

February 23, 2009

Douglas MacNeal, P.E., Project Manager
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: Groundwater Sampling Work Plan
Rockaway Park Former MGP Site
Site # 2-41-029

Dear Mr. MacNeal:

This letter presents the work plan for conducting groundwater sampling and synoptic water level measurements at the Rockaway Park former MGP site. The scope of work described in this work plan is related to community concerns raised by Assemblywoman Audrey I. Pheffer and discussions with the New York State Department of Environmental Conservation (NYSDEC).

To address the community concerns that impacted groundwater extends south of the site beneath adjacent residential properties, National Grid proposes installation of up to five small-diameter water table (shallow groundwater zone) monitoring wells. Previous groundwater monitoring conducted during the remedial investigation utilized temporary groundwater probes. The proposed monitoring wells would be installed in the former locations of five temporary groundwater probes. The placement of these wells should intercept and laterally bound any potential groundwater impacts south of the former MGP site.

Groundwater Sampling Objectives

The objective of the groundwater sampling program is:

- Demonstrate the shallow groundwater conditions at and south of the former MGP site.
- Confirm the current flow direction of shallow groundwater during high and low tide.

Scope of Work

To meet the objectives stated above, the proposed scope of work will include the collection of groundwater samples from newly installed groundwater monitoring wells. Unless specified otherwise, all field investigation activities to be completed will be conducted in accordance with the NYSDEC-approved Generic Work Plan, Volume II, for the Investigation of the Rockaway Park former MGP Site, dated November 1999 (herein referred to as the "approved work plan").

Synoptic Water Levels Measurements (Tidal Study)

GEI Consultants, Inc. (GEI) will conduct a 48-hour tidal study using the existing shallow monitoring wells at the site as shown on **Figure 1 (Attachment A)**. The measurements will be collected using downhole dataloggers to identify groundwater flow direction during high and low tides. Monitoring data for each well will be recorded on the attached monitoring log (**Attachment B**). Monitoring wells containing NAPL will be measured for LNAPL using an oil/water interface probe and for dense non-aqueous phase liquids (DNAPL) using a dedicated weighted bailer. Dataloggers will not be used in these monitoring wells.

The tidal study will include measurements collected at the following monitoring wells:

On Site Monitoring Wells	Off Site Monitoring Wells
RPMW-08S, RPMW-10S, RPMW-14S MW-02, PZ-06	RPMW-01S, RPMW-02S RPMW-03S, RPMW-04S RPMW-11S, RPMW-16S RPMW-17S , PZ-07

In addition to monitoring wells, a tidal gauge transducer will be installed in a stilling well within Jamiaca Bay at the bulkhead. The results of the tidal gauge data and groundwater monitoring well elevation data will be used to determine the tidal influence on groundwater elevations.

Groundwater Monitoring Well Installation

Four permanent groundwater monitoring wells will be installed at the site by GEI to replicate the shallow groundwater probes collected during the RI. All monitoring wells will be installed by Geoprobe® direct push methods. The wells would be placed at the approximate locations of the former groundwater probes, RPGP-16, RPGP-14, RPGP-02, and RPGP-08. In addition, the shallow and intermediate intervals for monitoring well cluster RPMW-16 will be reinstalled in the original location between the residences and the metropolitan transit authority railroad tracks. The monitoring well screen intervals will be placed to intercept the water table at these locations. The depth to groundwater in this area is approximately 9 feet below grade surface (bgs). Therefore it is anticipated that the wells would be installed to depths of approximately 15 feet bgs. Specific well locations and screen settings will be determined in the field based on utility clearance and observed depth to groundwater. As part of the completion of each groundwater monitoring well, soil samples will be described in the field continuously. Well construction and development will be in accordance with the approved work plan.

Groundwater Sampling

All newly installed and existing shallow monitoring wells will be sampled for Benzene, Toluene, Ethyltoluene, Xylenes (BTEX) and polycyclic aromatic hydrocarbons (PAHs). If a measurable layer of non-aqueous phase liquids (NAPL) is identified within a well, no groundwater sample will be collected.

Table 1 (see **Attachment C**) summarizes the proposed sample points, the objective of each sample point, proposed depths of monitoring wells as well as the number of samples to be selected for laboratory analysis at each location. In addition, **Table 1** summarizes the planned chemical analysis of each sample and the laboratory data turnaround time. The proposed sample locations for the Rockaway Park Site are shown on **Figure 1**. Note that all proposed sample locations shown on **Figure 1** are approximate and that the actual location of each sample point will be determined in the field based on private property access, field conditions, equipment access, and utility clearance.

Quality Assurance/Quality Control (QA/QC) Plan

QA/QC samples will be collected as summarized in **Table 2**. One set of QA/QC samples, consisting of a matrix spike, matrix spike duplicate, and field blank will be collected and analyzed for every 20 environmental samples collected in the field.

All sample analysis and data validation will be conducted in accordance with the New York State Department of Environmental Conservation June 2000 Analytical Services Protocol (ASP). All other information not provided in this scope of work, such as detailed sampling procedures and protocols, is included in the approved work plan.

Health and Safety Plan

All fieldwork will be conducted in manner consistent with the provisions of the approved site-specific health and safety plan.

Field Program Schedule

It is anticipated that the field program will commence upon NYSDEC approval of this work plan. Monitoring well installation will commence pending private property access.

Summary Report

A summary report will be developed to present the findings of the groundwater investigation. The report will include the following:

- A supplemental investigation sample location map;
- New well completion logs;
- Graphics depicting the groundwater contours at low tide and high tide;
- Revised analytical data summary tables including comparison to appropriate standards, criteria and guidance values (SCGs);
- Data validation findings;
- Revised findings and recommendations, if necessary, based on the supplemental data.

If you have any questions, feel free to contact me at (516) 545-2555.

Sincerely,



Thomas J. Campbell
Project Manager

Attachment

cc: S. Selmer (NYSDOH)
V. Brevdo (NYSDEC, Region 2)
T. Leissing (National Grid)
F. Murphy (National Grid)
M. O'Neil (GEI)