Thomas Campbell
Project Manager

May 30, 2012

Mr. William Ports, P.E.
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, New York 12233-7013

Subject: Pre-Design Investigation Work Plan
Far Rockaway Former Manufactured Gas Plant (MGP) Site
1200-1224 Brunswick Avenue, Far Rockaway, New York
NYSDEC Site No.: 2-41-032, Order on Consent Index #: A2-0552-0660

Dear Mr. Ports:

National Grid is submitting the following Pre-Design Investigation (PDI) Work Plan to support the selected site remedy at the Far Rockaway Former Manufactured Gas Plant (MGP) site (Site) located at 1200-1224 Brunswick Avenue, Queens, New York. The site remedy is described in the New York State Department of Environmental Conservation (NYSDEC) March 2012 Record of Decision (ROD). The purpose of the PDI is to pre-characterize impacted soil at the 1224 and 1250 Brunswick Avenue properties to allow for direct dig and haul to licensed disposal facilities. This PDI is being conducted by National Grid pursuant to a Multi-site Order on Consent and administrative settlement with the NYSDEC, Index # A2-0552-0606, and in accordance with applicable guidelines of the NYSDEC and the New York State Department of Health (NYSDOH).

Background

The Site was operated as a MGP by Hempstead Gas and Electric Light Company from the mid 1890's to 1909. Long Island Lighting Company (LILCO), a predecessor company to National Grid (formally KeySpan), acquired the facility in 1923. The Site is approximately one-acre in size, zoned as M1-Light Manufacturing. It is currently owned by third parties for office space and warehousing, and contains three two-story buildings. Details of the Site history, setting, and investigation results are presented in the Remedial Investigation Report, Far Rockaway Former MGP Site, 1200 – 12124 Brunswick Avenue, Far Rockaway, Queens County, New York, prepared by AECOM on behalf of National Grid and approved by the NYSDEC in August 2011. Figure 1 illustrates the current site layout, the location of former MGP structures, observed MGP impacts, and the limits of the excavation specified in the FS.

Pre-Design Investigation Scope

The scope of the PDI will include the advancement of soil borings to complete the pre-characterization of soils for direct dig and haul to licensed disposal facilities during the remedial action. Soil boring locations will be hand cleared to a depth of 5 feet below ground surface (bgs) prior to advancement of each borehole.. Soil borings will be advanced continuously starting at 5 feet bgs. by direct-push technology to approximately 20 ft bgs using a 5 ft Marco-Core® discreet sampler. It should be noted that the soil borings are targeted for a 20 foot completion depth to provide some contingency on the design depth (maximum of 15 feet) of the soil excavation. Soil samples will be observed and described by the Site geologist. Soil boring locations have been determined by superimposing a sample grid over the excavation area assuming an excavation to a depth of 15 ft bgs. Each cell in the grid, presented on Figure 1, represents a

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soil volume of 250 cubic yards (cu yd) or less assuming a 15 foot deep excavation of 4,500 cu yd of soil. One soil boring will be advanced as close to the center of each cell in the grid as surface and subsurface obstructions permit, and one representative soil sample from each boring or a soil sample with the highest potential for impacts based on field (visual/photoionization detector [PID] screening) will be submitted for the analytical methods specified by the disposal facilities. In some instances, there may be additional samples collected from each boring and later composited into a single sample representing the "one sample per boring" to meet the specific requirements of each disposal facility. The specific analytical parameters and sample frequency are summarized on Table 1.

A detailed survey of the Site will be conducted prior to the PDI by a New York State-licensed surveyor under the direct supervision of AECOM. The survey work will provide a comprehensive site base map identifying all site features pertinent to the design. This includes:

- Topographic survey and mapping;
- Survey and mapping of general site features (buildings, curb, pavement, structures) and property lines; and
- Level A Subsurface Utility Engineering (SUE) survey to accurately identify and map above and below ground utilities.

Vertical elevations will be surveyed to an accuracy of 0.01 of a foot. The horizontal locations of each point will be established from directly measuring from site features with an accuracy of 0.1 foot. Elevations will be referenced to the North American Vertical Datum of 1988 (NAVD88) and horizontal locations will be based upon the North American Datum of 1983 Long Island Grid of the New York State Coordinate System (NAD83 N.Y.L.I. – 3104).

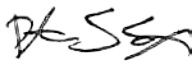
Additional activities to be completed to meet the PDI objectives include:

- Property access agreements
- Mobilization
- Utility clearance
- Waste management
- Community air monitoring

Unless otherwise specified above, these activities will be conducted in accordance with the methods, procedures, and documents specified in the Remedial Investigation Work Plan (RIWP) prepared for this site by National Grid, dated November 2007. Upon approval and updates (if needed) to existing access agreements, National Grid is prepared to complete this work in June/July 2012.

If you have any questions, please contact me (516-545-2555) or via electronic mail (e-mail) at thomas.campbell@us.ngrid.com.

Sincerely,


Pete Cox for
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Figures

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Stored Items

SB-110/MW-110

MW-110D/110-1D

MW-119D/119-1D

MW-119S/119-1S

SS-106

Platform

Paved Parking

LIRR

SB-106

MW-113S

MW-113D

SB-105/MW-105 (DESTROYED)

MW-105D/105-1D

MW-105S

SS-105

SS-113

MW-118D/118-1D

MW-118S/118-1S

SB-100/MW-100

SB

FORMER COAL BIN

1216 BRUNSWICK AVENUE

FORMER GAS GENERATOR

1224 BRUNSWICK AVENUE

PDI-3

PDI-2

B-1

A-1

D-1

C-1

Storage Area

PDI-1

Unpaved Area

C-2

SB-102

A-2

D-2

PDI-7

B-2

E-1

SB-114/MW-114

Paved Parking

C-3

B-3

A-3

D-3

PDI-6

FORMER 75,000 CF GAS HOLDER

121-1S/121-1D/121-2D

121-4S

121-2S

1250 BRUNSWICK AVENUE

PDI-5

MW-121D

MW-121S

E-2

B-4

A-4

D-4

SB-115

Paved Parking

121-3S

C-4

MW-117S

MW-117D

FORMER GASOLINE TANK (APPROXIMATE)

E-3

PDI-4

SB-103

FILL NON-MGP

SB-104

Storage Container

Storage Container

Storage Container

BRUNSWICK AVE.

15 0 30

GRAPHIC SCALE IN FEET

SB-107/MW-107

SS-104

LEGEND

- BUILDING
- EDGE OF PAVEMENT
- FENCE
- RAILROAD
- SIDEWALK
- RETAINING WALL
- HISTORIC MGP STRUCTURE
- LIMITS OF ON-SITE EXCAVATION 0-15 BGS
- MONITORING WELL/SOIL BORING
- SOIL BORING
- LIMITS OF OXYGEN INJECTION IF REQUIRED AFTER GW MONITORING

OBSERVED IMPACTS 0 TO 15 FEET BELOW GROUND SURFACE

- NO VISUAL IMPACTS
- STAINING
- BLEBS, GLOBS, LENSES, GRAIN COATING, SHEEN
- OUTER RING SHOWS DEEPER SAMPLE RESULT AT SAME BORING LOCATION
- APPROXIMATE EXTENT OF VISIBLE IMPACTS (DASHED WHERE INFERRED)
- SOIL CHARACTERIZATION GRID FOR 250yd^3 @ 15 FEET DEEP
- A-3 SOIL CHARACTERIZATION SAMPLING POINT – 15 FEET DEEP

AECOM

NATIONAL GRID
FORMER MGP SITE, FAR ROCKAWAY, NY

DATE: 05/22/2012 | DRWN: RCW

PROPOSED PREDESIGN INVESTIGATION BORING LOCATIONS CHARACTERIZATION GRIDS 250cu.yd. @ 15' deep

FIGURE 1

Table

AECOM

Table 1
Summary of Pre-characterization Disposal Facility Analytical Sampling Requirements
Pre-Design Investigation Work Plan
Former Far Rockaway MGP Site
Far Rockaway, New York

Contaminant	EPA Method	Frequency	Bayshore [1]	CESP (Morrisville, NJ)
Total VOCs	8260B	500 CY	X	
Total SVOCs	8270C	500 CY	X	
Total PCBs	8082	500 CY	X	X[7]
Total Metals (Priority Pollutant Metals)	3050/6010B	500 CY	X[2]	
Total RCRA Metals +Cu, Ni, Zn, Va, Cn, and Hex Chromium (if total Cr > 190 ppm)	6020A	1000 CY		X[7]
Mercury	7471	500 CY	X	
TPH	8015M DRO/GRO to C-44	250 CY	X	X[4]
TOX	9020B (9023)	250 CY		X[4]
Ignitability	1010 (7.1.2)	1000 CY		X[7]
Corrosivity	9040/9045	1000 CY		X[7]
Reactivity (Cyanides & Sulfides)	7.3.3.2 & 7.3.4.1	1000 CY		X[7]
Sulfur	ASTM D3176/4239D	1000 CY	X[6]	
TCLP Metals RCRA +Cu, Ni, Zn	1311/6010B	1000 CY		X[5 and 7]
TCLP Hg	1311/7471	1000 CY		X[5]
TCLP VOC	1311/8260	1000 CY		X[7]
TCLP SVOC	1311/8270	1000 CY		X[7]

Notes:

X signifies that the analysis is required

All TCLP levels are represented in mg/L

All totals are in mg/kg

(1) Bayshore Recycling Facility formally ESMI NJ. Composite of five samples (100 CY ea). Samples must be repeated for every 500 CY or fraction thereof.

(2) Includes As, Be, Cd, Cr, Ni, Pb, Hg.

(3) Plus Cu, Ni, Zn, Va, Cn, Hex Chromium (if total Cr > 190 ppm).

(4) One sample for initial 60 CY (90 tons) and second 60 CY (90 tons), then every 250 CY (375 tons) thereafter.

(5) TCLP analysis required when total concentrations are 20x the RCRA limit [40 CRF 281 Subpart C].

(6) Accepted methodologies: ASTM D129, ASTM 3176, 3177, 4239 Aand D2622 (Methods 426C, 428A); EPA SW-846 6010B, or 6020.

(7) One five-point composite sample for the first 1000 CY (1500 tons) and every 1000 CY (1500 tons thereafter).