

**Table 3
Proposed Sampling Rationale
Glen Cove Former Manufactured Gas Plant Site
Glen Cove, New York**

Sample ID	Sample Location/ Rationale	Sample Type			Analysis ¹						
		Soil	Sediment	Water	VOCs ²	SVOCs ³	Metals ⁴	PCBs ⁵	TCN ⁶	Grain Size Bulk Density TOC, Moisture Content ⁷	TAL/TCL ⁸
Soil Boring Installation											
GCSB-32	Located to the south of the current electrical substation control room. The proposed boring will evaluate potential discharges downgradient of the active cesspool that receives sanitary waste from the LIPA electrical substation and evaluate for the presence/absence of the clay/sandy-clay confining layer beneath the footprint of the former MGP. Boring is anticipated to be completed to approximately 50 feet below ground surface.	X			X	X	X		X		
GCSB-33	Located on the western boundary of the current electrical substation. The proposed boring will evaluate the presence of the bottom of the former 60,000 cubic foot gas holder structure and the presence/absence of the clay/sandy-clay confining layer beneath the footprint of the former MGP. Boring will be advanced to the bottom of the holder to check for the presence of NAPL, if no NAPL is observed the boring will continue through the base of the holder until 10 feet of visually clean material or a confining layer is encountered. If NAPL is observed, the boring will be relocated to the outside of the holder and continued as discussed. Boring is anticipated to be completed to approximately 50 feet below ground surface.	X									X
GCSB-34	Located on the western boundary of the current electrical substation. The proposed boring will evaluate potential impacts from the former 60,000 cubic foot gas holder structure and the presence/absence of the clay/sandy-clay confining layer beneath the footprint of the former MGP. Boring is anticipated to be completed to approximately 50 feet below ground surface.	X			X	X	X		X		
GCSB-35	Located along the northern boundary of the current electrical substation fence to the west of the current substation control house. The proposed boring will evaluate the lateral extent of tar impacts at the site and the presence/absence of the clay/sandy-clay confining layer beneath the footprint of the former MGP. The boring is anticipated to be completed at approximately 50 feet below ground surface.	X			X	X	X		X		

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GCSB-36	Located on the northern parcel that borders the site within a gravel parking area. The proposed boring will evaluate the lateral extent of tar impacts adjacent to the site and the presence/absence of the clay/sandy-clay confining layer adjacent to the site. The boring is anticipated to be completed to approximately 70 feet below ground surface.	X			X	X	X		X		
GCSB-38	Located along the northwestern corner of the site adjacent to an existing retaining wall. The proposed boring will evaluate the lateral extent of tar impacts and evaluate the presence/absence of the clay/sandy-clay confining layer on the site. The boring is anticipated to be completed at approximately 50 feet below ground surface.	X			X	X	X		X		
Soil Boring/Temporary Groundwater Probe Installation											
GCSB/ GCGWP-37	Located on the northern parcel that borders the site within a gravel parking area. The proposed boring will evaluate the lateral extent of tar impacts adjacent to the site and the presence/absence of the clay/sandy-clay confining layer adjacent to the site. The boring is anticipated to be completed to approximately 70 feet below ground surface. A temporary groundwater probe will be installed at this location to check for groundwater impacts previously observed in GCSB-28.	X		X	X	X	X		X		
Soil Boring/Monitoring Wells											
GCSB-39/ GCMW-08 S, D	Located on the northern parcel that borders the site within a gravel parking area. The proposed boring will evaluate the lateral extent of tar impacts adjacent to the site and the presence/absence of the clay/sandy-clay confining layer adjacent to the site. The boring is anticipated to be completed to approximately 70 feet below ground surface. A nested pair (groundwater table well and deep well) of groundwater wells will be installed at this location to provide information regarding the groundwater aquifer information.	X		X	X	X	X		X	X	

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GCSB-40/ GCMW-09	Located within the access road adjacent to PZ-01. The proposed boring will evaluate the lateral extent of tar impacts adjacent to the site and the presence/absence of the clay/sandy-clay confining layer adjacent to the site. The boring is anticipated to be completed to approximately 70 feet below ground surface. A deep groundwater monitoring well will be installed to screen deep groundwater beneath observed impacts. Additionally, PZ-01 will be re-installed (PZ-01A) adjacent to the former location because the well was damaged. PZ-01 will be abandoned at this time.	X		X						X	X
GCSB-41/ GCMW-10	Located on the western boundary of the site adjacent to the culverted Glen Cove Creek. The proposed boring will evaluate soils for the tar impacts and the presence absence of the clay/sandy-clay confining unit at the site. The boring is anticipated to be completed to approximately 60 feet below ground surface. A deep monitoring well will be installed to screen the deep groundwater aquifer and provide hydrologic information for groundwater flow.	X		X	X	X	X		X	X	X
GCSB-42/ GCMW-11	Located on the northern boundary of the current substation. The proposed boring will evaluate soils for the vertical extent of tar impacts within the inferred former Glen Cove Creek channel and evaluated the thickness of the clay/sandy-clay confining unit at the site. The boring is anticipated to be completed to approximately 60 feet below ground surface. A deep groundwater monitoring well will be installed to screen deep groundwater aquifer and provide hydrologic information for groundwater flow. Groundwater aquifer monitoring well (PZ-03) will be re-installed if unable to be located during the field investigation.	X		X	X	X	X		X	X	

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GCSB-43/ GCMW-12	Located upgradient of the former MGP site within the Hazel Avenue. This boring will evaluate soils for potential impacts from current and historic sources of contamination. The boring is anticipated to be completed to approximately 70 feet below ground surface. A groundwater table monitoring well will be installed to screen the groundwater table aquifer for potential impacts and provide hydrologic information.	X		X	X ⁹	X	X		X	X	
Monitoring Well Re-Installation											
PZ-02A	Located in the southwestern portion of the site. PZ-02 will be re-installed with a replacement well PZ-02A to provide shallow groundwater information and hydrologic information.			X	X	X	X		X		
PZ-03A	Located along the northern boundary of the current electrical substation fence. PZ-03 will be re-installed with a replacement well PZ-03A to provide groundwater information within the substation.			X	X	X	X		X		
PZ-04A	Located in the southern portion of the current electric substation. PZ-04 will be re-installed with a replacement well PZ-04A to provide shallow groundwater hydrologic information and chemical information.			X	X ⁹	X	X		X		
PZ-05A	Located in the eastern corner of the site. If PZ-05 can not be located, then it will be re-installed to obtain shallow groundwater, hydrologic information, and chemical information.			X	X ⁹	X	X		X		
PZ-06A	Located in the northeastern corner of the site. PZ-06 will be reinstalled to obtain shallow groundwater hydrologic information.			X	X	X	X		X		
PZ-07A	Located in the southwestern portion of the site. If PZ-07 can not be located, then it will be re-installed to obtain groundwater chemistry and hydrologic information at the site adjacent to Glen Cove Creek.			X	X	X	X		X		

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Temporary Geoprobe Groundwater Probe Installation											
GCGWP-01 through GCGWP-06	Located in the northwestern corner of the site. These temporary groundwater probes will be installed into the groundwater table to evaluate potential migration of MGP constituents along the former Glen Cove Creek channel.			X	X	X					
Surficial Soil Samples											
GCSS-19	Located in the southwestern portion of the site to evaluated surface soil conditions within the first two inches of mineral soil.	X			X	X	X		X	X ¹⁰	
GCSS-20	Located in the western portion of the site to evaluate surface soil conditions within the footprint of the former 40,000 cubic foot gas holder (Hortonsphere). Surficial sample will be collected within the first two inches of mineral soils beneath the vegetative mat.	X			X	X	X		X	X ¹⁰	
GCSS-21	Located in the western portion of the site to evaluate surficial soil conditions within the footprint of the former aboveground storage tanks. Surficial sample will be collected within the first two inches of mineral soils beneath the vegetative mat.	X			X	X	X		X		
GCSS-22	Located in the central portion of the site to evaluate surficial soil conditions within the footprint of the former 60,000 cubic foot gas holder. Surficial sample will be collected within the first two inches of mineral soils.	X						X		X ¹⁰	X
GCSS-23	Located in the eastern portion of the site to evaluate the surficial soil conditions within the active transformer substation. Surficial soil sample will be collected within the first two inches of mineral soils.	X			X	X	X		X		
GCSS-24	Located in the northwestern corner of the site to evaluate the surficial soil conditions within the footprint of the potential impact zone. Surficial soil sample will be collected within the first two inches of mineral soils.	X			X	X	X		X	X ¹⁰	
GCSS-25	Located in the northwestern portion of the site adjacent to the former 60,000 cubic foot gas holder within the active transformer station. Soil sample will be collected to evaluate the surficial soil conditions within the footprint of the potential impact zone. Surficial soil sample will be collected within the first two inches of mineral soils.	X			X	X	X		X		
GCSS-26	Located on the northern portion of the site within the active transformer station. Soil sample will be collected to evaluate the surficial soil conditions within the footprint of the potential impact zone. Surficial soil sample will be collected within the first two inches of mineral soils.	X			X	X	X	X	X		

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GCSS-27	Located in the eastern portion of the site to evaluate the surficial soil conditions at the former SS-4 sampling location. Surficial soil sample will be collected within the first two inches of mineral soils.	X			X	X	X		X	X ¹⁰	
Glen Cove Creek Sediment Samples											
GCSED-01	Located on the upstream side of open channel of Glen Cove Creek where the box culvert that crosses Rout 107 empties into the channel. This sample will be collected to check for the presence of upstream impacts in the channel.		X		X	X			X		
GCSED-02	Located midway down the open channel of Glen Cove Creek adjacent to the former hortonsphere location. This sample will be collected to check for the presence of impacts in the channel from MGP related sources.		X		X	X			X		
GCSED-03	Located on the downstream side of open channel of Glen Cove Creek just upstream of the closed box culvert that crosses the LIRR and continues downstream of the site. This sample will be collected to check for the presence of impacts in the channel from MGP related sources.		X		X	X			X		

Notes:

1. All test methods specified are from EPA SW-846.
2. VOCs refer to volatile organic compounds (Benzene, Toluene, Ethylbenzene, Xylene [BTEX]) fraction only by EPA Method 8021.
3. SVOCs refer to semivolatile organic compounds (Polycyclic Aromatic Hydrocarbons [PAHs]) by EPA Method 8270.
4. RCRA 8 Metals analyzed are as follows: arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver by EPA Method 6010/7471.
5. PCBs refer to Polychlorinated Biphenyls by EPA Method 8082.
6. TCN stands for total cyanide EPA Method 9012.
7. Grain size was analyzed by ASTM Method D-422, TOC stands for total organic compound analyzed by EPA Method 9060, bulk density was analyzed by ASTM Method D2937-94. Moisture Content by ASTM D2937-94.
8. TCL/TAL stands for target compound list/target analyte list, which includes VOCs analysis by EPA Method 8260, SVOCs by EPA Method 8270, and RCRA-8 metals plus TCL/TAL metals by EPA Method 6010/7471, and total cyanide by EPA Method 9012.
9. A full VOC scan will be completed for the upgradient groundwater samples to evaluate off-site impacts entering the site.
10. Grain size will be analyzed on two surficial soil samples. pH analysis will be completed by EPA method 150.1 for five surficial soils samples collected.