NYSEG

October 12, 2005

John Spellman, P.E.
Project Manager
MGP Remedial Section
Bureau of Western Remedial Action
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway
Albany, NY 12233-7017

Subject: Auburn Clark Street Former MGP Site
SRI Interim Report/Proposed Scope of Expanded Work
Work Plan Addendum II

Dear Mr. Spellman:

Enclosed for your information and use is a proposed work plan addendum for the above-referenced site. This document briefly summarizes the results of investigation work completed per Work Plan Addendum I in August 2005 and presents a work scope and rationale for a second SRI expansion.

Pending your approval, NYSEG will advance the additional fieldwork as quickly as possible. We hope to begin soon before inclement weather has the potential to hamper our field efforts. If you have questions or comments concerning this work, please contact me by phone at (607) 762-8787 or by e-mail at jjruspantini@nyseg.com.

Sincerely,
NYSEG

John J. Ruspantini, CHMM
Environmental Analyst
Site Investigation & Remediation

cc: J. M. Simone
M. Gutmann – URS Corp.

Enclosure

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ATTACHMENT II

NEW YORK STATE ELECTRIC & GAS CORPORATION

SUPPLEMENTAL REMEDIAL INVESTIGATION

WORK PLAN ADDENDUM II

CLARK STREET FORMER MANUFACTURED GAS PLANT (SITE No. 7-06-008)

AUBURN, NEW YORK

OCTOBER 12, 2005

1.0 INTRODUCTION

This Work Plan Addendum summarizes the proposed work elements for the additional field investigations to be conducted as part of the Remedial Investigation at the NYSEG Clark Street site in Auburn, New York. This Work Plan Addendum must be used in conjunction with the existing Supplemental Remedial Investigation Work Plan, Quality Assurance Project Plan, Health and Safety Plan, and Field Sampling Plan (URS, October 2004). This addendum must be attached to the Supplemental Remedial Investigation Work Plan as Attachment II.

2.0 PURPOSE

The objectives of the additional field investigations are to delineate the horizontal and vertical extent of non-aqueous phase liquid (NAPL) in the bedrock, and to delineate the horizontal and vertical extent of the groundwater contaminant plume in the bedrock groundwater regime. The additional work elements needed to achieve the objectives were based upon data gathered as part of recent work completed at the site. Some of the data was summarized in the *Interim Summary Data Report, Former Clark Street Manufactured Gas Plant Site, Auburn, New York*, submitted to NYSDEC in March 2005. Key findings of the most recent round of field activities are presented herein.

3.0 RESULTS OF AUGUST 2005 FIELDWORK

Subsequent to the findings of the Interim Summary Report, one round of additional work was completed at the site in early August 2005. Bedrock monitoring wells MW-08D, MW-09D, MW-10D, MW11D were installed on the north side of the Owasco Outlet per the work scope outlined in Work Plan Addendum 1, (Attachment I?; dated June 6, 2005) Visual observations and Packer test data prompted the installation of two additional bedrock monitoring wells, MW-12D (east of MW-11D) and MW13B (west of MW-7B Based upon visual observations and detailed rock core inspection and dense non-aqueous phase liquid (DNAPL) observations from the August 2005 work done on MW-13B, no MGP-related impact existed at this location. However, the packer results and visual observations from the remaining bedrock wells installed in August 2005 indicate the need for additional wells to further delineate the extent of groundwater

contamination. Visual observations of DNAPL in these well drillings suggest that tar may be moving through the bedrock in a northeasterly direction, in a zone of east/west trending bedrock fractures. Packer test results indicated a decrease in concentrations of contaminants with depth. Detected concentrations of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were less in packer samples collected at depths greater than 50 feet below ground surface (Figures 1 and 2).

4.0 SCOPE OF WORK

The work scope is divided into the tasks listed below:

- Five additional deep-bedrock monitoring wells (MW-14D, MW-15D, MW-16D, MW-17D, and MW-18D) will be installed north of the Owasco outlet at the approximate locations shown on Figure 3.

- At the new deep bedrock well locations, the bedrock will be continuously cored until DNAPL is not observed in the bedrock or a maximum depth of approximately 50 to 60 feet below the top of bedrock. The core holes at locations at MW-14D, MW-15D, and MW-16D will be packer tested at 10-foot intervals using a single packer. Packer testing procedures are provided in Section 4.2. MW-17D and MW-18D will not be packer tested because DNAPL appears to be migrating northeast of the site and DNAPL was not observed in existing monitoring wells MW-08D and MW-10D. As shown in Table 1, groundwater samples collected during packer testing will be analyzed for BTEX and STARs PAHs and 2-methylnaphthalene and dibenzofuran. The data will be used to assess the vertical extent of the groundwater plume.

- Forensic PAH profile samples will be collected from up to three packer-tested intervals with NAPL (if detected).

- Groundwater samples will be collected from overburden wells MW-08S, MW-09S, MW-10S, MW-11S as one of the first field tasks during this phase of work. The Department has inquired about these wells specifically and NYSEG has decided to expedite sampling of these wells. After the five new wells are installed and developed, the21 remaining existing overburden and bedrock monitoring wells and the five newly installed monitoring wells will be sampled in a synoptic round. The groundwater samples will be analyzed for the parameters listed in Table 1.

- Groundwater potentiometric surface maps have been generated for the overburden and shallow bedrock zones. Figures 4 and 5 present the groundwater contours in the overburden on August 24, 2005, and September 1, 2005, respectively. Figure 6 presents the groundwater contours in the shallow bedrock on September 1, 2005. A potentiometric surface map for the deep bedrock was not generated of the long open hole intervals of MW-09D, MW-11D, and MW-12D. The long open hole intervals average the hydraulic interactions across the zones. As a result, potentiometric data from the deep portions of these wells are not yet available. During the upcoming fieldwork, NYSEG proposes to measure the potentiometric head in wells MW-08D through MW-12D, as well as the newly proposed wells, MW-14D through MW-18D using a portable inflatable packer unit. The unit will be made up of a one-inch PVC riser, and appropriate air lines and regulators for inflating the packer with nitrogen. At each well, the potentiometric head will be measured at approximately 10 foot intervals. These data will be used to develop potentiometric surface maps of the bedrock aquifer.

- Based upon the potentiometric data gathered as part of the previous task, as well as the stratigraphic and hydraulic information obtained as part of all field investigations, NYSEG will provide to the Department a letter of recommendation for retrofitting open hole bedrock monitoring wells. The letter of intent with rationale will be provided to the Department prior to completing this proposed phase of field work.

5.0 METHODS

5.1 Bedrock Monitoring Wells

Methods and procedures are described in Section 2.3 of the FSP.

5.2 Packer Testing/Sampling

Packer testing will be conducted during coring of the bedrock at three monitoring well locations (MW-14D, MW-15D, and MW-16D). Packer testing will be conducted to gather

information regarding water yield, hydraulic properties of the bedrock and the presence or absence of NAPL along with dissolved phase concentrations of indicator compounds. Packer samples will be collected to characterize the groundwater flow zones within the lower Marcellus Shale and Onondaga Limestone units.

A single packer will be used to isolate the bottom 10 feet of the borehole and a submersible pump will be used to pump the groundwater from the borehole. Groundwater samples from each 10-foot packer interval will be collected from wells (MW-14D, MW-15D, and MW-16D). The packer samples will be analyzed for BTEX (Method 8260B) and PAHs (Method 8270C) unless NAPL is observed in the drilling water or rock core. If NAPL is detected, a forensic extended PAH profile analytical sample will be collected at up to three locations, to be determined in the field in consultation with the NYSDEC representative. The groundwater samples will be collected after purging a minimum of three borehole volumes from the packer interval. If the packer interval goes dry during purging, then the groundwater sample will be collected after the borehole recovers.

Once the bedrock is cored to the desired total depth, the borehole will then be reamed to a nominal 4-inch diameter using a roller bit to a maximum depth of approximately 50 to 60 feet below the top of bedrock. The bedrock wells will remain as open bedrock monitors.

5.3 Deep Bedrock Packer Interval Hydraulic Monitoring

A portable inflatable packer unit with one-inch PVC Riser, and appropriate air lines and regulators for inflating the packer with nitrogen will be used at wells MW-08D through MW-12D and wells MW-14D through MW-18D. At each well approximately 10 foot of the well will be sealed at a time and the water levels in the inner and outer risers will be monitored until they return to static conditions. Upon reaching static conditions the assembly will be raised or lowered and the next depth zone will be monitored in the same manner. The wells will be monitored in this way during the same day to obtain comprehensive potentiometric surface data for the site.

6.0 ANALYTICAL PROGRAM

Table 1 summarizes the laboratory analytical program for these additional investigations. Severn Trent Laboratories, Inc. (STL) in Amherst, New York, a New York State ASP Laboratory, will analyze samples collected during this phase of the RI. STL will provide ASP Category B Quality Assurance/Quality Control (QA/QC) deliverables package for analytical data. META Environmental, Inc. of Watertown, Mass. will conduct the forensic PAH analyses. Table 2 summarizes the sample preservation requirements, bottle requirements, and holding times for the analytical parameters.

TABLE 1
SAMPLING AND ANALYSIS PROGRAM ADDENDUM
NYSEG - FORMER CLARK STREET MGP SITE

Analytical Method[1]	Matrix[2]	No. of Field Samples	Field Duplicates[3]	Equipment Blanks[3]	Trip Blanks[4]	MS/MSD (Pairs)[3]	Total No. of Samples
Groundwater Sampling							
BTEX (USEPA Method 8260B)	GW	29	2	2	5	2	42
PAHs (USEPA Method 8270C)		29	2	2	0	2	37
Total Phenols (USEPA Method 9065/420.2)		29	2	2	0	2	37
Total Cyanide (USEPA Method 9012A)		29	2	2	0	2	37
Free Cyanide (USEPA Method 9012A) [5]		6	1	1	0	1	10
Iron Cyanide Speciation (Ion Chromatography) [5]		6	1	1	0	1	10
Alkalinity (USEPA Method 310.1)		29	2	2	0	2	37
Chloride (USEPA Method 300.0)		29	2	2	0	2	37
Nitrate (USEPA Method 300.0)		29	2	2	0	2	37
Nitrite (USEPA Method 300.0)		29	2	2	0	2	37
Sulfate (USEPA Method 300.0)		29	2	2	0	2	37
Sulfide (USEPA Method 376.2)		29	2	2	0	2	37
Dissolved Iron (USEPA Method 6010B) - Field Filtered		29	2	2	0	2	37
Ferrous Iron (Field analysis)		29	2	2	0	2	37
Total Dissolved Solids (USEPA Method 160.1)		29	2	2	0	2	37
Packer Testing/Groundwater and NAPL Sampling							
BTEX (USEPA Method 8260B)	GW	25	2	2	5	2	38
PAHs (USEPA Method 8270C) (1-week TAT) [6]		25	2	2	0	2	33
Fingerprint/Forensic PAH Analysis (Modified Methods 8100/8270C)	NAPL	3	0	0	0	0	3

1. Test Methods for Evaluating Solid Waste, Physical Chemical Methods (SW-846) USEPA Final Update III, June 1997
   Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, USEPA, Revised March 1983

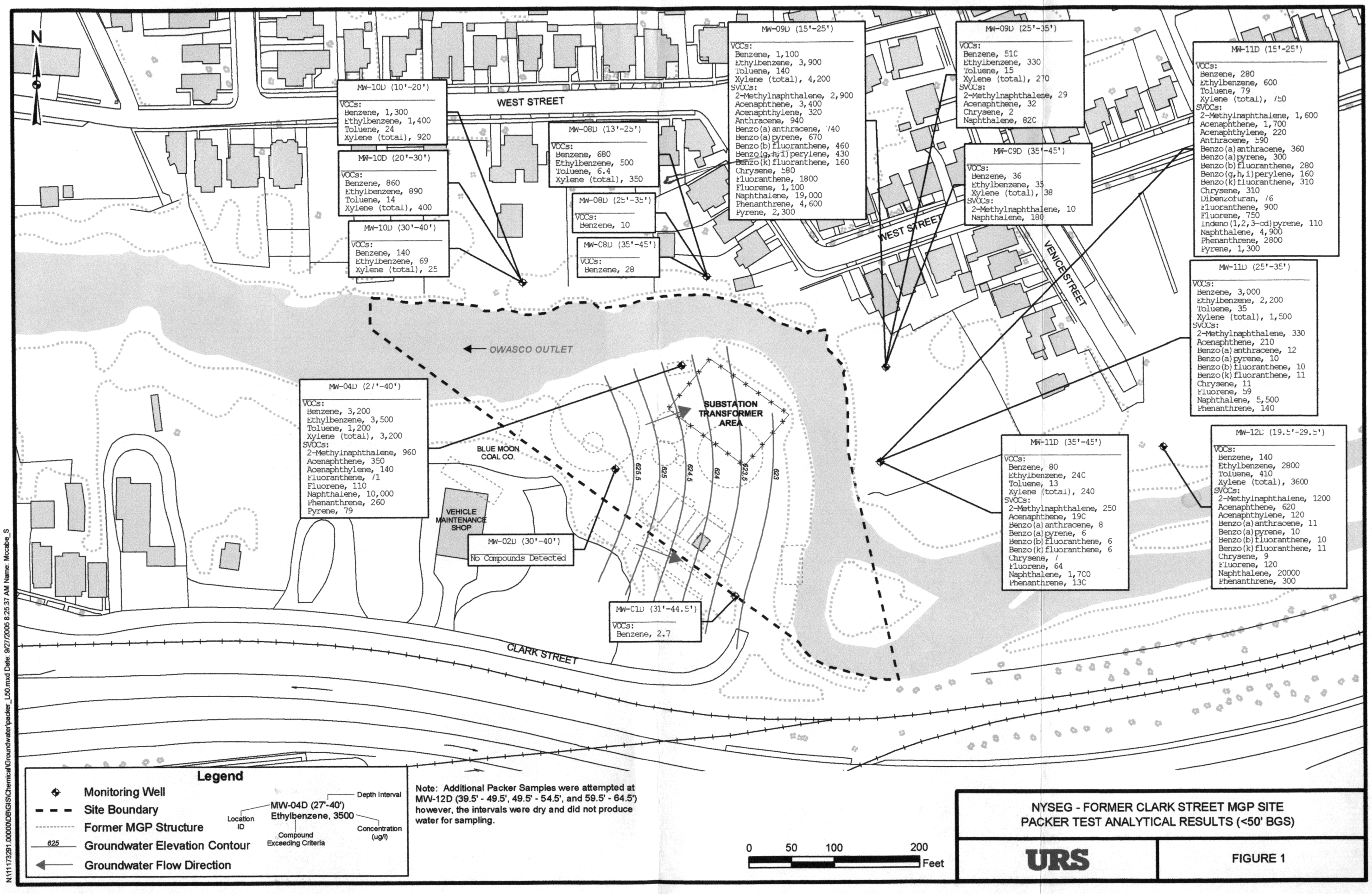
   TCL - USEPA Superfund Target Compound List
   SVOCs - Semivolatile Organic Compounds
   BTEX - Benzene, toluene, ethylbenzene, and xylenes
   PAHs - Polyaromatic hydrocarbons

2. GW - groundwater, NAPL - non-aqueous phase liquid
3. Assumes a 5% frequency (one per 20 field samples)
4. Approximate - Assumes one per day of field sampling for water samples only
5. Will be analyzed as needed if total cyanide concentration exceeds applicable regulatory criteria.
6. PAHs include acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenz(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, 2-methylnaphthalene, naphthalene, phenanthrene, pyrene, and dibenzofuran.

TABLE 2
SAMPLE CONTAINERS, PRESERVATION, AND HOLDING TIMES
NYSEG - FORMER CLARK STREET MGP SITE

Test Type	Container	Preservation	Holding time
Field Measurements			
Field pH	4 oz. wide-mouth glass	N/A	Immediate
Field temperature	4 oz. wide-mouth glass	N/A	Immediate
Field conductance	4 oz. wide-mouth glass	N/A	Immediate
Lab Measurements			
AQUEOUS SAMPLES			
BTEX (EPA Method 8260B)	3-40 ml septa vials, Glass	HCl to pH < 2	Analyze within 14 days.
PAHs (EPA Method 8270C)	2-1 Liter Amber Glass	Cool 4 ^{0}C	Extract within seven days; analyze within 40 days
Total Phenols (EPA Method 9065/420.2)	1-8 oz. Amber Glass	$H2SO_4$ to pH < 2	Analyze within 28 days.
Cyanide, Total/Free (EPA 9012A/335.3)	1-8 oz., Plastic	NaOH to pH > 12 0.6g ascorbic acid	Analyze within 14 days.
Iron Cyanide Speciation (Ion Chromatography)	1-8 oz., Plastic	NaOH to pH > 12 0.6g ascorbic acid	Analyze within 14 days.
Alkalinity (EPA 310.1)	1-32 oz., Plastic	Cool 4 ^{0}C	Analyze within 14 days.
Chloride (EPA 300.0)			Analyze within 28 days.
Nitrate (EPA 353.1)			Analyze within 48 hours.
Nitrite (EPA 354.1)			Analyze within 48 hours.
Sulfate (EPA 300.0)			Analyze within 28 days.
Total Dissolved Solids (EPA 160.1)			Analyze within 7 days.
Sulfide (EPA 376.2)	1-8 oz., Plastic	NaOH to pH > 12 / Zinc Acetate	Analyze within 7 days.
TAL Metals (EPA Methods 6010B/7470A)	1-8 oz., Plastic	HNO_3 to pH < 2	Analyze within 6 months.
Dissolved Iron (EPA 6010B)	1-8 oz., Plastic	HNO_3 to pH < 2	Field filter immediately, analyze within 6 months.

TAL - USEPA Superfund Target Analyte List
SVOCs - Semivolatile Organic Compounds
BTEX - Benzene, toluene, ethylbenzene, and xylenes
PAHs - Polyaromatic hydrocarbons


N
WEST STREET
MW-10D (10'-20')
VOCs:
Benzene, 1,300
Ethylbenzene, 1,400
Toluene, 24
Xylene (total), 920
MW-10D (20'-30')
VOCs:
Benzene, 860
Ethylbenzene, 890
Toluene, 14
Xylene (total), 400
MW-10D (30'-40')
VOCs:
Benzene, 140
Ethylbenzene, 69
Xylene (total), 25
MW-08D (13'-25')
VOCs:
Benzene, 680
Ethylbenzene, 500
Toluene, 6.4
Xylene (total), 350
MW-08D (25'-35')
VOCs:
Benzene, 10
MW-C8D (35'-45')
VOCs:
Benzene, 28
MW-09D (15'-25')
VOCs:
Benzene, 1,100
Ethylbenzene, 3,900
Toluene, 140
Xylene (total), 4,200
SVOCs:
2-Methylnaphthalene, 2,900
Acenaphthene, 3,400
Acenaphthylene, 320
Anthracene, 940
Benzo(a)anthracene, 740
Benzo(a)pyrene, 670
Benzo(b)fluoranthene, 460
Benzo(g,h,i)perylene, 430
Benzo(k)fluoranthene, 160
Chrysene, 580
Fluoranthene, 1800
Fluorene, 1,100
Naphthalene, 19,000
Phenanthrene, 4,600
Pyrene, 2,300
MW-09D (25'-35')
VOCs:
Benzene, 510
Ethylbenzene, 330
Toluene, 15
Xylene (total), 270
SVOCs:
2-Methylnaphthalene, 29
Acenaphthene, 32
Chrysene, 2
Naphthalene, 820
MW-C9D (35'-45')
VOCs:
Benzene, 36
Ethylbenzene, 35
Xylene (total), 38
SVOCs:
2-Methylnaphthalene, 10
Naphthalene, 180
WEST STREET
VENICE STREET
MW-11D (15'-25')
VOCs:
Benzene, 280
Ethylbenzene, 600
Toluene, 79
Xylene (total), 750
SVOCs:
2-Methylnaphthalene, 1,600
Acenaphthene, 1,700
Acenaphthylene, 220
Anthracene, 590
Benzo(a)anthracene, 360
Benzo(a)pyrene, 300
Benzo(b)fluoranthene, 280
Benzo(g,h,i)perylene, 160
Benzo(k)fluoranthene, 310
Chrysene, 310
Dibenzofuran, 76
Fluoranthene, 900
Fluorene, 750
Indeno(1,2,3-cd)pyrene, 110
Naphthalene, 4,900
Phenanthrene, 2800
Pyrene, 1,300
MW-11D (25'-35')
VOCs:
Benzene, 3,000
Ethylbenzene, 2,200
Toluene, 35
Xylene (total), 1,500
SVOCs:
2-Methylnaphthalene, 330
Acenaphthene, 210
Benzo(a)anthracene, 12
Benzo(a)pyrene, 10
Benzo(b)fluoranthene, 10
Benzo(k)fluoranthene, 11
Chrysene, 11
Fluorene, 59
Naphthalene, 5,500
Phenanthrene, 140
MW-11D (35'-45')
VOCs:
Benzene, 80
Ethylbenzene, 240
Toluene, 13
Xylene (total), 240
SVOCs:
2-Methylnaphthalene, 250
Acenaphthene, 190
Benzo(a)anthracene, 8
Benzo(a)pyrene, 6
Benzo(b)fluoranthene, 6
Benzo(k)fluoranthene, 6
Chrysene, 7
Fluorene, 64
Naphthalene, 1,700
Phenanthrene, 130
MW-12D (19.5'-29.5')
VOCs:
Benzene, 140
Ethylbenzene, 2800
Toluene, 410
Xylene (total), 3600
SVOCs:
2-Methylnaphthalene, 1200
Acenaphthene, 620
Acenaphthylene, 120
Benzo(a)anthracene, 11
Benzo(a)pyrene, 10
Benzo(b)fluoranthene, 10
Benzo(k)fluoranthene, 11
Chrysene, 9
Fluorene, 120
Naphthalene, 20000
Phenanthrene, 300
OWASCO OUTLET
SUBSTATION TRANSFORMER AREA
BLUE MOON COAL CO.
VEHICLE MAINTENANCE SHOP
625.5
625
624.5
624
623.5
623
MW-04D (27'-40')
VOCs:
Benzene, 3,200
Ethylbenzene, 3,500
Toluene, 1,200
Xylene (total), 3,200
SVOCs:
2-Methylnaphthalene, 960
Acenaphthene, 350
Acenaphthylene, 140
Fluoranthene, 71
Fluorene, 110
Naphthalene, 10,000
Phenanthrene, 260
Pyrene, 79
MW-02D (30'-40')
No Compounds Detected
MW-C1D (31'-44.5')
VOCs:
Benzene, 2.7
CLARK STREET
Legend
Monitoring Well
Site Boundary
Former MGP Structure
625 Groundwater Elevation Contour
Groundwater Flow Direction
MW-04D (27'-40')
Ethylbenzene, 3500
Location ID
Depth Interval
Compound Exceeding Criteria
Concentration (ug/l)
Note: Additional Packer Samples were attempted at MW-12D (39.5' - 49.5', 49.5' - 54.5', and 59.5' - 64.5') however, the intervals were dry and did not produce water for sampling.
0 50 100 200
Feet
NYSEG - FORMER CLARK STREET MGP SITE
PACKER TEST ANALYTICAL RESULTS (<50' BGS)
URS
FIGURE 1
N:\11173291.00000\DB\GIS\Chemical\Groundwater\packer_L50.mxd Date: 9/27/2005 8:25:37 AM Name: Mccabe_S

N

WEST STREET

MW-10D (40'-50')
No Compounds Exceed Criteria

MW-10D (50'-60')
VOCs:
Benzene, 210
Ethylbenzene, 190
Xylene (total), 100
SVOCs:
2-Methylnaphthalene, 14
Naphthalene, 600

MW-08D (45'-55')
VOCs:
Benzene, 42

MW-08D (55'-65')
VOCs:
Benzene, 140
Ethylbenzene, 16
Toluene, 5.6
Xylene (total), 12

MW-11D (45'-55')
VOCs:
Benzene, 15
Ethylbenzene, 140
Xylene (total), 170
SVOCs:
2-Methylnaphthalene, 640
Acenaphthene, 380
Chrysene, 2
Fluorene, 110
Naphthalene, 2,800
Phenanthrene, 160

MW-11D (55'-65')
VOCs:
Benzene, 7.4
Ethylbenzene, 78
Toluene, 5.4
Xylene (total), 86
SVOCs:
2-Methylnaphthalene, 410
Acenaphthene, 500
Acenaphthylene, 78
Anthracene, 180
Benzo(a)anthracene, 130
Benzo(a)pyrene, 100
Benzo(b)fluoranthene, 97
Benzo(g,h,i)perylene, 56
Benzo(k)fluoranthene, 110
Chrysene, 110
Fluoranthene, 310
Fluorene, 250
Naphthalene, 1,100
Phenanthrene, 980
Pyrene, 470

MW-04D (40'-50')
VOCs:
Benzene, 1,600
Ethylbenzene, 1,000
Toluene, 84
Xylene (total), 760
SVOCs:
2-Methylnaphthalene, 420
Acenaphthene, 260
Fluorene, 80
Naphthalene, 5,400
Phenanthrene, 150

MW-04D (50'-60')
VOCs:
Benzene, 140
Ethylbenzene, 310
Toluene, 44
Xylene (total), 230
SVOCs:
2-Methylnaphthalene, 200
Acenaphthene, 120
Naphthalene, 1,900
Phenanthrene, 120

OWASCO OUTLET

MW-04D (60'-70')
VOCs:
Benzene, 380
Ethylbenzene, 490
Toluene, 100
Xylene (total), 450
SVOCs:
2-Methylnaphthalene, 370
Acenaphthene, 110
Acenaphthylene, 180
Fluorene, 71
Naphthalene, 3,500
Phenanthrene, 150

SUBSTATION TRANSFORMER AREA

BLUE MOON COAL CO.

625.5
625
624.5
624
623.5
623

MW-11D (65.3'-70.3')
VOCs:
Benzene, 7.4
Ethylbenzene, 110
Toluene, 39
Xylene (total), 96
SVOCs:
2-Methylnaphthalene, 250
Acenaphthene, 180
Benzo(a)anthracene, 8
Benzo(a)pyrene, 4
Benzo(b)fluoranthene, 3
Chrysene, 6
Fluorene, 66
Naphthalene, 1,600
Phenanthrene, 140

MW-04D (70'-80')
VOCs:
Benzene, 730
Ethylbenzene, 2,800
Toluene, 330
Xylene (total), 1,900
SVOCs:
2-Methylnaphthalene, 2,600
Acenaphthene, 1,500
Acenaphthylene, 630
Anthracene, 660
Benzo(a)anthracene, 440
Benzo(a)pyrene, 490
Benzo(b)fluoranthene, 530
Benzo(g,h,i)perylene, 120
Benzo(k)fluoranthene, 69
Chrysene, 470
Fluoranthene, 1,200
Fluorene, 840
Indeno(1,2,3-cd)pyrene, 93
Naphthalene, 14,000
Phenanthrene, 3,100
Pyrene, 1,800

VEHICLE MAINTENANCE SHOP

MW-04D (80'-90')
VOCs:
Benzene, 90
Ethylbenzene, 440
Toluene, 69
Xylene (total), 400
SVOCs:
2-Methylnaphthalene, 400
Acenaphthene, 96
Acenaphthylene, 190
Benzo(a)anthracene, 21
Benzo(a)pyrene, 15
Benzo(b)fluoranthene, 19
Benzo(k)fluoranthene, 19
Chrysene, 18
Fluorene, 66
Naphthalene, 3,500
Phenanthrene, 180
Pyrene, 55

MW-02D (40'-50')
No Compounds Detected

MW-02D (50'-60')
No Compounds Detected

MW-02D (60'-70')
No Compounds Detected

MW-01D (44.5'-54.5')
No Compounds Detected

MW-01D (54.5'-64.5')
No Compounds Detected

MW-01D (64.5'-74.5')
No Compounds Detected

MW-01D (74.5'-79.5')
No Compounds Detected

CLARK STREET

Legend

- Monitoring Well
- Site Boundary
- Former MGP Structure
- 625 Groundwater Elevation Contour
- Groundwater Flow Direction

MW-04D (80'-90') — Location ID
Ethylbenzene, 440 — Compound Exceeding Criteria; Concentration (ug/l)
Depth Interval

0 50 100 200 Feet

NYSEG - FORMER CLARK STREET MGP SITE
PACKER TEST ANALYTICAL RESULTS (>50' BGS)

URS

FIGURE 2

N:\11173291.00000\DB\GIS\Chemical\Groundwater\packer_G50.mxd Date: 9/27/2005 8:29:43 AM Name: Mccabe_S

N

MW-18D

WEST STREET

MW-17D

MW-15D

MW-16D

WEST STREET

VENICE STREET

WASHINGTON ST

MW-14D

MW-10D

MW-10S

MW-08D

MW-08S

MW-09S

MW-09D

MW-04D

MW-04

MW-04B

MW-06

MW-06B

MW-03

MW-03B

MW-07B

SUBSTATION TRANSFORMER AREA

BLUE MOON COAL CO.

MW-02D

MW-02B

MW-02

MW-13B

VEHICLE MAINTENANCE SHOP

MW-05

MW-05B

MW-11D

MW-11S

MW-12D

MW-01B

MW-01D

MW-01

CLARK STREET

Legend

- Proposed Monitoring Well
- Overburden Monitoring Well
- Shallow Bedrock Monitoring Well
- Deep Bedrock Monitoring Well
- Site Boundary
- Former MGP Structure

0 50 100 200 Feet

NYSEG - FORMER CLARK STREET MGP SITE
PROPOSED MONITORING WELL LOCATIONS

URS

FIGURE 3

N:\11173291.00000\DBG\Sproposed_wells.mxd Date: 9/27/2005 8:15:15 AM Name: Mccabe_S

N

MW-10S, 626.67

MW-08S, 626.70

SG-02L, 626.90

OWASCO OUTLET

MW-04, 627.00

MW-03, 627.20

627

MW-06, 627.00

MW-09S, 626.87

SG-01L, 626.74

SUBSTATION
TRANSFORMER
AREA

627

627.5

BLUE MOON
COAL CO.

MW-11S, 627.74

628

MW-02, 627.83

SG-04L, 626.94

MW-05, 627.98

VEHICLE
MAINTENANCE
SHOP

628.5

629

629.5

630

MW-01, 630.25

CLARK STREET

Legend

- Monitoring Well
- Stream Gauge
- 630 Groundwater Elevation Contour
- Groundwater Flow Direction
- Site Boundary
- MW-01, 630.25 (Location ID / Groundwater Elevation (ft amsl))

0 30 60 120 Feet

NYSEG - FORMER CLARK STREET MGP SITE
GROUNDWATER POTENTIOMETRIC SURFACE MAP
(AUGUST 24, 2005 - OVERBURDEN)

URS

FIGURE 4

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N

MW-10S, 625.95

MW-08S, 626.61

628

OWASCO OUTLET

SG-02L, Dry

MW-04, 627.41

MW-03, 629.45

MW-06, 627.82

MW-09S, 627.72

SG-01L, Dry

626.5

627

627.5

628

628.5

629

SUBSTATION TRANSFORMER AREA

BLUE MOON COAL CO.

MW-02, 628.60

MW-11S, 627.75

SG-04L, 625.83

MW-05, 629.23

629.5

VEHICLE MAINTENANCE SHOP

630

630.5

MW-01, 630.77

CLARK STREET

Legend

- Monitoring Well
- Stream Gauge
- 630 Groundwater Elevation Contour
- Groundwater Flow Direction
- Site Boundary
- MW-01, 630.77 (Location ID / Groundwater Elevation (ft amsl))

0 30 60 120 Feet

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NYSEG - FORMER CLARK STREET MGP SITE
GROUNDWATER POTENTIOMETRIC SURFACE MAP
(SEPTEMBER 1, 2005 - OVERBURDEN)

URS

FIGURE 5

N

OWASCO OUTLET

SG-02L, Dry

MW-04B, 626.14

MW-06B, 626.36

SG-01L, Dry

MW-03B, 625.66

626

MW-07B, 626.63

SUBSTATION TRANSFORMER AREA

626.2

626.4

626.6

626.8

627

627.2

627.4

627.6

627.8

BLUE MOON COAL CO.

MW-13B, 627.05

MW-02B, 627.85

SG-04L, 625.83

MW-05B, 626.53

VEHICLE MAINTENANCE SHOP

MW-01B, 626.18

CLARK STREET

Legend

- Monitoring Well
- Stream Gauge
- Groundwater Elevation Contour (630)
- Groundwater Flow Direction
- Site Boundary
- MW-01B, 626.18 (Location ID; Groundwater Elevation (ft amsl))

0 30 60 120 Feet

NYSEG - FORMER CLARK STREET MGP SITE
GROUNDWATER POTENTIOMETRIC SURFACE MAP
(SEPTEMBER 1, 2005 - SHALLOW BEDROCK)

URS

FIGURE 6

N:\11173291.00000\DB\GIS\Geology\090105_ShallowRK.mxd Date: 9/14/2005 3:18.14 PM Name: Mccabe_S