

July 2, 2020

Mr. Gerald Pratt
New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Western Remedial Action, 11th Floor
625 Broadway
Albany, New York 12233

Re: Test Pit Investigation for Unknown Structures
National Grid Inwood Former Holder Site
Intersection of Nassau Avenue and Sheridan Blvd
Inwood, Nassau County, New York
Site No. 1-30-121, Order on Consent Index # A2-0552-0606

Dear Mr. Pratt:

The purpose of this letter report is to document the findings of the unknown structures investigation undertaken by National Grid Site Investigation and Remediation (SIR) on June 9 and 10, 2020 at the Inwood Former Holder Site (the Site) located in Inwood, Nassau County, New York.

As discussed in the National Grid correspondence titled *Re: Test Pit Investigation for Unknown Structure* and dated June 2, 2020 (National Grid, 2020), works were initially completed on May 14, 2020 to investigate an unknown structure to the south-east of the former Holder Pad. Long Island Pump & Tank, Inc. performed all subsurface activities on behalf of SIR. National Grid's consultant, AECOM, provided Interim Site Management Plan (ISMP) oversight and performed Community Air Monitoring. All activities were conducted in accordance with the ISMP by OSHA 40-hour trained staff enrolled in a medical monitoring program. A metal structure, identified to be a possible former gas distribution steel 36" pipeline with a flange joint exposed at the surface, was located during the investigation. In addition, two unidentified pipelines were discovered running north to south which included a 2" diameter steel pipeline located approximately 1 ft below ground surface (bgs), and a second 4" diameter cast iron pipeline identified at approximately 4 ft bgs beneath and parallel to the 2" diameter steel pipeline.

On June 9 and 10, 2020, National Grid SIR completed additional investigations to trace the previously identified unknown structures, and further evaluate whether additional unknown structures are present within the proposed National Grid Gas Operations infrastructure works area of disturbance.

This investigation was completed with reference to the recommendations provided in National Grid, 2020 as follows:

- Tracing of three previously identified pipelines uncovered during test pit activities, using inductive or conductive signal tracing;
- Use of Ground Penetrating Radar (GPR) or Magnetometer to identify any unknown structures within the alignment of the Gas Operations infrastructure work; and
- Targeted test pit investigation of unknown structures detected during the GPR/magnetometer investigation limited to the alignment of the infrastructure work.

Completed Field Activities

The following investigation activities were completed under AECOM/National Grid SIR oversight:

- A GPR survey was completed on June 9, 2020 by Enviroprobe Service, Inc. (Enviroprobe) across the proposed alignment of the Gas Operations infrastructure works area of disturbance as shown in Figure 1.
- Three test pits (TP19B – TP21) were advanced on June 10, 2020 by Long Island Pump & Tank, Inc. at the locations shown in Figure 1. The following is noted:
 - Location TP19A was advanced during the initial test pit investigation on May 14, 2020, and TP19B was advanced on June 10, 2020 to expose the previously identified unknown structures at TP19A. The dimensions of TP19B were 15 ft in length, 10 ft in width and 5 ft in depth. Following exposure of the previously identified pipelines, Enviroprobe commenced works to trace the pipelines. It is noted that the previously identified 4" diameter cast iron pipeline at approximately 4 ft bgs was not able to be re-located during excavation activities, and as such has not been traced.
 - Location TP20 was advanced on June 10, 2020 to the south of TP19B in the alignment of the traced pipelines in a southerly direction. The dimensions of TP20 were 5 ft in length, 3 ft in width and 3 ft in depth. Excavation and tracing activities could not be completed further south due to the presence of dense vegetation.
 - Location TP21 was advanced on June 10, 2020 to the north of TP19B in the alignment of the traced 2" diameter pipeline in a northerly direction toward the former Holder Pad. The dimensions of TP21 were 8 ft in length, 3 ft in width and 5 ft in depth.

- Soil removed during the excavation of each test pit was temporarily stored on heavy duty plastic sheeting. Upon completion of each test pit, the excavation was backfilled with removed material in the sequence it was excavated.
- A composite sample of the excavated soil from TP20 (EXC-02) was collected for analysis for the following parameters to inform potential future waste characterization:
 - Target Compound List (TCL) Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) SW-846 Method 8260C;
 - TCL Semi-Volatile Organic Compounds (SVOCs) by USEPA SW-846 Method 8270D;
 - Resource Conservation and Recovery Act (RCRA) Metals by USEPA SW-846 Method 6010D;
 - Total Mercury by USEPA SW-846 Method 7471B;
 - Total Cyanide by USEPA SW-846 Method 9012B;
 - TCL Pesticides by USEPA SW-846 Method 8081B; and
 - TCL Polychlorinated Biphenyls (PCBs) by USEPA SW-846 Method 8082A.
- Community Air Monitoring Plan (CAMP) was implemented during intrusive activities.

All work followed the Inwood Site Specific Health and Safety Plan (HASP) and National Grid protocol for Gas Policy Safety. In addition, all activities were conducted in accordance with the ISMP.

Findings

GPR and Tracing

The Enviroprobe Geophysical Investigation Report (Enviroprobe Report) is provided in Attachment A.

Enviroprobe used a combination of instrumentation to perform the scope of work comprising a GSSI UtilityScan HS cart-mounted GPR unit with a 350 MHz antenna, a Fisher TW-6 metallic locator, a Radiodetection RD7000TX3 multi-frequency transmitter, and a Radiodetection RD7000PXL receiver.

The previously identified 36" diameter pipeline was exposed at TP19B and noted to be at approximately 3 ft bgs, and the 2" diameter pipe was identified at 1 ft bgs. These pipelines were traced, and Figure 4 of the Enviroprobe Report shows the approximate alignment of these identified pipelines running north to south with the 36" pipeline on the left (west) and 2" pipeline on the right (east).

The GPR survey did not identify additional unknown structures within the surveyed alignment of the proposed Gas Operations works area of disturbance. It is noted that the presence of clayey, highly saline or saturated soils, highly conductive materials in fill, and areas covered by concrete reduces GPR penetration.

The Enviroprobe Report notes that due to the wet conditions and subsurface content, the GPR signal penetration was estimated at less than 4 ft across the majority of the survey area, and penetration was further reduced in areas with concrete cover. Noted field observations indicate that penetration was less than 2.5 ft over the former Gas Holder concrete pad, and less than 2 ft in proximity to the identified unknown structures. As such, the potential exists for subsurface structures to be present within the proposed Gas Operations infrastructure development area that have not yet been identified.

Test Pit Investigation

The following findings are noted:

- **TP19B:** Soils to 2 ft bgs were comprised of brown sandy fill material with gravel. Underlying soils from 2 – 5ft bgs included black silty clays. Groundwater was encountered at the base of the excavation.

The previously identified 36” steel pipeline was confirmed to be present at 3 ft bgs, and the 2” steel pipeline confirmed at 1ft bgs. Tracing of the 36” diameter steel pipeline did not identify the pipeline to the north of TP19B.

Odors consistent with those identified during the advancement of TP19A were noted ranging from light petroleum odors to strong organic peaty odors. No elevated Photoionization Detector (PID) readings were recorded.

TP20: The previously identified 36” and 2” steel pipelines were traced south of TP19B to TP20. Soils to 2 ft bgs were comprised of brown sandy fill material with gravel, and underlying soils to 3 ft bgs included black silty clays. No evidence of visual or olfactory impacts were noted, and no elevated PID readings were recorded. The following additional pipes were identified in TP20:

- A cut 2” diameter steel pipe at approximately 1 ft bgs.
- Two 1” diameter steel pipes at approximately 3 ft bgs running east to west. One of these pipes appeared to be a conduit.

TP21: Soils to 2 ft bgs were comprised of brown sandy fill material with gravel. Underlying soils to 5 ft bgs included black silty clays. No evidence of visual or olfactory impacts were noted, and no elevated PID readings were recorded. The northern extent of the previously identified 2” diameter steel pipe was confirmed in this test pit, and the pipe is inferred to end at TP21.

It is noted that no identifiable Manufactured Gas Plant (MGP) related impacts were observed in soils at TP19B – TP21.

A photograph log of test pitting activities is provided in Attachment B.

- The results of soil analysis were screened against the New York State Department of Environmental Conservation, Environmental Remediation Programs Part 375-6.8(b) Commercial Use Soil Cleanup Objective (SCO) Values. All analyte concentrations were reported below Commercial Use SCOs for all constituents.

Tabulated analytical results are provided in Table 1 attached.

- There were no action level exceedances during the CAMP (refer Attachment C).

Summary

Two of the three previously identified pipelines were uncovered and traced, including the 36” steel pipeline at 3ft bgs and the 2” steel pipeline at 1ft bgs as shown in Figure 1 attached. The previously identified 4” cast iron pipeline at 4ft bgs was not able to be relocated during the excavation activities and was not traced.

Three additional pipes were identified in TP20 including a cut 2” diameter steel pipe at approximately 1 ft bgs, and two 1” diameter steel pipes at approximately 3 ft bgs running east to west. This pipework is likely associated with the former Engine Room located in proximity to TP20.

Cleaning or removal of the identified piping as an Interim Remedial Measure (IRM) is not warranted based on the investigation findings completed to date. Rather, it is anticipated that these pipes will be removed, if encountered, and properly managed by National Grid Gas Operations during Site redevelopment.

The GPR survey did not identify additional unknown structures within the alignment of the Gas Operations work area of disturbance. However, given the noted limitations of the GPR survey (i.e. wet conditions, subsurface content, and areas with concrete cover), the potential exists for subsurface structures to be present within the proposed Gas Operations development area that have not yet been identified.

If you have any questions or comments about the activities mentioned in this letter, please contact me by telephone at (516) 581-7313 or via email at Jessica.phillips@nationalgrid.com.

Sincerely,



Jessica Phillips
Project Manager

References

National Grid (2020) *Re: Test Pit Investigation for Unknown Structure, National Grid Inwood Former Holder Site, Intersection of Nassau Avenue and Sheridan Blvd, Inwood, Nassau County, New York, Site No, 1 – 30 – 121, Order on Consent Index # A2-0552-0606*

Encl.

Figure 1: GPR/Pipe Location Investigation

Table 1: Soil Analytical Results

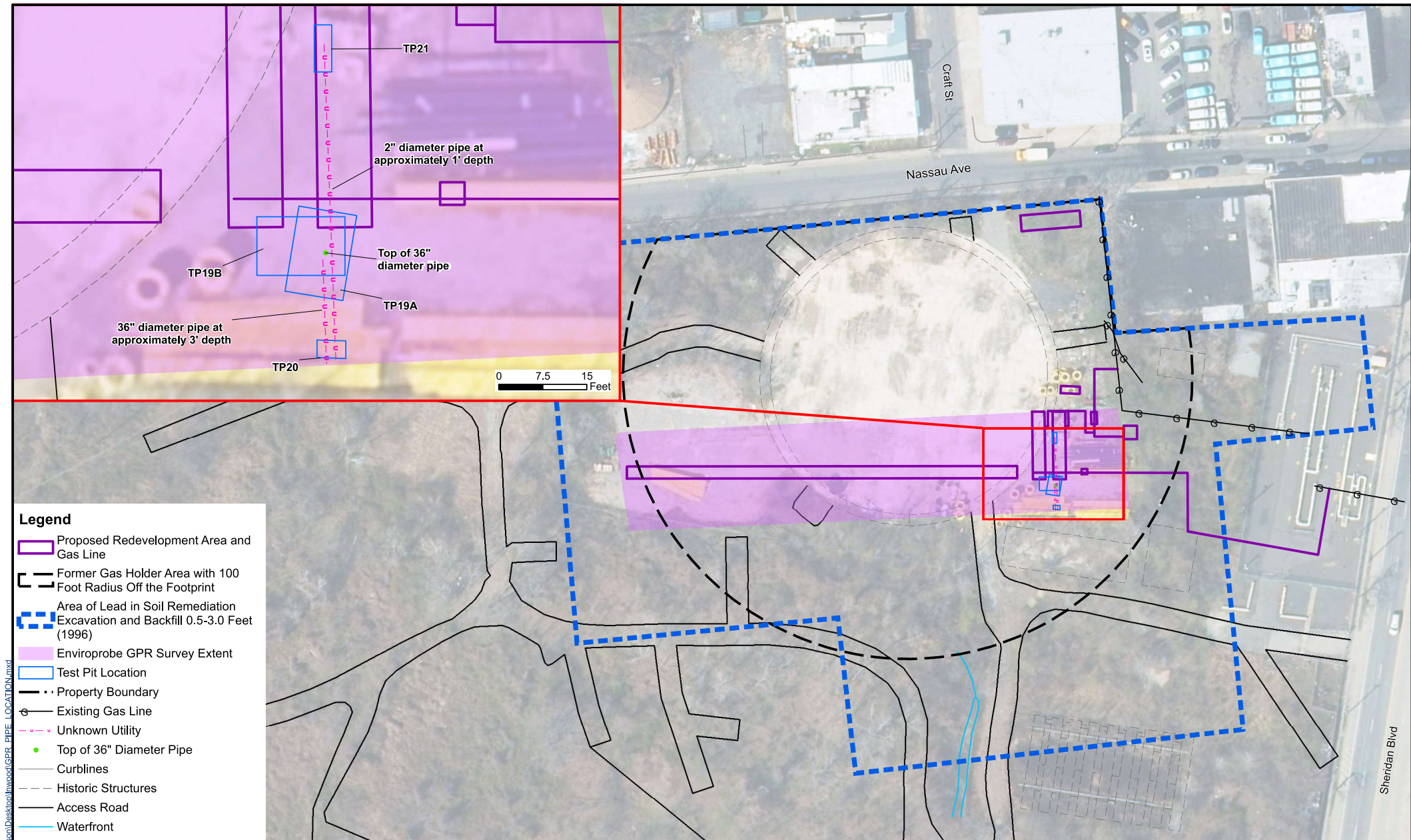
Attachment A: Enviroprobe Geophysical Investigation Report

Attachment B: Photograph Log

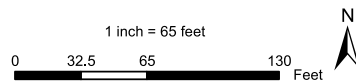
Attachment C: CAMP Summary

cc: W. Kuehner, NYSDOH (Electronic Copy Only)
S. Aldridge, National Grid (Electronic Copy Only)
A. Kushnir, National Grid (Electronic Copy Only)
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Figure 1
GPR/Pipe Location Investigation



AECOM



National Grid
Former Inwood Gas Holder Site
Nassau Ave/Sheridan Blvd
Inwood, NY

GPR/Pipe Location Investigation

Date: 6/30/2020	Drawn: HO	Job #: 60137359	Figure 1
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Table 1
Soil Analytical Results

Location ID Sample Date Sample ID	CAS #	PART 375-Protection of Pubic Health-Commercial	EXC-02 6/10/2020 EXC-02
BTEX (ug/kg)			
Benzene	71-43-2	44000	
Ethylbenzene	100-41-4	390000	0.93 U
m+p-Xylene	1330-20-7-M,P	NL	0.93 U
o-Xylene	95-47-6	NL	0.93 U
Toluene	108-88-3	500000	0.93 U
Total BTEX	BTEX	NL	0.93 U
VOCs (ug/kg)			
1,1,1-Trichloroethane	71-55-6	500000	0.93 U
1,1,2,2-Tetrachloroethane	79-34-5	NL	0.93 U
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	NL	0.93 U
1,1,2-Trichloroethane	79-00-5	NL	0.93 U
1,1-Dichloroethane	75-34-3	240000	0.93 U
1,1-Dichloroethene	75-35-4	500000	0.93 U
1,2,3-Trichlorobenzene	87-61-6	NL	0.93 U
1,2,4-Trichlorobenzene	120-82-1	NL	0.93 U
1,2-Dibromo-3-chloropropane	96-12-8	NL	0.93 U
1,2-Dibromoethane	106-93-4	NL	0.93 U
1,2-Dichlorobenzene	95-50-1	500000	0.93 U
1,2-Dichloroethane	107-06-2	30000	0.93 U
1,2-Dichloropropane	78-87-5	NL	0.93 U
1,3-Dichlorobenzene	541-73-1	280000	0.93 U
1,4-Dichlorobenzene	106-46-7	130000	0.93 U
1,4-Dioxane	123-91-1	130000	19 U
2-Butanone	78-93-3	500000	4.7 U
2-Hexanone	591-78-6	NL	4.7 U
4-Methyl-2-pentanone	108-10-1	NL	4.7 U
Acetone	67-64-1	500000	6.7
Bromochloromethane	74-97-5	NL	0.93 U
Bromodichloromethane	75-27-4	NL	0.93 U
Bromoform	75-25-2	NL	0.93 U
Bromomethane	74-83-9	NL	0.93 U
Carbon disulfide	75-15-0	NL	0.93 U
Carbon tetrachloride	56-23-5	22000	0.93 U
Chlorobenzene	108-90-7	500000	0.93 U
Chloroethane	75-00-3	NL	0.93 U
Chloroform	67-66-3	350000	0.93 U
Chloromethane	74-87-3	NL	0.93 U
cis-1,2-Dichloroethene	156-59-2	500000	0.93 U
cis-1,3-Dichloropropene	10061-01-5	NL	0.93 U
Cyclohexane	110-82-7	NL	0.93 U
Dibromochloromethane	124-48-1	NL	0.93 U
Dichlorodifluoromethane	75-71-8	NL	0.93 U
Isopropylbenzene	98-82-8	NL	0.93 U
Methyl acetate	79-20-9	NL	4.7 U
Methyl tert-butyl ether	1634-04-4	500000	0.93 U
Methylcyclohexane	108-87-2	NL	0.93 U
Methylene chloride	75-09-2	NL	0.93 U
Styrene	100-42-5	NL	0.93 U
Tetrachloroethene	127-18-4	150000	0.93 U
trans-1,2-Dichloroethene	156-60-5	500000	0.93 U
trans-1,3-Dichloropropene	10061-02-6	NL	0.93 U
Trichloroethene	79-01-6	NL	0.93 U
Trichlorofluoromethane	75-69-4	NL	0.93 U
Vinyl chloride	75-01-4	NL	0.93 U
SVOCs (ug/kg)			
1,1'-Biphenyl	92-52-4	NL	370 U
1,2,4,5-TETRACHLOROBENZENE	95-94-3	NL	370 U
2,2'-oxybis(1-Chloropropane)	108-60-1	NL	370 U
2,3,4,6-Tetrachlorophenol	58-90-2	NL	370 U
2,4,5-Trichlorophenol	95-95-4	NL	370 U
2,4,6-Trichlorophenol	88-06-2	NL	150 U
2,4-Dichlorophenol	120-83-2	NL	150 U
2,4-Dimethylphenol	105-67-9	NL	370 U
2,4-Dinitrophenol	51-28-5	NL	290 U
2,4-Dinitrotoluene	121-14-2	NL	74 U
2,6-Dinitrotoluene	606-20-2	NL	74 U
2-Chloronaphthalene	91-58-7	NL	370 U
2-Chlorophenol	95-57-8	NL	370 U
2-Methylphenol	95-48-7	500000	370 U
2-Nitroaniline	88-74-4	NL	370 U
2-Nitrophenol	88-75-5	NL	370 U
3,3'-Dichlorobenzidine	91-94-1	NL	150 U
3-Nitroaniline	99-09-2	NL	370 U
4,6-Dinitro-2-methylphenol	534-52-1	NL	290 U
4-Bromophenyl phenyl ether	101-55-3	NL	370 U
4-Chloro-3-methylphenol	59-50-7	NL	370 U
4-Chloroaniline	106-47-8	NL	370 U
4-Chlorophenyl phenyl ether	7005-72-3	NL	370 U
4-Methylphenol	106-44-5	500000	370 U
4-Nitroaniline	100-01-6	NL	370 U
4-Nitrophenol	100-02-7	NL	740 U
Acetophenone	98-86-2	NL	370 U
Atrazine	1912-24-9	NL	150 U
Benzaldehyde	100-52-7	NL	370 U
bis(2-Chloroethoxy)methane	111-91-1	NL	370 U
bis(2-Chloroethyl) ether	111-44-4	NL	37 U
bis(2-Ethylhexyl) phthalate	117-81-7	NL	47
Butyl benzyl phthalate	85-68-7	NL	62
Caprolactam	105-60-2	NL	370 U

Location ID Sample Date Sample ID	CAS #	PART 375-Protection of Public Health-Commercial	EXC-02 6/10/2020 EXC-02
Carbazole	86-74-8	NL	370 U
Dibenzofuran	132-64-9	350000	370 U
Diethyl phthalate	84-66-2	NL	370 U
Dimethyl phthalate	131-11-3	NL	370 U
Di-n-butyl phthalate	84-74-2	NL	370 U
Di-n-octyl phthalate	117-84-0	NL	370 U
Hexachlorobenzene	118-74-1	6000	37 U
Hexachlorobutadiene	87-68-3	NL	74 U
Hexachlorocyclopentadiene	77-47-4	NL	370 U
Hexachloroethane	67-72-1	NL	37 U
Isophorone	78-59-1	NL	150 U
Nitrobenzene	98-95-3	NL	37 U
N-Nitrosodi-n-propylamine	621-64-7	NL	37 U
N-Nitrosodiphenylamine	86-30-6	NL	370 U
Pentachlorophenol	87-86-5	6700	290 U
Phenol	108-95-2	500000	370 U
PAHs (ug/kg)			
2-Methylnaphthalene	91-57-6	NL	370 U
Acenaphthene	83-32-9	500000	370 U
Acenaphthylene	208-96-8	500000	370 U
Anthracene	120-12-7	500000	370 U
Benzo(a)anthracene	56-55-3	5600	130
Benzo(a)pyrene	50-32-8	1000	150
Benzo(b)fluoranthene	205-99-2	5600	180
Benzo(ghi)perylene	191-24-2	500000	81
Benzo(k)fluoranthene	207-08-9	56000	66
Chrysene	218-01-9	56000	140
Dibenz(a,h)anthracene	53-70-3	560	25
Fluoranthene	206-44-0	500000	190
Fluorene	86-73-7	500000	11
Indeno(1,2,3-cd)pyrene	193-39-5	5600	92
Naphthalene	91-20-3	500000	370 U
Phenanthrene	85-01-8	NL	120
Pyrene	129-00-0	500000	210
Total Metals (mg/kg)			
Arsenic	7440-38-2	16	3.0
Barium	7440-39-3	400	55.3
Cadmium	7440-43-9	9.3	0.47
Chromium	7440-47-3	NL	15.6
Lead	7439-92-1	1000	43.6
Mercury	7439-97-6	2.8	0.0042
Selenium	7782-49-2	1500	1.7
Silver	7440-22-4	1500	1.7 U
Cyanide (mg/kg)			
Total Cyanide	57-12-5	27	0.16
PCBs (ug/kg)			
Aroclor 1016	12674-11-2	NL	74 U
Aroclor 1221	11104-28-2	NL	74 U
Aroclor 1232	11141-16-5	NL	74 U
Aroclor 1242	53469-21-9	NL	74 U
Aroclor 1248	12672-29-6	NL	74 U
Aroclor 1254	11097-69-1	NL	74 U
Aroclor 1260	11096-82-5	NL	74 U
Aroclor 1262	37324-23-5	NL	74 U
Aroclor 1268	11100-14-4	NL	74 U
PCB (Total) (ppb)	CALC-PCBs	1000	74 U
Pesticides (ug/kg)			
Pesticides (total)	CALC-Pesticides	680	
Aldrin	309-00-2	680	7.4 U
Alpha-BHC	319-84-6	3400	2.2 U
Beta-BHC	319-85-7	3000	2.2 U
Chlordane	57-74-9	NL	74 U
DDD,4,4-	72-54-8	92000	7.4 U
DDE,4,4-	72-55-9	62000	7.4 U
DDT,4,4-	50-29-3	47000	7.4 U
Delta-BHC	319-86-8	500000	2.2 U
Dieldrin	60-57-1	1400	2.2 U
Endosulfan I	959-98-8	200000	7.4 U
Endosulfan II	33213-65-9	200000	7.4 U
Endosulfan sulfate	1031-07-8	200000	7.4 U
Endrin	72-20-8	89000	7.4 U
Endrin aldehyde	7421-93-4	NL	7.4 U
Endrin ketone	53494-70-5	NL	7.4 U
Gamma BHC - Lindane	58-89-9	9200	2.2 U
Heptachlor	76-44-8	15000	7.4 U
Heptachlor Epoxide	1024-57-3	NL	7.4 U
Methoxychlor	72-43-5	NL	7.4 U
Toxaphene	8001-35-2	NL	74 U

Notes:

¹ New York State Department of Environmental - Environmental Remediation Programs Part 375-6.8(b) Commercial Use Soil Cleanup Objective Value
U - The material was analyzed for but not detected at, or above, the reporting limit. The associated numerical value is the sample quantitation limit
BTEX - Benzene, Toluene, Ethylbenzene, Xylene; VOC - Volatile Organic Compound; SVOC - Semi Volatile Organic Compound; PAH - Polycyclic Aromatic Hydrocarbon; PCB - Polychlorinated Biphenyl
mg/kg - Milligram per Kilogram
ug/kg - Microgram per Kilogram
Bold indicates the analyte detected at a concentration greater than the MDL.
NL - Not Listed

Attachment A
Enviroprobe Geophysical Investigation Report



GEOPHYSICAL INVESTIGATION REPORT

PERFORMED AT:

**36 Nassau Avenue
Inwood, NY 11096**

PREPARED FOR:

**Melissa Saunders
AECOM
125 Broad Street, 15th Floor
New York, NY 10004**

PREPARED BY:

**John Rango
Geophysical Technician
Enviroprobe Service, Inc.
81 Marter Avenue
Mount Laurel, NJ 08054
(856) 858-8584
(800) 596-7472**

June 9 & 10, 2020

1.0 INTRODUCTION

Enviroprobe Service, Inc. (Enviroprobe) is an environmental investigation services firm which provides monitoring well installation (HSA), Geoprobe (DPT) drilling services and Environmental & Engineering Geophysics (EEG) services to the environmental consulting and engineering community.

Enviroprobe conducted a subsurface geophysical investigation at the subject property within client-specified areas of concern. Due to conditions and objectives, the investigation utilized a GSSI UtilityScan HS cart-mounted Ground Penetrating Radar (GPR) unit with a 350 MHz antenna, a Fisher TW-6 metallic locator, a Radiodetection RD7000TX3 multi-frequency transmitter, and a Radiodetection RD7000PXL receiver.

Ground penetrating radar (commonly called GPR) is a geophysical method that has been developed over the past thirty years for shallow, high-resolution, subsurface investigations of the earth. GPR uses high frequency pulsed electromagnetic waves (generally 10 MHz to 2,000 MHz) to acquire subsurface information. An EM wave is propagated downward into the ground by a transmitting antenna. Where abrupt changes in electrical properties occur in the subsurface, a portion of the energy is reflected back to the surface. This reflected wave is detected by a receiver antenna and transmitted to a control unit for real time processing and display. The penetration depth of the GSSI unit varies from several inches to tens of feet according to site-specific conditions. The penetration depth decreases with increased soil conductivity. The penetration depth is the greatest in ice, dry sands, and fine gravels. Clayey, highly saline or saturated soils, areas covered by concrete, foundry slag, or other highly conductive materials greatly reduce GPR penetration. GPR is a method that is commonly used for environmental, engineering, archaeological, and other shallow investigations.

The Fisher TW-6 metallic locator is designed to find pipes, cables and other metallic objects such as underground storage tanks (USTs). The TW-6 transmitter generates an electromagnetic field that induces electrical currents in the subsurface. These currents produce a secondary electromagnetic field that is measured by the TW-6 receiver. One surveyor can carry both the transmitter and receiver together to search for underground metallic objects, although the TW-6 response can also be affected by the electrical properties of non-metallic materials in the subsurface.

The Radiodetection (RD) transmitter and receiver are commonly used for pipe and cable locating. The multi-frequency transmitter can be directly connected, clamped, or used to induce a signal in a target line while the multi-frequency receiver is used to measure the signal from energized lines.

2.0 SCOPE OF WORK

On June 9 & 10, 2020, a geophysical technician from Enviroprobe Service Inc. was mobilized to the subject property, an industrial building, in order to perform a

geophysical investigation. The purpose of this investigation was to designate conduits/utilities. These ground surface consisted of concrete, asphalt, and natural soil surfaces.

3.0 SURVEY RESULTS

The survey was conducted using a cart-mounted GPR unit, a Fisher TW-6 metallic locator, a handheld magnetic locator, and a RD unit. The RD unit was used to trace common utilities from sources in and around the survey area. The RD receiver was also used in the passive mode to search for live underground electrical power cables and other utilities emitting 60Hz electromagnetic signals. When possible, the locations of utilities were confirmed with the GPR. The GPR survey was also performed in a grid pattern in at least two orthogonal directions to search for evident and non-evident underground utilities. Linear anomalies consistent with underground utilities were marked on site using the following colors: pink - unknown utilities. (See Figures 1 - 4)



Figure 1: 36" diameter pipe at approximately 3' and a 2" diameter steel pipe at 1ft.



Figure 2: 36" diameter pipe at approximately 3' and a 2" diameter steel pipe at 1ft.



Figure 3: Area of investigation highlighted in pink. *(Not to scale)



Figure 4: Confirmed utilities. Running from south to north the larger diameter pipe is located on the left side while the smaller pipe at approximately 1ft is located on the right. *(Not to scale)

4.0 LIMITATIONS

Due to surface wet conditions and subsurface content, the GPR signal penetration was estimated at less than 4 ft in the majority of the survey area. This penetration was reduced in areas of concrete cover.

The TW-6 survey was kept up to 6 feet away from above ground objects containing metals depending on the sizes, shapes and positions of the metal objects. The TW-6 survey was not effective in areas with reinforced concrete.

Due to the dielectric properties of the subsurface, clay, plastic polymer, and fiberglass utilities may not have been detected.

All field services were conducted in compliance with the industry standard of care guidelines found in ASCE 38-02 (Level B).

5.0 WARRANTIES

The field observations and measurements reported herein are considered sufficient in detail and scope for this project. Enviroprobe Service, Inc. warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental engineering methods. There is a possibility that conditions may

exist which could not be identified within the scope of this project and were not apparent during the site activities performed for this project.

Enviroprobe represents that the services were performed in a manner consistent with that level of care and skill ordinarily exercised by environmental consultants under similar circumstances. No other representations to Client, express or implied, and no warranty or guarantee is included or intended in this agreement, or in any report, document, or otherwise.

Enviroprobe Service, Inc. believes that the information provided in this report is reliable. However, Enviroprobe cannot warrant or guarantee that the information provided by others is complete or accurate. No other warranties or guarantees are implied or expressed.

GPR data is subject to signal anomalies and operator interpretation. The GPR data is intended to provide the locations of areas of concern requiring additional investigation or the approximate location of underground structures and utilities. Great care must be utilized when excavating and/or drilling around underground structures and utilities since GPR data can only be used for estimation purposes and GPR data is subject to misinterpretation. Enviroprobe can not guarantee that utilities, post-tension cables, and/or rebar will not be incurred during drilling, cutting, coring, or excavating activities.

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Attachment B
Photograph Log

PHOTOGRAPH LOG

Facility Name:
Former Inwood Gas Holder Site

Site Location:
Nassau Ave. & Sheridan Blvd., Inwood New York

Project No.
60137359

Photo No.
1

Date:
06/10/20

Direction Photo Taken:

Toward south east

Description:

Exposure of 36" diameter pipe and 2" diameter pipe at TP19.



Photo No.
2

Date:
06/10/20

Direction Photo Taken:

Toward north east

Description:

36" diameter pipe and 2" diameter pipe running north to south at TP19. Minor groundwater seepage observed. The top of pipe can be seen in the top left corner of photo.



PHOTOGRAPH LOG

Facility Name:
Former Inwood Gas Holder Site

Site Location:
Nassau Ave. & Sheridan Blvd., Inwood New York

Project No.
60137359

Photo No.
3

Date:
06/10/20

Direction Photo Taken:

Toward south east

Description:

2" diameter cut pipe at TP20.



Photo No.
4

Date:
06/10/20

Direction Photo Taken:

Toward west

Description:

Two 1" diameter pipes at TP20.



PHOTOGRAPH LOG

Facility Name:
Former Inwood Gas Holder Site

Site Location:
Nassau Ave. & Sheridan Blvd., Inwood New York

Project No.
60137359

Photo No.
5

Date:
06/10/20

Direction Photo Taken:

Toward south west

Description:

End of 2" diameter pipe at TP21.



Photo No.
6

Date:
06/10/20

Direction Photo Taken:

Toward south east

Description:

Backfill at TP19.



Attachment C
CAMP Summary

Date:	6/10/2020
Activity:	Test Pit Investigation for Unknown Structures
Wind Direction:	South East
Wind Speed:	10 mph
Weather:	Sunny, 77°F

Time	DustTrak Up-Wind	DustTrak Down-Wind	PID Up-Wind	PID Down-Wind
815	0.007	0.055	0.0	0.0
830	0.004	0.022	0.0	0.0
845	0.004	0.024	0.0	0.0
900	0.003	0.024	0.0	0.0
915	0.005	0.017	0.0	0.1
930	0.003	0.018	0.0	0.0
945	0.004	0.016	0.0	0.0
1000	0.004	0.022	0.0	0.0
1015	0.010	0.015	0.0	0.0
1030	0.003	0.016	0.0	0.0
1045	0.003	0.018	0.0	0.0
1100	0.003	0.019	0.0	0.0
1115	0.022	0.004	0.0	0.2

Notes:

DustTrak II (mg/m³)

PID - MiniRAE3000 (ppm)

Action Levels: Dust 0.1mg/m³; Total VOCs - 5ppm