



April 17, 2015

Courtney Savidge
Langan
30 S. 17th Street, Suite 1300
Philadelphia, PA 19103

**Project: Geophysical Survey – Logan Triangle, N. 9th St. and W. Wyoming Ave.,
Philadelphia, PA**

Dear Courtney;

The following is a brief letter report detailing the results of the geophysical survey performed at the above referenced site. Site maps and/or pertinent ground penetrating radar (GPR) transects are contained in the report and Appendix A. It would be helpful to review Appendix A and the site maps when reading this report. TPI's standard practice is to indicate the results of the geophysical survey by marking all identified utility lines, tanks, and GPR anomalies etc. with chalk, paint or flags. It should be noted that this report is a means of transferring data and results of data interpretation, which was performed during the time allotted for the fieldwork.

Project Scope and Visual Site Inspection

TPI Environmental, Inc. (TPI) was contracted by Langan (client) to scan areas of concern (AOC) at the above referenced location to confirm or deny the presence of possible underground storage tanks (USTs) and other significant metallic structures. The site consists of demolished residential and commercial lots located at the above address and as indicated in Figure 1. Upon arrival to the site on March 31, TPI reviewed the site history with the client and performed a site walk to search for evidence of USTs. During the site walk the following areas of interest were noted:

- The client directed TPI to three areas of suspect USTs. Potential fill ports were identified at all three areas. (EM Scan Areas, Figure 1).

Methodology

Geophysical surveys are typically accomplished by employing the following techniques; GPR, Fisher TW6 electromagnetic metal detection (TW6 EM), a Geonics EM61-MK2 Time – Domain Electromagnetic Detector unit (EM61), radio frequency line locating (RF), and magnetics. The EM61 is a high power, high sensitivity metal detector capable of detecting both ferrous and non-ferrous metal. The TW6 EM unit sounds an audible alarm in the presence of a large mass of metal such as an UST. A description and discussion of these geophysical methods as well as TPI's standard procedures for performing geophysical surveys is found in Appendix A. In general, "blind surveys" are typically performed by initially scanning the site with a TW6 EM

unit and/or an EM61 unit and noting areas of relatively high EM response. Then locations with a high EM response are further investigated with GPR. Known utilities are typically traced with the RF unit, GPR, and the TW6 EM unit depending on the size, matrix and conductive properties of the line. EM units are typically not effective and practical in areas underlain with reinforced concrete and/or the presence of ubiquitous metallic objects.

Geophysical Survey Results

The geophysical survey at this site was accomplished with the TW6 EM, RF, and GPR units. The EM survey was performed throughout the survey area with the exception of areas within five feet of metallic objects (reinforced concrete slabs, metal fences, metal doors etc.). Known utilities were traced with RF and confirmed with GPR. The GPR survey was performed around known metallic objects and over metallic anomalies identified during the EM survey. Results of the geophysical survey were marked on the ground with paint. A map of the survey results is contained in this report. Results of the geophysical survey are as follows;

- TPI detected three (3) EM anomalies during the geophysical survey.
 - A1 – 6'x10' UST-style EM/GPR anomaly within EM Scan Area 1 (See field Notes).
 - A2 – 17'x23' two (2) UST-style EM/GPR anomalies within EM Scan Area 2 (See Field Notes). UST-style anomaly #1 is 8'x13' and UST-style anomaly #2 is 9'x16'.
 - A3 – 4'x4' plate-style EM/GPR anomaly within EM Scan Area 3 (See Field Notes).
- Reinforced concrete was detected within Scan Areas 1 and 3. While no UST-style anomalies were detected beneath the concrete at Scan Area 3, steel reinforcement eliminates the use of EM equipment and severely limits the effectiveness of GPR. As a result, TPI can never eliminate the possibility of an UST beneath any steel reinforced slab.

TPI completes non-intrusive geophysical surveys using equipment and techniques representing best available technology. TPI does not accept responsibility for survey limitations due to inherent technological limitations or unforeseen and varying site-specific conditions such as metal-reinforced concrete. In practical terms, TPI serves to reduce the risk of encountering subsurface utilities during excavation operations or greatly increase the chance of locating man made subsurface objects depending on the goal of the project. The results of this investigation should only be used as a tool and should not be considered a guarantee regarding the presence or absence of USTs or piping.

If you should require additional information or have any questions, please do not hesitate to contact me at the above phone number or email me at ffendler@tpienv.com.

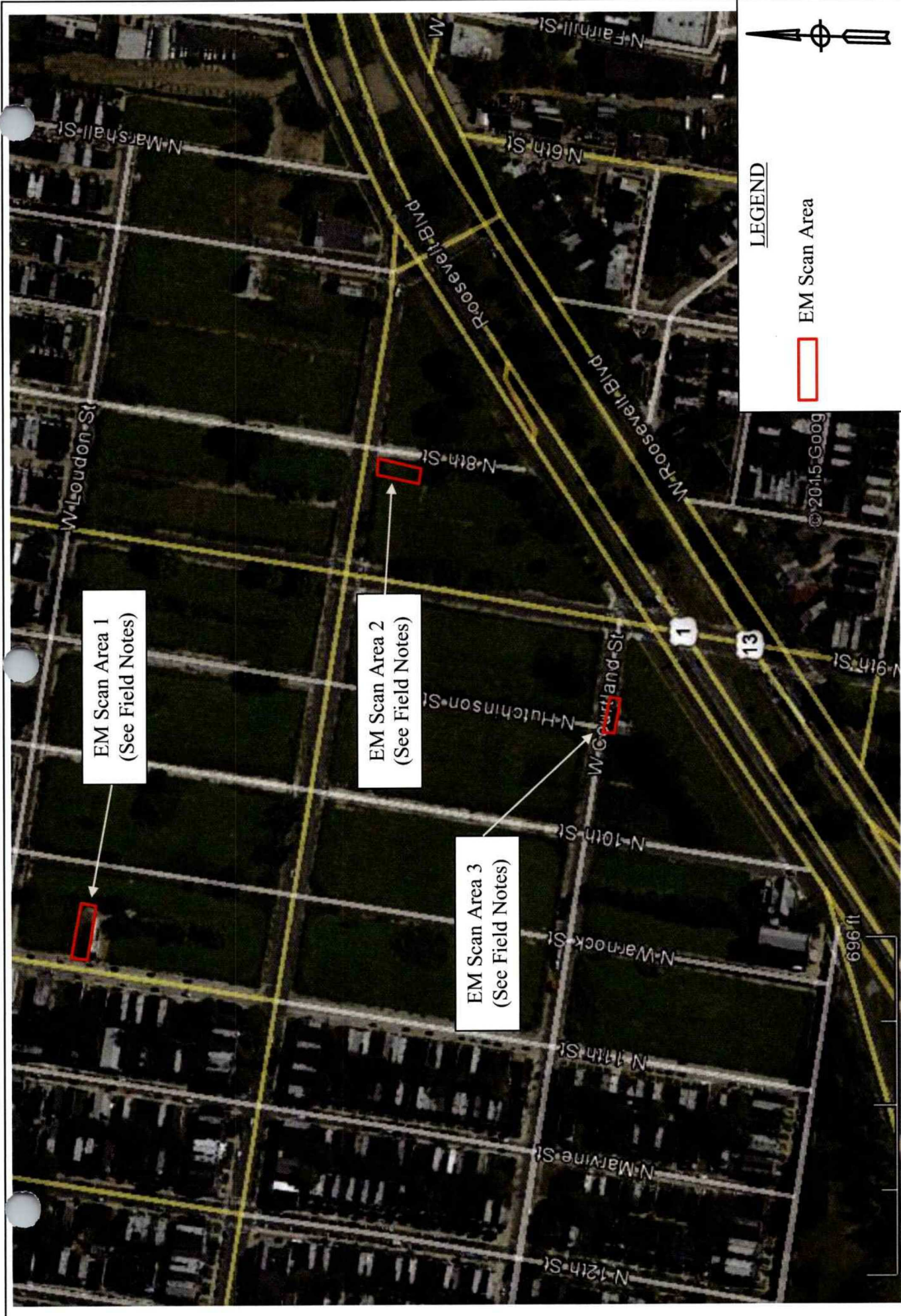
Sincerely,



Frank Fendler, M.S., P.G.
President



Michael Robbins, M.S.
Geologist



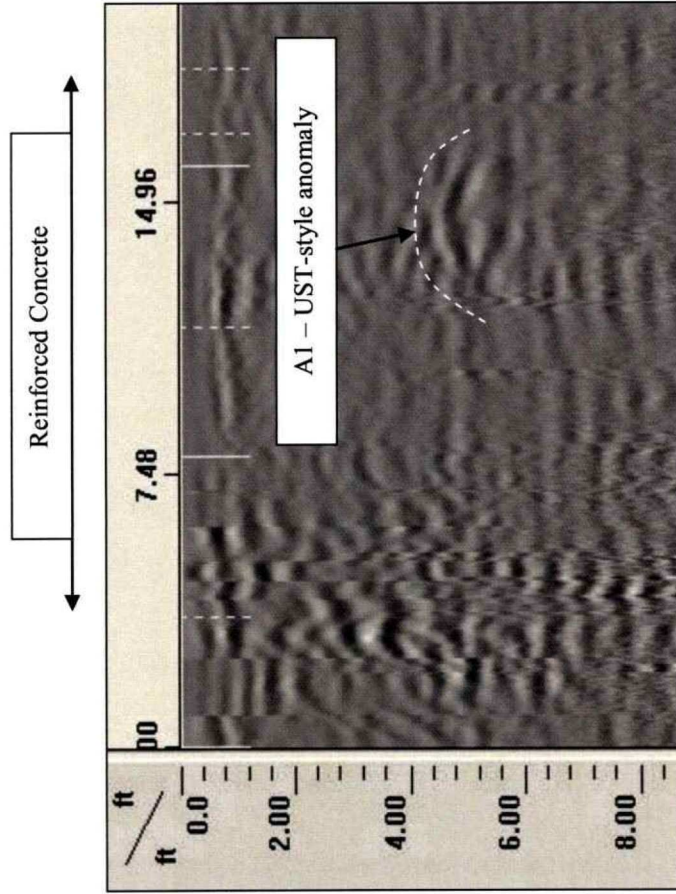
Logan Triangle, Philadelphia, PA	Figure 1	Geophysical Survey Results
Client: Langan	Date: 03/31/15	Geophysical Survey Results



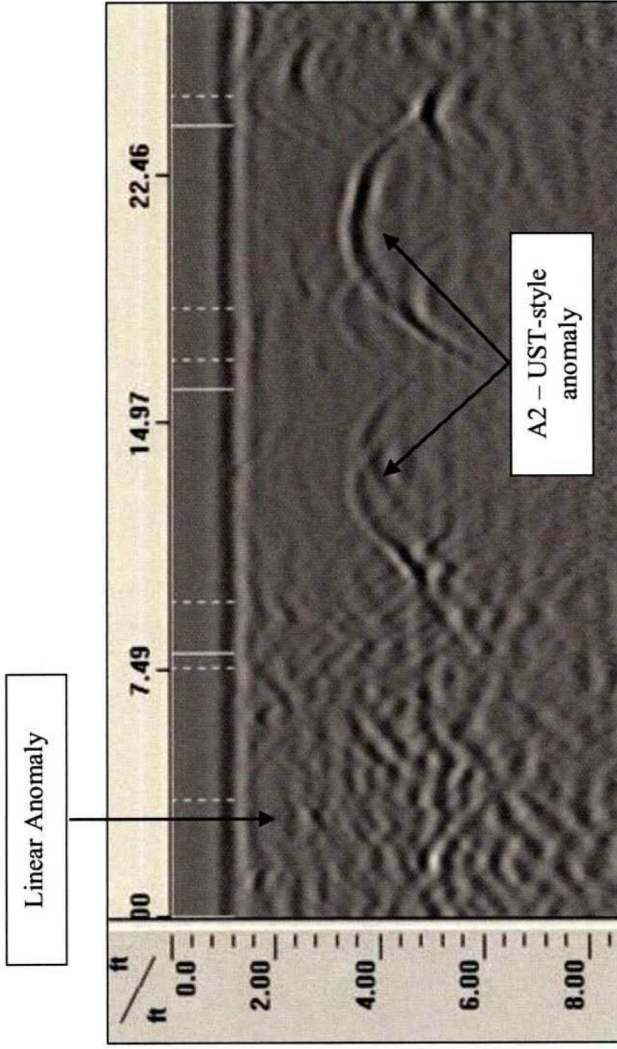
Appendix A

GPR Transects, Field Notes, and Survey Methods

GPR Transect 210
Scan Area 1

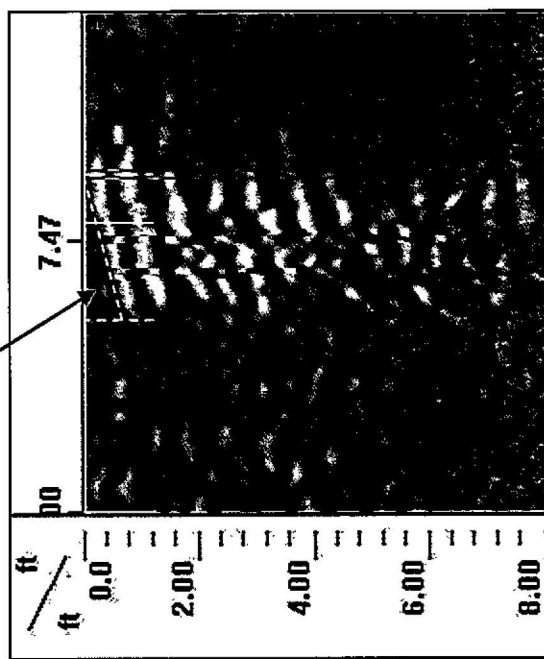


GPR Transect 214
Scan Area 2



**GPR Transect 216
Scan Area 2**

A3 - plate-style
anomaly



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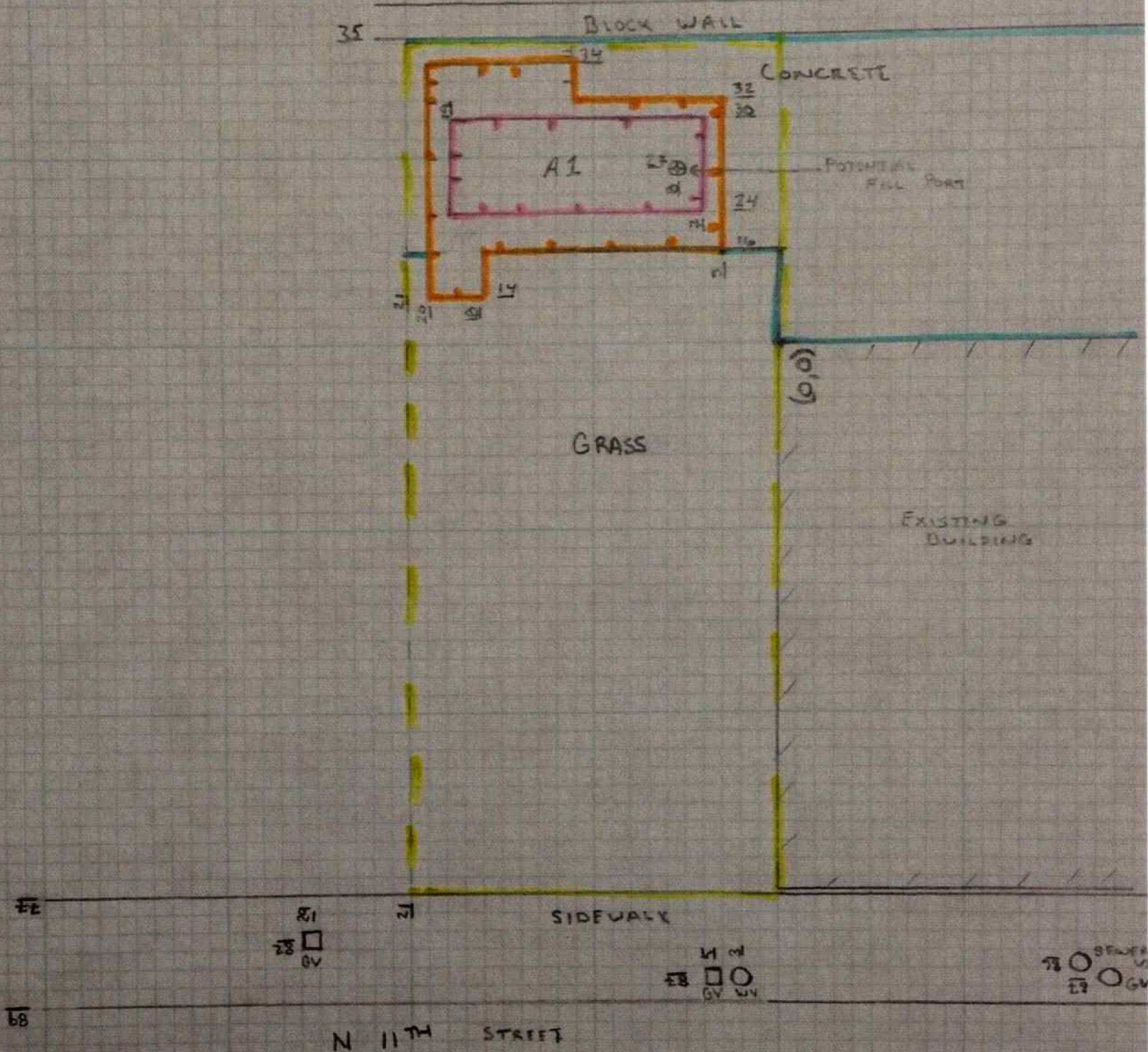
9TH ST. AND W. WYOMING AVE.
PHILADELPHIA, PA

03/31/15



Field Notes

3 ←



LEGEND



CONCRETE PAD

REINFORCED CONCRETE

EM/GPR ANOMALY

EM SCAN AREA 1

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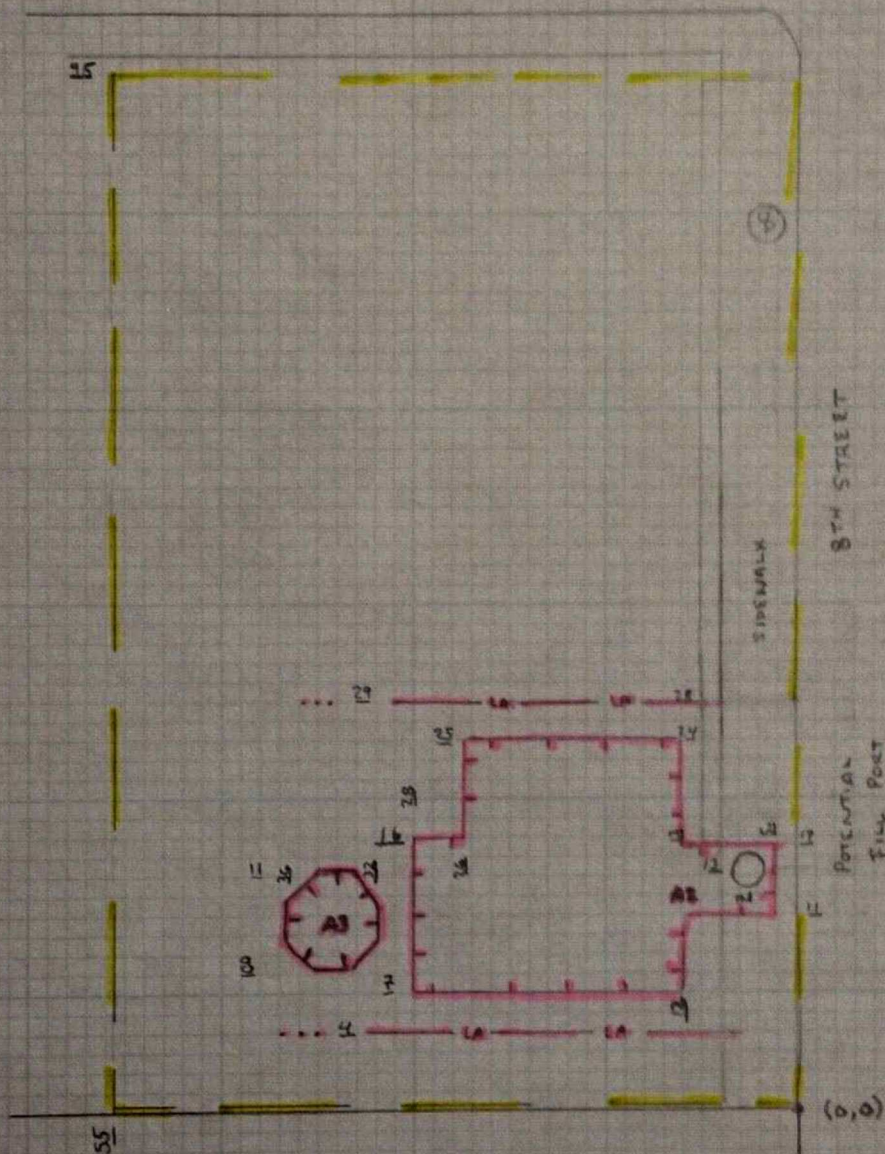
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03/31/15



Field Notes

WYOMING AVE



LEGEND



EM SCAN AREA 2



LINEAR ANOMALY



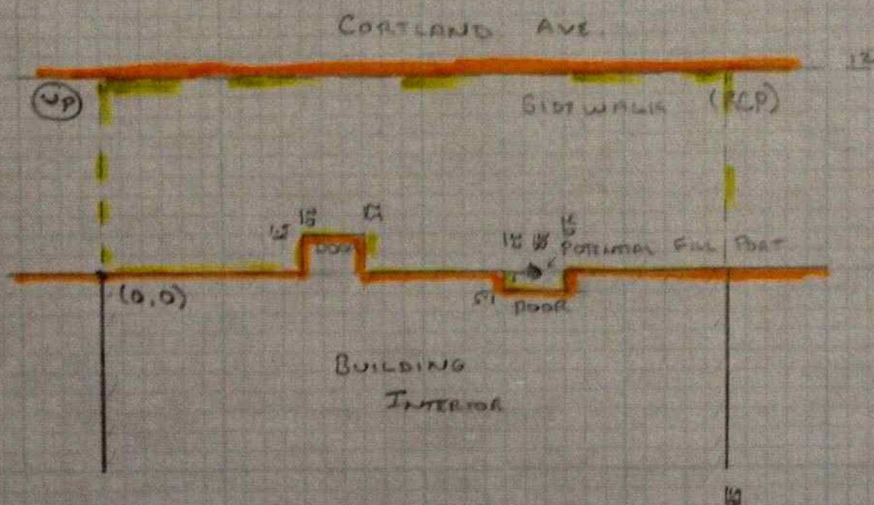
EM ANOMALY

N 9TH ST AND W. WYOMING AVE.

PHILADELPHIA, PA

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Field Notes



EM SCAN AREA 3



REINFORCED CONCRETE

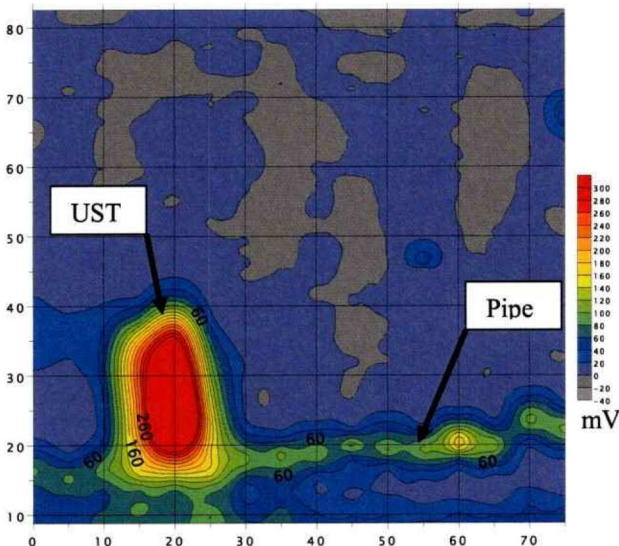
Attachment A

TPI's Geophysical Survey Equipment & Methods

Geonics EM61-MK2

The EM61 is a high resolution time-domain metal detector which is used to detect ferrous and non-ferrous metallic objects. It consists of a powerful transmitter that generates a pulsed primary magnetic field, which induces eddy currents in nearby metallic objects. The decay of these currents is measured by two receiver coils mounted on the coil assembly. The responses are recorded and displayed by an integrated computer based digital data logger with real time numerical and graphic display. Two ports on the logger allows simultaneous collection of EM and GPS data. For further processing and interpretation data can be transferred to a laptop computer in the field and a color contoured map of the EM61 response is prepared (see below).

EM61 Color Contoured Map



The EM61-MK2 detects a single 55 gallon drum at a depth of over 10-feet beneath the instrument, yet it is relatively insensitive to interference from nearby surface metal such as fences, buildings, cars, etc. By making the measurement at a relatively long time after termination of the primary pulse, the response is practically independent of the electrical conductivity of the ground.

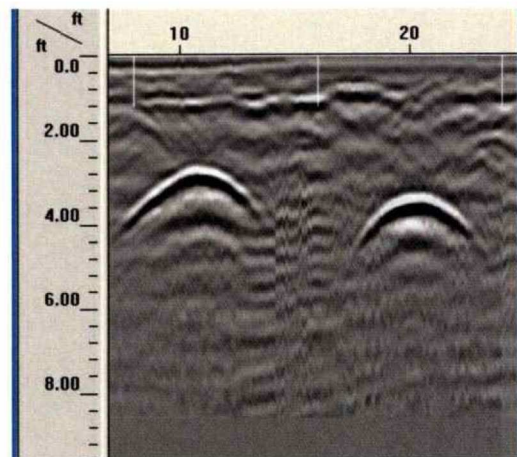
Due to its unique coil arrangements, the response curve is a single well defined positive peak

greatly facilitating quick and accurate location of the target, the depth of which can usually be estimated from the width of the response and/or from relative response from each of the two receiver coils.

GPR

This method is one of the most powerful and cost effective methods of locating man made objects and stratigraphic layers in the subsurface. It is an active method that transmits electromagnetic pulses into the ground, the radar pulses are reflected from materials or layers of differing dielectric and electrical conductive properties. The GPR computer measures the elapsed time in billionths of a second (nanoseconds) from when the pulses are sent and when they are received back at the surface that can then be converted to depth. Results of the radar scan are displayed as a continuous cross section of the subsurface on the computer screen in real time. Metallic materials such as tanks, pipes conduits, rebar etc. have vastly different dielectric properties than soils so their reflections are striking and relatively easy to identify. Pipes and tanks constructed of PVC, concrete, and terracotta also produce distinct reflections, however, these reflections are typically not as striking as metallic materials. A typical radar image of two metallic underground storage tanks is found below.

GPR Image Of Two Metallic USTs



GPR surveys are conducted with the most advanced GPR equipment currently available

Attachment A

TPI's Geophysical Survey Equipment & Methods

including a Geophysical Survey Systems (GSSI) SIR-3000 subsurface radar unit with a 400 MHz antenna. The 400 MHz antenna has a depth range of approximately 20-feet and other antennas may be employed with the system depending on specific site conditions and objectives of the survey. The GPR transect data may be saved on the internal hard drive and transferred to a PC for storage, printing, and post processing. GSSI is the world leader in the development of GPR systems and was the first company to commercialize GPR in 1970. GPR hardware and software has improved dramatically over the last several years allowing for relatively rapid and economical GPR surveys. With 3-dimensional capabilities, the latest GPR software takes data processing a step farther than the former 2-dimensional viewing method. Three-dimensional visualization helps you to see the whole picture, giving you a powerful tool to interpret complex utility layouts and identify subtle linear features that may have otherwise been missed.

GPR surveys are typically conducted by searching for GPR hyperbolas indicative of subsurface pipes or tanks signatures in the vicinity of known entities. These signatures are marked on the ground and areas progressively further from the known entity are scanned and marked. This process is continued until the GPR operator performed enough scans to determine and mark the subsurface pipe, tank or anomaly. During this process the GPR data is typically not saved due to the immense size of the data files. After this phase of the GPR survey is completed, representative GPR transects or grids are performed and saved for the report and post processing. Some of the factors that may negatively affect GPR results include clay soils, rebar in concrete, high moisture content, depth of the target, and the integrity, size, and material of the target.

TW-6 EM Unit

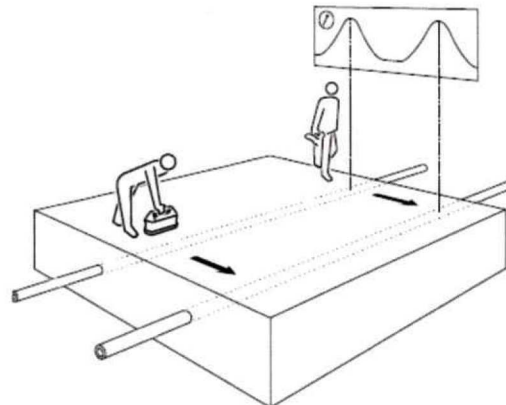
TPI routinely employs a Fisher TW-6 electromagnetic metal detector when performing GPR surveys. The TW-6 creates an electromagnetic field with a transmitting coil and measures the strength of that field with a receiving coil. As the TW-6 passes over electrically conductive materials such as metal tanks or drums the field is distorted and the instrument produces an audible alarm based on

the degree of the distortion. The TW-6 can detect conductive materials the size of drums or small tanks to depths of 10-feet. The instrument is actually a relatively poor metal detector which makes it ideal for locating large conductive materials such as metal drums, medium to large metal pipes, reinforced concrete pipes, and metal tanks. A more sensitive metal detector would produce "false positives" on small pieces of metal that are typically found in fill and throughout developed sites. If the survey area is underlain by reinforced concrete or cars and other large surficial metallic features are within 10-feet, the TW-6 will not be useful.

Line Locating

Line locating is performed with a Radiodetection RD400 PXL-2 line locator with a 433 HCTX-2 transmitter. The transmitter emits a specific radio or electromagnetic signal which is indirectly induced or directly conducted onto the metallic line. The transmitter is capable of producing frequencies of 512 Hz, 8 kHz, or 33 kHz and the receiver is configured for the specific transmitted frequency. The induced signal is coupled with the line by either using an induction clamp which surrounds an exposed line or placing the transmitter above a buried line and transmitting the signal to it. The receiver may also be used in a passive locate mode (power) to identify the presence of current carrying lines. Nonmetallic lines may also be located by snaking a sonde down accessible lines with push rods. A sonde is a small transmitter that emits a specific electromagnetic frequency which can be detected by the receiver at depths of 12 to 16-feet.

Inductive Sweep With Transmitter/Receiver



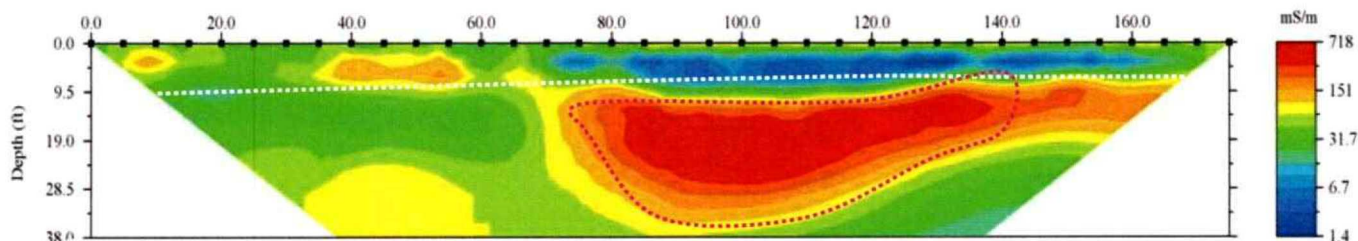
Attachment A TPI's Geophysical Survey Equipment & Methods

Resistivity

TPI conducts subsurface resistivity surveys using the AGI SuperSting R8 IP Earth Resistivity and IP Meter. The SuperSting unit measures the voltage drop of an induced electrical current across numerous electrodes as it travels through the electrically heterogeneous subsurface. Multiple survey profiles are completed in this manner based upon the specific conditions of the field area in order to assemble a complete characterization of the ground resistivity properties. The resistivity data is then processed and examined for evidence of significant subsurface features including bedrock surfaces, perched groundwater tables, cavities/sinkholes, or potential contaminant plumes.



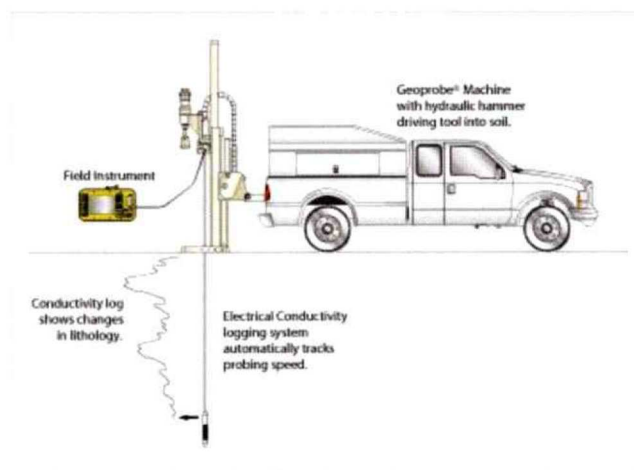
AGI SuperSting R8 IP Earth Resistivity and IP Meter assembly.



Resistivity pseudosection across a backfilled canal. Approximately 10' of high resistivity/low conductivity surficial fill (blue) over low resistivity/high conductivity canal backfill (orange-red).

Down-hole Conductivity

TPI is also able to collect down-hole soil conductivity data with an electric conductivity probe. The EC probe is driven into the subsurface by a direct push unit. A current is induced in the native soil between two contacts at opposite ends of the probe. The soil conductivity is then calculated based upon the ratio of induced current to resultant voltage across the probe. Down-hole EC profiling is particularly useful in the efficient determination of soil grain size (permeable sands vs impermeable clays), water content, and metal content.



Electrical conductivity probe

Narrative Descriptions of Test Pit Material

Test Pits Excavated within EPA Remediated Areas 1, 3 and 6 to Investigate REC-1

- L-TP-1: Brown fine-to-coarse sand, some silt and fine-to-coarse gravel, some fill material (building debris, including: brick, wood, scrap metal, boulders) to 6 feet bgs, followed by a 6-inch thick foundation slab, beneath which gray ash/cinder fill was encountered to 10 feet bgs (end of test pit);
- L-TP-6: One foot of clayey silt with trace mica and fine roots (topsoil), followed by one foot of reddish-brown fine-to-coarse sand and silt with fine-to-coarse gravel and fill material (brick, rebar, concrete and wood), followed by a 6-inch thick concrete slab, beneath which dark to medium gray ash/cinder fill with fine-to-coarse gravel and trace fill (wood and glass fragments) was encountered to 10 feet bgs (end of test pit);
- L-TP-7: One foot of orange-brown silt with trace mica and fine roots, followed by brown fine-to-coarse sand with trace mica and fill material (brick, wood, glass, scrap metal pipe, boulders) to 6 feet bgs, underlain by gray ash/cinder fill with fine-to-coarse gravel and trace fill material (glass and wood) to 10 feet bgs (end of test pit).

Fill Characterization Test Pit to Investigate Sitewide Fill Material (REC-1)

- L-TP-3: One foot of medium-brown sandy soil with roots (topsoil), followed by building debris (mostly red brick with some boulders) and some fine-to-coarse sand with fine-to-coarse gravel to 4 feet bgs, underlain by brown fine-to-coarse micaceous sand and fine-to-coarse gravel with less building debris to 8 feet bgs, followed by dark gray ash/cinder fill material to 10 feet bgs (end of test pit).

Test Pits Excavated to Investigate Known or Suspect Onsite USTs (RECs 2 and 3)

- L-TP-4: Medium-brown fine-to-coarse micaceous sand, some silt and building debris (large slabs of concrete, brick, wood, scrap metal pipe) to 4 feet bgs, followed by a 6-inch layer of charred wood material, underlain by grayish-brown, soft, moist, micaceous clayey silt and sand with trace fine-to-coarse gravel and fill material (brick, metal, wood and glass) to 8.5 feet bgs, followed by gray ash/cinder fill with fine-to-coarse gravel to 10 feet bgs (end of test pit);
- L-TP-5: One foot of reddish-brown fine-to-coarse sand and silt with fine-to-coarse gravel and cobbles, followed by building debris (boulders, brick, wood and concrete) to 3 feet bgs,

underlain by a 3-inch layer of gray ash, followed by reddish-brown fine-to-coarse sand and silt with fine-to-coarse gravel and trace fill material to 6 feet bgs, underlain by gray ash/cinder fill with fine-to-coarse gravel and trace fill material (glass and wood fragments) to 8 feet bgs, underlain by brown, soft, moist, micaceous clayey silt with some fine-to-coarse gravel to 9 feet bgs (end of test pit);

- L-TP-8: Brown fine-to-coarse sand and silt with fine-to-coarse gravel and fill (brick and wood) to 3 feet bgs with a 6-inch layer of black, charred material mixed with wood fragments at approximately 1.5 feet bgs, followed by gray-discolored greenish-brown, slightly moist, silty clay with petroleum-like odors to 9 feet bgs, underlain by marbled tan and orange clay with no apparent discoloration or odors to 10 feet bgs (end of test pit).

Test Pits Excavated to Investigate Offsite Former or Existing USTs (RECs 5 and 6)

- L-TP-2: One foot of brown, micaceous sandy soil with fine-to-coarse gravel, followed by red brick fill with some brown fine-to-coarse sandy soil with fine-to-coarse gravel and trace other fill (boulders, wood and fabric), followed by orange-brown compact clayey silt with some fine-to-coarse gravel to 7 feet bgs, underlain by orange-brown, moist clayey sand (coarser grained than overlying material with fine-to-coarse gravel to 12 feet bgs (end of test pit);
- L-TP-9: Brown fine-to-coarse micaceous sand with fine-to-coarse gravel and some building debris (boulders, brick, trace wood, trace plastic debris) to 6 feet bgs, followed by orange-brown, moist clayey sand and silt with trace fine-to-coarse gravel to 7 feet bgs, underlain by slightly moist, light gray and orange mottled clay to 10 feet bgs (end of test pit).

LOG OF TEST PIT L-TP-1

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 105ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft Not Encountered		WATER LEVEL - First Not Encountered	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+105.0	Medium-brown, f-c SAND and SILT with f-c GRAVEL, some FILL (brick, wood, scrap metal, large rocks)		0			
			0.0	1			
			0.0	2			08:05 - collect soil sample L-TP-1_1.5-2 for lead and arsenic
			0.0	3			No odors or staining
			0.0	4			
			0.0	5			08:10 - collect soil sample L-TP-1_5-5.5 for lead and arsenic
			0.0	6			
			0.0	7			No odors or staining
			0.0	8			08:15 - collect soil sample L-TP-1_8-8.5 for lead and arsenic
			0.0	9			No odors or staining
	+99.0	CONCRETE slab	0.0	6			
	+98.5	Gray ASH/CINDERS [FILL]	0.0	7			
			0.0	8			
			0.0	9			
			0.0	10			10 feet below grade - end of test pit
	+95.0	10 feet below grade - end of test pit	0.0	10			
				11			
				12			

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LOG OF TEST PIT L-TP-2

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/2/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 122ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 12 ft Not		WATER LEVEL - First Encountered	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+122.0	Medium brown, f-c SAND, some f-c GRAVEL, trace mica		0			
	+121.0	Red BRICK, some medium-brown, f-c SAND and f-c GRAVEL, trace large rocks, wood and fabric fill [fill]	0.0	1			No odors or staining
			0.0	2			
			0.0	3			No odors or staining
	+118.0	Orangish-brown, compact, CLAYEY SILT, some f-c GRAVEL	0.0	4			
			0.0	5			No odors or staining
	+115.0	Orangish-brown, moist, CLAYEY SAND (coarser grained than above material) with f-c GRAVEL	0.0	6	Excavator	CUTTINGS	
			0.0	7			No odors or staining
	+110.0	12 feet below grade - end of test pit	0.0	8			
			0.0	9			No odors or staining
			0.0	10			
			0.0	11			No odors or staining
			0.0	12			09:15 - collect soil sample L-TP-2_11.5-12 for PADEP leaded gasoline parameters
			0.0	13			12 feet below grade - end of test pit No ASH/CINDERS encountered in L-TP-2
				14			

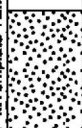
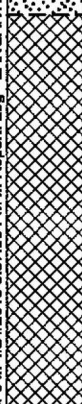
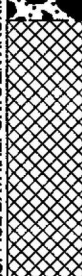
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LOG OF TEST PIT L-TP-3

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 115ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft		WATER LEVEL - First Encountered Not Encountered 	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+115.0	Medium-brown, f-c SAND, trace organics (fine roots)		0			
	+114.0	Red brick and large rocks, some f-c SAND and f-c GRAVEL	0.0	1			
			0.0	2			No odors or staining
			0.0	3			
	+111.0	Brown, f-c SAND and f-c GRAVEL, some brick and large stones, trace mica	0.0	4			10:15 - collect soil sample L-TP-3_4-4.5 for TCL/TAL parameters
			0.0	5	Excavator	CUTTINGS	
			0.0	6			No odors or staining
			0.0	7			
	+107.0	Dark gray, ASH/CINDER FILL	0.0	8			No odors or staining
			0.0	9			10:05 - collect soil sample L-TP-3_8.5-9 for TCL/TAL parameters
	+105.0	10 feet below grade - end of test pit	0.0	10			10 feet below grade - end of test pit
				11			
				12			

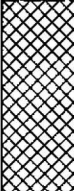
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LOG OF TEST PIT L-TP-4

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 111ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft		WATER LEVEL - First Encountered Not Encountered 	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+111.0	Medium brown, f-c SAND, some SILT, trace mica		0			
			0.0	1			No odors or staining
			0.0	2			
			0.0	3			No odors or staining
	+107.0	Black, charred material (wood?)	0.0	4			
	+106.5	Grayish-brown, CLAYEY SILT and f-c SAND, trace mica, trace f-c gravel, trace fill material (brick, metal, wood, glass) soft, moist	0.0	5			No odors or staining
			0.0	6			
			0.0	7			No odors or staining
			0.0	8			11:20 - collect soil sample L-TP-4 8-8.5 for PADEP leaded gasoline parameters
			0.0	9			No odors or staining
	+102.5	Gray ASH/CINDER fill with f-c GRAVEL	0.0	10			10 feet below grade - end of test pit
	+101.0		0.0	11			
				12			

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LOG OF TEST PIT L-TP-5

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 112ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 9 ft Not Encountered		WATER LEVEL - First Not Encountered	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+112.0	Reddish-brown, f-c SAND and SILT, some f-c GRAVEL and COBBLES		0			
	+111.0	Large rocks and brick, wood fragments, concrete fragments	0.0	1			No odors or staining
	+109.0	Gray ASH/CINDERS [fill]	0.0	3			No odors or staining
	+108.8	Reddish-brown, f-c SAND and SILT with f-c GRAVEL, trace fill material	0.0	4			
	+106.0	Gray, ASH/CINDERS and f-c GRAVEL, trace fill material (glass, wood debris)	0.0	6			
	+104.0	Medium brown, CLAYEY SILT, some f-c GRAVEL, trace mica, soft, moist	0.0	8			
	+103.0	9 feet below grade - end of test pit	0.0	9			11:48 - collect soil sample L-TP-5_8.5-9 for PADEP leaded gasoline parameters
				10			9 feet below grade - end of test pit
				11			

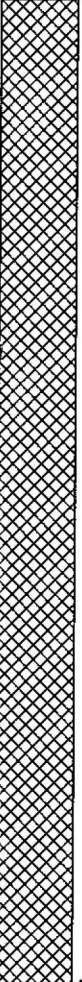
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LOG OF TEST PIT L-TP-6

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 120ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft Not Encountered		WATER LEVEL - First Not Encountered	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+120.0	Medium-brown, CLAYEY SILT, trace mica and organics (fine roots)		0			
	+119.0	Reddish-brown, f-c SAND and SILT, some f-c GRAVEL and fill material (brick, rebar, concrete, wood)	0.0	1			
	+118.0	CONCRETE slab	0.0	2			13:25 - collect soil sample L-TP-6_1.5-2 for lead and arsenic
	+117.5	Dark to medium gray ASH/CINDERS and f-c GRAVEL, trace fill (wood and glass fragments)	0.0	3			No odors or staining
			0.0	4			
			0.0	5			
			0.0	6			13:30 - collect soil sample L-TP-6_5-5.5 for lead and arsenic
			0.0	7			No odors or staining
			0.0	8			
			0.0	9			13:35 - collect soil sample L-TP-6_8.5-9 for lead and arsenic
			0.0	10			No odors or staining
	+110.0	10 feet below grade - end of test pit	0.0	10			10 feet below grade - end of test pit
				11			
				12			

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LOG OF TEST PIT L-TP-7

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/1/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 117ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft Not		WATER LEVEL - First Encountered ☒ Not Encountered ☐	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+117.0	Orangish-brown, SILT, trace mica and organics (fine roots)		0			
	+118.0	Medium brown, f-c SAND, trace mica, some fill material (brick, wood, glass, scrap metal pipe, large rocks)	0.0	1			
			0.0	2			15:00 - collect soil sample L-TP-7_1.5-2 for lead and arsenic
			0.0	3			No odors or staining
			0.0	4			
			0.0	5			
	+111.0	Gray ASH and f-c GRAVEL, trace fill (glass, wood)	0.0	6			
			0.0	7			No odors or staining
			0.0	8			
			0.0	9			No odors or staining 14:50 - collect soil sample L-TP-7_9-9.5 for lead and arsenic
	+107.0	10 feet below grade - end of test pit	0.0	10			10 feet below grade - end of test pit
				11			
				12			

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LOG OF TEST PIT L-TP-9

Sheet 1 of 1

PROJECT NAME Logan Pointe		PROJECT NUMBER 220080901		DATE 4/2/15	
LOCATION North Philadelphia, Pennsylvania		ELEVATION Approx. 115ft			
EXCAVATION CONTRACTOR James D. Morrissey Inc.		DEPTH 10 ft		WATER LEVEL - First Not Encountered	
EQUIPMENT Komatsu E-210 Track-Mounted Bucket Excavator		FOREMAN Tucker		WATER LEVEL - Completion Not Encountered	
				LANGAN PERSONNEL Cortney Savidge	

Symbol	ELEV (feet)	DESCRIPTION	PID readings (ppm)	Depth Scale	SAMPLE		REMARKS
					Number	Type	
	+115.0	Medium-brown, f-c SAND with f-c GRAVEL, some FILL material (brick, large rocks, trace wood, trace plastic debris), trace mica		0			
			0.0	1			No odors or staining
			0.0	2			
			0.0	3			No odors or staining
			0.0	4			
			0.0	5			No odors or staining
	+109.0	Medium brownish-orange, CLAYEY SILT and SAND, trace f-c gravel, moist	0.0	6			
	+108.0	Light gray and orange marbled, CLAY, slightly stiff, slightly moist	0.0	7			No odors or staining
			0.0	8			12:00 - collect soil sample L-TP-9_7.5-8 for PADEP leaded gasoline parameters
			0.0	9			No odors or staining
	+105.0	10 feet below grade - end of test pit	0.0	10			10 feet below grade - end of test pit
				11			No ASH/CINDERS encountered in L-TP-9
				12			

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