GEI Consultants, Inc.

188 Norwich Avenue
P.O. Box 297
Colchester, CT 06415
(860) 537-0751
(860) 537-6347 Fax

November 4, 2002
982482-1-1001

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

Re: Former Clifton, Staten Island MGP Site
Supplemental Remedial Investigation (RI) Work Plan–Edgewater Street

Dear Mr. Omorogbe:

On behalf of our client, KeySpan Energy (KeySpan), GEI Consultants, Inc. (GEI) is submitting this work plan to conduct supplemental remedial investigations adjacent to the former manufactured gas plant (MGP) site located at 25 Willow Avenue within Operable Unit 2 (OU-2), Clifton, Staten Island, New York. Following your review of this work plan, please contact Ms. Tracey Bell at KeySpan with your approval or if you have any questions regarding this 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.

Off-Site Evaluation of Tar Migration from 25 Willow Avenue Parcel

Soil borings SB-81 and SB-82/82A were previously completed in May 2002 to evaluate the lateral and vertical presence of tar beneath Bay Street to the northeast of the 25 Willow Avenue parcel; within Operable Unit 2 (OU-2). Drilling observations revealed tar residuals in soil boring (SB-81) within a discrete interval located approximately from 13 feet to 21 feet below ground surface (bgs). Laboratory analyses revealed elevated levels of the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene xylene

(BTEX) and semivolatile organic compounds (SVOCs) polycyclic aromatic hydrocarbons (PAHs) within this interval. No tar residuals were noted in SB-81 below 21 feet bgs to the termination of the boring at 45 feet bgs where only trace levels of VOCs and naphthalene were detected above the laboratory detection limit. No tar residuals or odors were noted within boring SB-82/82A to the termination of the boring at 37 feet bgs. Laboratory analysis of a soil sample at the termination of this boring did not detect BTEX of PAHs above the laboratory detection limit.

To evaluate the potential lateral extent of tar to the northeast of boring SB-81, five borings (SB-90 through SB-94) will be completed utilizing a direct push Geoprobe® sampling rig within the Edgewater Street right-of-way (ROW). The proposed borings are presented on Figure 1. Each proposed boring will be advanced approximately 10 feet into the glacial till unit, which is located approximately 20 to 30 feet bgs. Soil samples will be collected continuously from each boring using 4-foot long MacroCore® 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 and decontamination waters will be collected and stored within 55-gallon USDOT-approved drums that will be staged on site.

Laboratory analysis will include up to two subsurface soil samples from each boring. Subsurface soil samples will be submitted to Severn-Trent Laboratories (STL) in Shelton, Connecticut for analysis of benzene, toluene, ethyl benzene and total xylenes (BTEX) by EPA method 8260, polycyclic aromatic hydrocarbons (PAHs) by EPA method 8270, Resource Conservation Recovery Act (RCRA-8) metals, and total cyanide (TCN).

Quality assurance samples to be submitted will include one blind duplicate soil sample, matrix spike/ matrix spike duplicate (MS/MSD), and one equipment rinse 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 laboratory.

Should field conditions indicate the presence of potential recoverable tar, one of the above listed borings will be completed as a polyvinyl chloride (PVC) monitoring well (RW-19) with a sump beneath the screen to serve as a potential tar recovery well. If tar is not encountered, then the monitoring well (RW-19) will be installed within the proposed boring (SB-93) to serve as a downgradient monitoring point to the northwest of the site. The monitoring well will be constructed in accordance with the methods described in the NYSDEC-approved November 9, 1998 RI Work Plan. Each boring not completed as a monitoring well will be abandoned with a Portland/bentonite grout mix and covered with asphalt patch following completion.

Following the installation of the monitoring well (RW-19), the monitoring well will be developed in accordance with methods described within the NYSDEC-approved November 9, 1998 RI Work Plan. Groundwater samples will be collected no sooner than two weeks after development. Each groundwater sample will be collected and analyzed for BTEX, PAHs, RCRA-8 metals, and total cyanide. Quality assurance samples will include one equipment rinse blank to be analyzed for BTEX, PAHs, RCRA-8 metals and total cyanide. One trip blank sample will be submitted for BTEX analysis.

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

The proposed borings will be located within Edgewater Street right-of-way (ROW). Space within the Edgewater Street ROW is limited and significant underground utilities are anticipated within portions of the ROW. The presence of these utilities will dictate the actual location of the borings. Each boring location was preliminarily marked out by GEI personnel during a subcontractor meeting in October 2002.

Survey

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.

RI Report Revision

The newly obtained data will be incorporated into the site-wide database, will be used to supplement the understanding of site conditions, and will be incorporated into the RI report for Operable Unit-2. Following evaluation of the analytical data and assuming that no further investigations are required, the existing RI report will be revised and submitted for NYSDEC review and approval. The revised RI report 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 DNAPL tar.

Schedule

Field activities to drill the planned soil borings can commence following NYSDEC approval of this work scope. The field program is currently scheduled to start on the week of November 11 and drilling activities will last for approximately one week. Issues affecting the start date include 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 Ms. Tracey Bell at 718-403-3053 or by email at tbell@keyspanenergy.com.

Sincerely,

GEI CONSULTANTS, INC.

David B. Terry, P.G., LEP
Project Manager

DBT:amm
Enclosures
c: T. Bell
L. Liebs
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