name: Address: Date DTW Former Sunbelt Equipment 25 Kent Avenue, Brooklyn, NY Groundwater depth Drilling Company: Method: Image: Company:	ite Elevation Datum Ground Elevation: 12' amsl <u>Vell Specifications:</u> No Well Installed
Site Name: Address: Former Sunbelt Equipment 25 Kent Avenue, Brooklyn, NY Date DTW Drilling Company: 25 Kent Avenue, Brooklyn, NY Groundwater depth Drilling Company: Method: Not Detected C ² Environmental Date Started: Date Completed: Not Detected 5/28/2015 5/28/2015 Forg Swirson Completion Depth: Greg Swirson SOIL DESCRIPTION 15B9 DEPTH (ft below Reco- Blow	12' amsl Well Specifications: No Well Installed
Drilling Company: Method: depth C ² Environmental Geoprobe Not Detected V Date Started: Date Completed: V 5/28/2015 5/28/2015 V Completion Depth: Geologist: V 30 Feet Greg Swirson V 15B9 DEPTH SAMPLES (ft below Reco- Blow SOIL DESCRIPTION	Vell Specifications: No Well Installed
Drilling Company: Method: C ² Environmental Geoprobe Date Started: Date Completed: 5/28/2015 5/28/2015 Completion Depth: Geologist: 30 Feet Greg Swirson 15B9 DEPTH Ketool SAMPLES (ft below Reco-	No Well Installed
Date Started: Date Completed: 5/28/2015 5/28/2015 Completion Depth: Geologist: 30 Feet Greg Swirson 15B9 DEPTH (ft below Reco- Blow SOIL DESCRIPTIC	No Well Installed
5/28/2015 5/28/2015 Completion Depth: Geologist: 30 Feet Greg Swirson 15B9 DEPTH (ft below SAMPLES (ft below Reco- Blow	
Completion Depth: Geologist: 30 Feet Greg Swirson 15B9 DEPTH (ft below Reco- Blow SOIL DESCRIPTIC	
30 Feet Greg Swirson 15B9 DEPTH (ft below Reco- Blow SOIL DESCRIPTIC)N
15B9 DEPTH SAMPLES (ft below Reco- Blow SOIL DESCRIPTIC)N
)N
(NTS) grade) very per PID	
(in.) 6 in. (ppm)	
32"- (FILL) black stained san	
brick fragments (petroleum o	dor)
36" - stained black sandy silt	(petroleum odor)
6" - brown silt (petroleum odd	pr)
38" - wet, slightly stained san	dy silt (petroleum
odor)	
to 38 5.8	
* - groundwater encountered at 10 t	feet has
15 No Recovery	001 590
20 58" - brown sand with scrap r	metal at annrox 21
feet bgs (no odor)	netal at applox. 21
25 56" - brown sandy silt (no odd	21)
25 56" - brown sandy silt (no odd	ור
to 56 2.8	



				15B1	0 Borir	ng Log				
Location:			168 feet ea er of the Si	st and 83 fe te.	et north c	of the	Depth t	o Water	Site Elevation Datum	
Site Name			Address				Date	Date DTW Ground Elevation		
Former S	unbelt Eq	uipment	25 Kent	t Avenue, Br	ooklyn, N	IY		Groundwater 12' amsl		
Drilling Co				Method:				-		
C ² Enviror	nmental			Geoprobe			Not De	Well Specifications:		
Date Star 5/28/2015			Date Completed: 5/28/2015						No Well Installed	
	on Depth: Geologist:					-				
30 Feet	•			Greg Swirs	son					
15E	15B10 DEPTH SAME				6					
		(ft belov		Blow			SOIL DESCRIPTION			
(N1	rs)	grade)	very (in.)	per 6 in.	PID (ppm)					
		0	_							
Г		F Ŭ				2" - cru	shed cor	ncrete		
		– to	30		0.0	2" - (FII	FILL) crushed asphalt (FILL) brown sandy silt (no odor)			
		5	-							
		- to			474.0		own san et staine	o odor) It (petroleum odor)		
		- 10	20		474.0	*groundw	ater encou	ntered at ap	proximately 9 feet bgs	
		Ľ				24" - w	et brown	sandy sil	t (petroleum odor)	
		to	24		124.0					
		15				20" - w	et brown	sandv sil	t (petroleum odor)	
		to	30		704.0				etroleum odor)	
		20				10" 14	ot brown	sand (no	adar)	
		_ 20				40 - W		sanu (110		
		to	48		2.8					
		25				30" - w	et brown	sand (sli	ght odor)	
		to			6.6					
		30								
		I		1						



				15B1	l1 Bori	ng Log				
Location:			92 feet we of the Sit	st and 24 fee			Depth t	o Water	Site Elevation Datum	
Site Name			Address				Date	DTW	Ground Elevation:	
Former Su	nbelt Eq	uipment	25 Kent	Avenue, Bro	ooklyn, N	IY		Groundwater 12' amsl		
Drilling Co				Method:						
C ² Environ				Geoprobe			Well Specifications:			
Date Starte 5/27/2015	ed:			Date Comp	oleted:					
Completion				5/27/2015 Geologist:				No Well Installed		
30 Feet	i Deptii.			Greg Swirs	on					
15B	11	DEPTH	1	SAMPLES			l			
		(ft belov	-	Blow			SOIL	DESCRIP	TION	
(NT	S)	grade)		per	PID		-			
			(in.)	6 in.	(ppm)					
		- 0	_							
		to			0.0	6" - bro 4" - tan	rushed concrete prown silty sand (no odor) an sand (no odor) prown silty sand (no odor) brown silt (no odor) vet stained black sand (petroleum odor)			
		5	_							
		- to	20		302.0					
		10				22" - w	et arav s	andv silt v	vith sheen (petroleum	
		to	34		315.0			d (petrole		
		E				-			approximately 10-12 feet bgs	
		_ 15	_					d (no odo	r)	
		to	40		0.0	20" - ta	n clay (n	o odor)		
		20				45" - gr	ay/tan cl	ayey sano	d (no odor)	
		to	45		0.0					
		25	_			45" - gr	ay sandy	/ clay (no	odor)	
		to	45		0.0					
		30								



						ring Lo	-			
Location:		kimately 172 ast corner (st and 12 fe e.	et north o	of the	Depth to Water		Site Elevation Datum	
Site Name	e:		Address				Date	DTW	Ground Elevation:	
Former S	unbelt Ec	luipment	25 Kent	Avenue, Brooklyn, NY			Groundwater depth		12' amsl	
Drilling Co	ompany:			Method:			depth			
C ² Enviro	nmental			Geoprobe			Not Detected		Well Specifications:	
Date Star				Date Completed:						
5/27/2015				5/27/2015					No Well Installed	
Completio 30 Feet	on Depth:			Geologist: Greg Swirson						
15E	312	DEPTH		SAMPLES	3					
		(ft below	Reco-	Blow		SOIL DESCRIPTION				
(N1	rs)	grade)	very (in.)	per 6 in.	PID (ppm)					
		0								
Г		- ^v -				1" - cru	shed cor			
		– to –	22		0.0				silt with brick fragments (no	
		5								
						20" - brown sandy silt (no odor)				
		– to –	24		102.0	4" - wet stained black silt (petroleum odor)				
		10	-					<u> </u>		
			1			44" - w	et gray c	lay with sl	heen (petroleum odor)	
		to	44		221.0					
		L							approximately 10-12 feet bgs	
		_ 15 _	-						heen (petroleum odor) ght petroleum odor)	
		to	44		50.1	22 - la	iii Clayey	sanu (siig		
		20				36" - br	own san	dy silt (no	odor)	
		to	36		0.0					
		_ 25 _	Ī					id (no odo (no odor)	r)	
		to	48		0.0	- 9'				
L		30								



				15B	13 Bo	ring Lo	g			
Location: Approximately 39 feet west and 48 feet north of the southeast corner of the Site.								o Water	Site Elevation Datum	
Site Nam			Address			Date DTW		Ground Elevation:		
	unbelt Eq	uipment		Avenue, Brooklyn, NY			Groun	Groundwater depth 12' amsl		
Drilling Co	ompany:		•	Method:		deptin				
C ² Enviro	nmental			Geoprobe		Not Detected		Well Specifications:		
Date Star				Date Completed:						
5/27/2015				5/27/2015				No Well Installed		
Completio 30 Feet	on Depth:			Geologist: Greg Swirson						
	313	DEPTH		SAMPLES						
100	515	(ft below	Reco-	Blow		SOIL DESCRIPTION			TION	
(N ⁻	TS)	grade)	very (in.)	per 6 in.	PID (ppm)	SOIL DESCRIPTION				
		0	1							
			13		0.0	1" - crushed concrete 8" - (FILL) asphalt and brick fragments (no odor) 4" - (FILL) brown/gray silt with brick fragments (no				
		5	-			odor)				
						13" - (FILL) gray silt with brick fragments (no odor)				
		— to —	25		0.0	12" - br	own silt	(no odor)		
		10								
						32" - brown sandy silt (no odor)				
		— to —	32		0.0					
		15				* - around	lwater enc	ountered at a	approximately 10-13 feet bgs	
							n clay (n			
		- to	38		0.0				ly (no odor)	
			4							
		20				52" - 00	ituratod		nd (no odor)	
		⊢ _	1			JZ - Sa	luraleu	orowit sal		
		– to –	52		0.0					
		25]							
		— — —	48		0.0			d (no odo own/gray	r) cleyey silt (no odor)	
		30			0.0					
			1							
]							
			4							



Location:		Approx	imatelv 6	4 feet so	uth and 37 fe	g Log the	Depth to Water Site Elevation I			
Location				of the S				Dopurt	o mator	
Site Name			Addre	SS:			Date	DTW	Ground Elevation:	
Former Su	un	belt Eq	uipment	25 Ke	nt Avenue, Br	rooklyn, N	(Groundwater 12' ams		12' amsl
Drilling Co	m	pany:			Method:			ue	pui	
C ² Enviror	nm	nental			Geoprobe			Not Detected Well Specification		
Date Start		d:			Date Com					
5/27/2015		D //			5/27/2015			-		No Well Installed
Completio 30 Feet	n	Deptn:			Geologist:					
15B	1	1	DEPTH	1	Greg Swir					
130	14	+	(ft below			5			DESCRIF	
(NT	5)	grade)	very						
(141)	9	/	grade)	(in.)	6 in.	(ppm)				
					0	(""")				
	-		0				0"		1	
			to	19		0.0	11" - (F		shed asph	alt (no odor) nents (no odor)
			5	_			3" - (FII	L) red b	rick fragn	nents (no odor) h brick and glass
			- to	20		0.0		nts (no o		I DICK AND GIASS
	-		_ 10 _ to	22		0.0			d (no odo silt (no od	
						0.0				
			15				-			approximately 13 feet bgs
			- to 	32		0.0	16" - brown clay (no odor) 16" - brown sand (no odor)			
							56" - br	own silty	clay (no	odor)
			- to - 25	56		0.0				
			-	_			34" - br	own san	dy clay (n	o odor)
			- to	34		0.0				
L			30							



					15B	15 Bori	ing Log			
Location: Approximately 30 feet to the west of the midpoint between boring locations 15B7 and 15B8.									o Water	Site Elevation Datum
Site Nam				Address				Date	DTW	Ground Elevation:
Former S	un	belt Eq	uipment	25 Kent	Avenue, Brooklyn, NY			Groundwater		12' amsl
Drilling Co	om	pany:		1	Method:		depth			
C ² Enviro	nm	ental			Geoprobe			Not Detected Well Specification		Well Specifications:
Date Star 5/28/2015		d:			Date Completed:			No Well Installed		
Completion		Denth [.]			5/28/2015 Geologist:					ino vveli installed
30 Feet	011	Bopin.			Greg Swirse	on				
15E	315	5	DEPTH		SAMPLES			1		
(N ⁻	TS)	(ft below grade)	Reco- very	Blow per	PID	SOIL DESCRIPTION			PTION
, ,		·	5 ,	(in.)	6 in.	(ppm)				
			0 -	-						
			- ° -				2" - cru	shed cor	ncrete	
			_ to _	15		0.0	13" - (F odor)	ILL) brov	wn sandy	silt with brick fragments (no
			5							
				_			30" - wet stained black sandy silt (petroleum odor)			
			_ to	30		832.0				
	- - - - - -		– – – to –	45		456.0				andy silt (petroleum odor) (petroleum odor)
			 - 15			400.0				
			[_	1						ndy silt (petroleum odor)
	-		_ to _	40		75.0		et black/brown compacted peat/organics um odor)		
			- 20 -	4						
			20	+			30" - wi	et staine	d black sa	and (petroleum odor)
			– – – – to –	30		15.0				
			 			13.0				
			_ 25 _				38" - br	own san	dy clay (n	o odor)
			– – – – to –	38		2.5			.,, (II	
			30							
			┝ –	-						
			┝ ─	1						
			<u> </u>							

<u>APPENDIX B</u> Soil Boring Photos



1808 MIDDLE COUNTRY ROAD Ridge, NY 11961

PHONE 631.504.6000 FAX 631.924.2870

Photo Log - Soil Borings







Photo 7 – View of black-stained soil exhibiting strong odors and PID response collected in a two- foot split-spoon sampler. Petroleum impacted soil was typical in most borings from the surface to four to twenty five feet below grade.	
Photo 8 – View of dark brown peat/compacted organics, recovered at depths ranging from 17-24 feet below grade. Peat was encountered in most borings installed. Specifically, those on the western side of the Site.	



Photo 11 – View of all soil boring intervals collected in five foot long sleeves using Geoprobe. Soil recovered was inspected for visual, olfactory and PID evidence of petroleum impacts.



<u>APPENDIX C</u> <u>UTILITY TUNNEL PHOTOS</u>



1808 MIDDLE COUNTRY ROAD RIDGE, NY 11961

PHONE 631.504.6000 FAX 631.924.2870

Photo Log - Utility Tunnel Inspection



Photo 3 – A brick structure was encountered approximately four feet below grade and extended approximately twenty feet into the property. The excavation was dub approximately eight feet below grade; however, the bottom of the brick structure was not encountered. Photo 4 – Several 8 to 12 inch diameter metal pipes were present in the . utility tunnel area.

Photo 5 – Petroleum impacted soil was encountered at depths ranging from approximately four to eight feet below grade in the utility tunnel excavation area.

