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Environmental Asset Management  
One Metro Tech Center  
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Brooklyn, NY 11201

October 20, 2003  
982482-1-1001

Mr. Amen M. Omorogbe, P.E.  
Project Manager, Manufactured Gas Plant Remedial Section  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Bureau of Western Remedial Action, 11<sup>th</sup> Floor  
625 Broadway  
Albany, New York 12233-7010

**Re: Clifton, Staten Island Former Manufactured Gas Plant (MGP) Site  
Supplemental Remedial Investigation (RI) Work Plan  
1 Edgewater Street**

Dear Mr. Omorogbe:

KeySpan Corporation (KeySpan) is submitting this work plan to conduct supplemental remedial investigation (RI) activities at 1 Edgewater Street, which is located to the northeast of the former manufactured gas plant (MGP) site at 25 Willow Avenue (Operable Unit 2 [OU-2]), Clifton, Staten Island, New York. The work plan has been prepared in partial response to the June 19, 2003 New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) comments on the Draft Remedial Investigation Report (Draft RI Report) addressing OU-2. The work plan specifically addresses NYSDEC Comment #6 and describes a proposed scope to delineate the extent of tar northeast of Edgewater Street, where tar impacts have previously been observed.

Following your review of this work plan, please contact me with your approval or if you have any questions regarding the proposed scope of work.

### **Work Plan**

The work described herein will be conducted in accordance with the procedures specified in the New York State Department of Environmental Conservation (NYSDEC)-approved November 9, 1998 RI Work Plan for the site. In addition, the work will be conducted following the quality assurance/quality control (QA/QC) procedures established in the approved RI work plan. All field activities will comply with the health and safety procedures specified in the NYSDEC-approved site-specific Health and Safety Plan.

### **Previous Investigations Within Edgewater Street**

Soil borings SB-90C, SB-91/91A, SB-92, SB-93 and SB-94 were completed in November of 2002 to evaluate the lateral and vertical occurrence of tar beneath Edgewater Street to the northeast of the 25 Willow Avenue parcel (OU-2). Discrete intervals of tar residuals were observed in soil borings SB-93 and SB-94. In addition, approximately 5.5 feet of accumulated tar was measured in monitoring well RW-19, which was installed adjacent to SB-94. Laboratory analyses revealed elevated levels of the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylene (BTEX) and semivolatile organic compounds (SVOCs) polycyclic aromatic hydrocarbons (PAHs) in soil samples collected from these borings. No tar residuals were noted in SB-93 below 12 feet bgs or SB-94 below 28 feet bgs to the termination of each of these borings at 40 feet bgs. Only trace levels of BTEX and PAHs were detected at the termination of these borings. Detailed findings from the borings completed in Edgewater Street were presented in the Draft RI Report for OU-2.

### **Proposed Supplemental RI Activities – 1 Edgewater Street**

To evaluate the potential lateral and vertical extent of tar to the northeast of borings SB-93 and SB-94 within Edgewater Street, up to six borings (SB-95 through SB-100) will be completed utilizing a direct push Geoprobe<sup>®</sup> sampling rig within the paved parking lot of 1 Edgewater Street (Figure 1). Soil borings SB-95 through SB-97 will be drilled first, if tar-related impacts are observed, then borings SB-98 through SB-100 will be drilled. However, if no impacts are observed in the first line of borings, then borings SB-98 through SB-100 will not be required to delineate the extent of impacts. Each proposed boring will be advanced into the glacial till unit approximately 10 feet below the last observed occurrence of tar. Borings are anticipated to be completed to approximately 40 feet bgs. Soil samples will be collected continuously from each boring using 4-foot or 5-foot long MacroCore<sup>®</sup> samplers equipped with a discrete sampler device.

Drilling equipment (rods and macro-core sampler) will be decontaminated on a temporary decontamination pad located at the site or in the vicinity of the sampling rig. Soil cuttings, decontamination fluids, and personal protective equipment will be collected and stored within 55-gallon United States Department of Transportation (USDOT)-approved drums that will be staged at 40 Willow Avenue.

Up to two soil samples from each boring will be submitted to Severn-Trent Laboratories (STL) in Shelton, Connecticut for analysis of BTEX by United States Environmental Protection Agency (EPA) method 8260, PAHs by EPA method 8270, Resource Conservation Recovery Act (RCRA-8) metals by EPA method 6010, and total cyanide (TCN) by EPA method 9012. STL is a NYSDEC-approved laboratory.

Quality assurance samples to be submitted will include one blind duplicate soil sample, one matrix spike/matrix spike duplicate (MS/MSD) soil sample, and one soil sampling equipment rinsate blank. Each of the quality assurance samples will be collected and analyzed for BTEX, PAHs, RCRA-8 metals and total cyanide. One trip blank sample will be submitted for BTEX analysis per shipment of samples to the laboratory.

If potentially recoverable tar is encountered, a 1.5- or 2-inch inner diameter polyvinyl chloride (PVC) monitoring well (RW-20) will be constructed at the boring location exhibiting the greatest degree of observed tar-related impacts. The well will be constructed with a sump beneath the screen to serve as a potential tar recovery well. If tar is not encountered, then RW-20 will be installed to serve as a downgradient groundwater monitoring point to the northeast of the site. Each boring not completed as a monitoring well will be abandoned with a Portland/bentonite grout mix that will be tremied from the bottom of the boring to the top of the boring and covered with asphalt patch following completion.

Monitoring well (RW-20) will be developed in accordance with methods described within the NYSDEC-approved November 9, 1998 RI Work Plan. The groundwater samples will be collected no sooner than two weeks after development. The groundwater sample will be collected and analyzed for BTEX, PAHs, RCRA-8 metals, and total cyanide. Quality assurance samples will include one groundwater sampling equipment rinsate blank to be analyzed for BTEX, PAHs, RCRA-8 metals and total cyanide. One trip blank sample will be analyzed for BTEX.

If the monitoring well (RW-20) contains tar, the monitoring well will not be sampled and the tar will be gauged, removed and stored within the USDOT-approved 55-gallon drums located on the 40 Willow Avenue Parcel.

STL will provide New York State Category B data deliverables for the soil and groundwater samples that will be provided in both electronic and printed format. The analytical results will be validated in accordance with New York requirements and will be incorporated into the existing site-wide database.

The proposed borings will be located on 1 Edgewater Street, which is a privately owned parcel. Prior to the commencement of the supplemental RI drilling program, KeySpan will obtain property access, on-site utility plans for the proposed area of investigation, and provide notice to the New York City one-call utility clearance for the proposed borings. In addition, GEI will subcontract a utility mark-out subcontractor to identify potential utility concerns at the proposed work area. During drilling activities, GEI will have each boring location hand cleared or cleared with a utility clearance machine to identify potential utility concerns.

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The locations and elevations of each newly completed soil boring and monitoring well will be surveyed by a New York State licensed surveyor. These survey data will be incorporated into the site survey database.

### **Report Preparation**

The newly obtained data will be incorporated into the site-wide database and will be used to supplement the understanding of site conditions. The findings from this investigation will include new boring completion logs, summaries of laboratory data, laboratory data reports, and an evaluation and discussion of the mobility of dissolved phase contaminants and tar. These findings will be submitted to NYSDEC as a supplemental letter report to the RI report for OU-2.

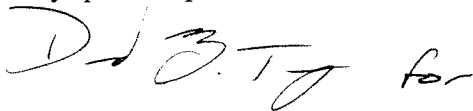
### **Schedule**

Field activities can commence following NYSDEC approval of this work scope. The field program is tentatively scheduled to start on the week of November 3<sup>rd</sup> and drilling activities will last for approximately five days. Issues affecting the start date include obtaining on-site access, utility clearance for the borings, potential utility conflicts based upon the utility mark-outs, and NYSDEC review and approval of this work plan letter.

If you have any questions or require any additional information, please contact me at 718-403-3053 or by email at [tbell@keyspanenergy.com](mailto:tbell@keyspanenergy.com).

Sincerely,

KeySpan Corporation



Tracey Bell  
Manager  
Environmental Asset Management

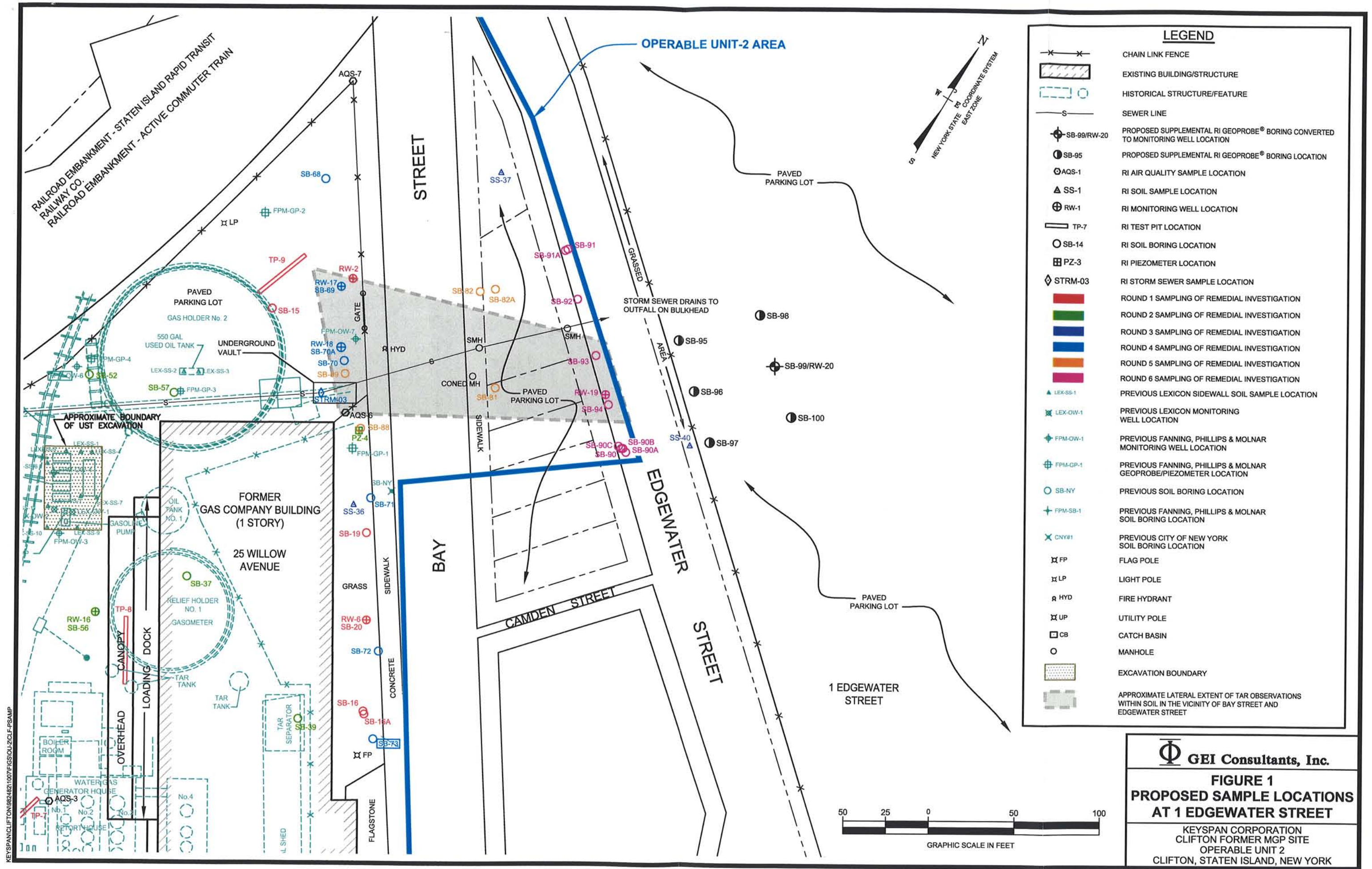
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Enclosures

c: L. Liebs-KeySpan  
B. McClellan-PS&S  
D. Terry-GEI





**LEGEND**

- CHAIN LINK FENCE
- EXISTING BUILDING/STRUCTURE
- HISTORICAL STRUCTURE/FEATURE
- SEWER LINE
- PROPOSED SUPPLEMENTAL RI GEOPROBE® BORING CONVERTED TO MONITORING WELL LOCATION
- PROPOSED SUPPLEMENTAL RI GEOPROBE® BORING LOCATION
- RI AIR QUALITY SAMPLE LOCATION
- RI SOIL SAMPLE LOCATION
- RI MONITORING WELL LOCATION
- RI TEST PIT LOCATION
- RI SOIL BORING LOCATION
- RI PIEZOMETER LOCATION
- RI STORM SEWER SAMPLE LOCATION
- ROUND 1 SAMPLING OF REMEDIAL INVESTIGATION
- ROUND 2 SAMPLING OF REMEDIAL INVESTIGATION
- ROUND 3 SAMPLING OF REMEDIAL INVESTIGATION
- ROUND 4 SAMPLING OF REMEDIAL INVESTIGATION
- ROUND 5 SAMPLING OF REMEDIAL INVESTIGATION
- ROUND 6 SAMPLING OF REMEDIAL INVESTIGATION
- PREVIOUS LEXICON SIDEWALL SOIL SAMPLE LOCATION
- PREVIOUS LEXICON MONITORING WELL LOCATION
- PREVIOUS FANNING, PHILLIPS & MOLNAR MONITORING WELL LOCATION
- PREVIOUS FANNING, PHILLIPS & MOLNAR GEOPROBE/PIEZOMETER LOCATION
- PREVIOUS SOIL BORING LOCATION
- PREVIOUS FANNING, PHILLIPS & MOLNAR SOIL BORING LOCATION
- PREVIOUS CITY OF NEW YORK SOIL BORING LOCATION
- FLAG POLE
- LIGHT POLE
- FIRE HYDRANT
- UTILITY POLE
- CATCH BASIN
- MANHOLE
- EXCAVATION BOUNDARY
- APPROXIMATE LATERAL EXTENT OF TAR OBSERVATIONS WITHIN SOIL IN THE VICINITY OF BAY STREET AND EDGEWATER STREET

**GEI Consultants, Inc.**

**FIGURE 1  
PROPOSED SAMPLE LOCATIONS  
AT 1 EDGEWATER STREET**

KEYSPAN CORPORATION  
CLIFTON FORMER MGP SITE  
OPERABLE UNIT 2  
CLIFTON, STATEN ISLAND, NEW YORK



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