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Niagara Mohawk
A National Grid Company

August 4, 2005

Mr. Scott Deyette
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233

Re: Site Characterization Data Summary Report for Fulton (N. Ontario St.) Former Manufactured Gas Plant (MGP) Site, Fulton, New York

Dear Mr. Deyette:

Please find attached the *Site Characterization Data Summary Report, Fulton (North Ontario St.) Former MGP, Fulton, New York* prepared by Brown and Caldwell Associates. The Site Characterization (SC) Data Summary Report comprises tables, figures and logs that relate the findings of the initial SC activities, and is being submitted in accordance with: the *Site Characterization/Interim Remedial Measure Work Plan for Site investigations at Fulton Non-Owned Former MGP Site* (EECS, Inc., January 2004) (hereafter referred to as the "SC Work Plan"); the August 17, 2004 letter addendum to the SC Work Plan; and the Voluntary Consent Order (VCO) between the New York State Department of Environmental Conservation (NYSDEC) and Niagara Mohawk, A National Grid Company (Niagara Mohawk) dated January 25, 2002.

The Data Usability Summary Report (DUSR), presenting the results of the independent validation of the analytical data for the initial SC, was previously submitted to the NYSDEC.

Data and information obtained during the initial SC investigation activities indicate that although MGP-related constituents are locally present at the site, they are not extensive and do not represent substantial potential impacts to human health or the environment. Thus, a Remedial Investigation (RI) may not be required for the site. However, Niagara Mohawk recommends that additional SC activities be conducted to confirm this. Accordingly, Niagara Mohawk would like to schedule a meeting with the NYSDEC to discuss the findings of the initial SC and possible additional SC activities. After you have had an opportunity to review the attached SC Data Summary Report, please contact me to schedule this meeting.

Please contact me if you have any questions or require additional information (315-428-5652).

Sincerely,

Steven P. Stucker, C.P.G.
Senior Analyst

Cc :
William Holzhauer-National Grid Service Company (w/o report)
Terry Young-Niagara Mohawk, a National Grid Company (w/o report)
Wendy Kuehner-NYSDOH (w/report)
Robert O'Neill-Brown & Caldwell (w/o report)

Brown and Caldwell Associates

Site Characterization
Data Summary Report
Fulton (North Ontario St.)
Former MGP
Fulton, New York

August 2005

SITE CHARACTERIZATION
DATA SUMMARY REPORT
FULTON (NORTH ONTARIO ST.) FORMER MGP
FULTON, NEW YORK

Prepared for:

Niagara Mohawk, A National Grid Company
300 Erie Boulevard West
Syracuse, New York 13202

Prepared by:

Brown and Caldwell Associates
110 Commerce Drive
Allendale, New Jersey 07401

August 2005

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8/2/2005

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TABLE 1
WELL CONSTRUCTION AND WATER LEVEL DATA
Fulton (North Ontario St.) MGP Site, Fulton, New York

Well	Ground Surface Elevation (ft., NGVD)	Top of Casing Elevation (ft., NGVD)	Top of Screen (ft., BGS)	Bottom of Screen (ft., BGS)	Date of Measurements	Total Depth (ft., BTOC)	Depth to Water (ft., BTOC)	Water Elevation (ft., NGVD)
MW-101	329.76	329.61	8.0	18.0	12/14/2004	16.44	11.46	318.15
MW-102	324.81	324.63	6.0	16.0	12/14/2004	15.50	9.85	314.78
MW-103	327.29	327.06	9.0	19.0	12/15/2004	18.15	12.36	314.70
PZ-1	329.65	329.65	NA	NA	12/15/2004	14.53	10.32	319.33
PZ-2	329.38	329.38	NA	NA	12/15/2004	14.25	9.54	319.84
PZ-3	327.06	327.06	NA	NA	12/15/2004	13.25	12.05	315.01

Notes:

NGVD - National Geodetic Vertical Datum
BGS - Below Ground Surface
BTOC - Below Top of Casing
NA - Not Available. PZ-1, PZ-2, and PZ-3 were installed previously by another party.

TABLE 2
SOIL ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Recommended Soil Cleanup Objective (TAGM 4046)	B-104 22-24' 11/16/2004	B-104 24-25.3' 11/16/2004	B-104 DUP 24-25.3' 11/16/2004	MW-101 8-10' 11/12/2004	MW-102 10-12' 11/12/2004
Volatile Organic Compounds							
BTEX							
Benzene	mg/Kg	0.06	0.55	0.0013 J	0.029 J	0.00034 U	0.0017 J
Ethylbenzene	mg/Kg	5.5	1.4 D	0.0083 J	0.43 J	0.00042 U	0.011
Toluene	mg/Kg	1.5	0.56 JD	0.0055 J	0.59 J	0.00043 U	0.0023 J
o-Xylene	mg/Kg	1.2	1.4 D	0.013 J	0.45 J	0.00072 U	0.012
m&p-Xylenes	mg/Kg	1.2	4.4 D	0.031 J	1.5 J	0.00086 U	0.016
Total BTEX	mg/Kg	NE	8.3	0.059	3.0	ND	0.043
Other VOCs							
Acetone	mg/Kg	0.2	NA	NA	NA	NA	NA
Methylene chloride	mg/Kg	0.1	NA	NA	NA	NA	NA
Tetrachloroethene	mg/Kg	1.4	NA	NA	NA	NA	NA
Semivolatile Organic Compounds							
Noncarcinogenic PAHs							
Acenaphthene	mg/Kg	50	6.5 JD	36 D	71 D	0.012 U	0.54
Acenaphthylene	mg/Kg	41	43 JD	10 D	18 D	0.016 U	0.66
Anthracene	mg/Kg	50	66 JD	35 D	62 D	0.013 U	2.6 JD
Benzo(g,h,i)perylene		50	8.1 JD	8.4 D	8.6 JD	0.024 U	0.017 U
Fluoranthene	mg/Kg	50	59 JD	69 D	140 JED	0.074 J	4.3 D
Fluorene	mg/Kg	50	40 JD	48 D	84 D	0.016 U	5.2 EJ
Naphthalene	mg/Kg	13	180 JD	57 D	92 D	0.012 U	2.3
Phenanthrene	mg/Kg	50	100 JD	130 D	220 JED	0.012 U	9 D
Pyrene	mg/Kg	50	60 JD	53 D	110 D	0.079 J	3.8 D
Total Noncarcinogenic PAHs	mg/Kg	NE	563	446	806	0.153	28
Carcinogenic PAHs							
Benzo(a)anthracene	mg/Kg	0.224	34 JD	36 D	61 D	0.0083 U	2.7
Benzo(a)pyrene	mg/Kg	0.061	23 JD	21 D	42 D	0.0095 U	1.9
Benzo(b)fluoranthene	mg/Kg	1.1	25 JD	29 D	50 D	0.029 U	2.6
Benzo(k)fluoranthene	mg/Kg	1.1	12 JD	9 D	24 D	0.019 U	1
Chrysene		0.4	26 JD	22 D	40 D	0.055 J	2
Dibenzo(a,h)anthracene	mg/Kg	0.014	4 JD	2.3 JD	4.4 JD	0.016 U	0.2 J
Indeno(1,2,3-cd)pyrene	mg/Kg	3.2	12 JD	9.7 D	8.2 JD	0.013 U	0.32 J
Total Carcinogenic PAHs	mg/Kg	NE	136	129	230	0.055	11
Total PAHs	mg/Kg	NE	699	575	1035	0.208	39
Other SVOCs							
Bis(2-ethylhexyl)phthalate	mg/Kg	50	NA	NA	NA	NA	NA
Carbazole	mg/Kg	NE	NA	NA	NA	NA	NA
Dibenzofuran	mg/Kg	6.2	NA	NA	NA	NA	NA
Di-n-butylphthalate	mg/Kg	8.1	NA	NA	NA	NA	NA
Phenol	mg/Kg	0.03	NA	NA	NA	NA	NA
Polychlorinated Biphenyls			not detected in samples (only sample TP-102A-F was analyzed)				

TABLE 2
SOIL ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Recommended Soil Cleanup Objective (TAGM 4046)	B-104 22-24' 11/16/2004	B-104 24-25.3' 11/16/2004	B-104 DUP 24-25.3' 11/16/2004	MW-101 8-10' 11/12/2004	MW-102 10-12' 11/12/2004
Pesticides			not detected in samples (only sample TP-102A-F was analyzed)				
Inorganic Constituents							
Aluminum	mg/Kg	SB	NA	NA	NA	NA	NA
Antimony	mg/Kg	SB	NA	NA	NA	NA	NA
Arsenic	mg/Kg	7.5 or SB	NA	NA	NA	NA	NA
Barium	mg/Kg	300 or SB	NA	NA	NA	NA	NA
Beryllium	mg/Kg	0.16 or SB	NA	NA	NA	NA	NA
Calcium	mg/Kg	SB	NA	NA	NA	NA	NA
Chromium	mg/Kg	10 or SB	NA	NA	NA	NA	NA
Cobalt	mg/Kg	30 or SB	NA	NA	NA	NA	NA
Copper	mg/Kg	25 or SB	NA	NA	NA	NA	NA
Iron	mg/Kg	2000 or SB	NA	NA	NA	NA	NA
Lead	mg/Kg	SB	NA	NA	NA	NA	NA
Magnesium	mg/Kg	SB	NA	NA	NA	NA	NA
Manganese	mg/Kg	SB	NA	NA	NA	NA	NA
Mercury	mg/Kg	0.1 or SB	NA	NA	NA	NA	NA
Nickel	mg/Kg	13 or SB	NA	NA	NA	NA	NA
Potassium	mg/Kg	SB	NA	NA	NA	NA	NA
Selenium	mg/Kg	2 or SB	NA	NA	NA	NA	NA
Vanadium	mg/Kg	150 or SB	NA	NA	NA	NA	NA
Zinc	mg/Kg	20 or SB	NA	NA	NA	NA	NA
Cyanide, Total	mg/Kg	NE	1	2	6.2	0.174 U	0.122 U
Other Parameters							
Total Organic Carbon	mg/Kg	NE	8500	6100	6600	15000	3700

Notes:
U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The method detection limit is the associated numerical value.
J - Estimated concentration. The result is below the quantitation limit but above the method detection limit.
D - The sample was diluted.
UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported method detection limit is approximate and may or may not represent the actual limit of the quantitation necessary to accurately and precisely measure the analyte in the sample.
E - Value exceeds calibration range.
N - Spiked sample recovery not within control limits.
SB - Site Background. Site background concentrations have not been established.
NE - Not established.
NA - Not analyzed.
ND - Not detected.
Boxed values indicate concentrations above the NYSDEC Recommended Soil Cleanup Objectives. Boxed and X rejected value.
* - Duplicate analysis is not within control limits.

TABLE 2
SOIL ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Recommended Soil Cleanup Objective (TAGM 4046)	MW-102 12-14' 11/12/2004	MW-103 8-10' 11/15/2004	TP-102A-F 11/11/2004	TP-103-F 11/10/2004	TP-103-N 11/10/2004
Volatile Organic Compounds							
BTEX							
Benzene	mg/Kg	0.06	0.00024 U	0.0019 J	0.0012 U	0.00025 UJ	0.00023 U
Ethylbenzene	mg/Kg	5.5	0.0083	0.0022 J	0.0012 U	0.0003 UJ	0.00028 U
Toluene	mg/Kg	1.5	0.0012 J	0.0029 J	0.0013 U	0.00032 UJ	0.00029 U
o-Xylene	mg/Kg	1.2	0.0065	0.011	0.0012 U	0.00053 UJ	0.00049 U
m&p-Xylenes	mg/Kg	1.2	0.0058 J	0.014	0.0032 U	0.00063 UJ	0.00058 U
Total BTEX	mg/Kg	NE	0.0218	0.032	ND	ND	ND
Other VOCs							
Acetone	mg/Kg	0.2	NA	NA	0.015 J	NA	NA
Methylene chloride	mg/Kg	0.1	NA	NA	0.0019 J	NA	NA
Tetrachloroethene	mg/Kg	1.4	NA	NA	0.0071 J	NA	NA
Semivolatile Organic Compounds							
Noncarcinogenic PAHs							
Acenaphthene	mg/Kg	50	0.13 J	11	0.018 U	0.018 UJ	0.0081 UJ
Acenaphthylene	mg/Kg	41	0.58	19 D	0.330 J	0.097 J	0.011 U
Anthracene	mg/Kg	50	1.1	69 D	0.380 J	0.16 J	0.0088 U
Benzo(g,h,i)perylene	mg/Kg	50	0.017 U	31 D	0.320 J	0.6 J	0.016 U
Fluoranthene	mg/Kg	50	2.1	120 D	5.8 D	2.2	0.0051 U
Fluorene	mg/Kg	50	0.96	34 D	0.065 J	0.084 J	0.01 U
Naphthalene	mg/Kg	13	1.3	77 D	0.027 U	0.13 J	0.008 U
Phenanthrene	mg/Kg	50	2.8 D	160 D	1.9	2.6	0.0082 U
Pyrene	mg/Kg	50	1.5	110 D	5.9 JD	2.1	0.0065 UJ
Total Noncarcinogenic PAHs	mg/Kg	NE	10	631	15	8.0	ND
Carcinogenic PAHs							
Benzo(a)anthracene	mg/Kg	0.224	0.83	87 D	3.7 D	0.86	0.0055 U
Benzo(a)pyrene	mg/Kg	0.061	0.58	62 D	2.4	0.91	0.0063 U
Benzo(b)fluoranthene	mg/Kg	1.1	0.7	74 D	3.9 D	1.2	0.02 U
Benzo(k)fluoranthene	mg/Kg	1.1	0.26 J	41 D	2.3	0.530 J	0.013 U
Chrysene	mg/Kg	0.4	0.64	72 D	4 D	1.1	0.012 U
Dibenzo(a,h)anthracene	mg/Kg	0.014	0.099 J	10	0.12 J	0.16 J	0.011 U
Indeno(1,2,3-cd)pyrene	mg/Kg	3.2	0.19 J	32 D	0.68	0.019 U	0.0089 U
Total Carcinogenic PAHs	mg/Kg	NE	3.3	378	17	4.8	ND
Total PAHs	mg/Kg	NE	14	1009	32	12.7	ND
Other SVOCs							
Bis(2-ethylhexyl)phthalate	mg/Kg	50	NA	NA	0.072 J	NA	NA
Carbazole	mg/Kg	NE	NA	NA	0.4	NA	NA
Dibenzofuran	mg/Kg	6.2	NA	NA	0.061 J	NA	NA
Di-n-butylphthalate	mg/Kg	8.1	NA	NA	0.075 J	NA	NA
Phenol	mg/Kg	0.03	NA	NA	0.05 J	NA	NA
Polychlorinated Biphenyls	not detected in samples (only sample TP-102A-F was analyzed)						

TABLE 2
SOIL ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Recommended Soil Cleanup Objective (TAGM 4046)	MW-102 12-14' 11/12/2004	MW-103 8-10' 11/15/2004	TP-102A-F 11/11/2004	TP-103-F 11/10/2004	TP-103-N 11/10/2004
Pesticides			not detected in samples (only sample TP-102A-F was analyzed)				
Inorganic Constituents							
Aluminum	mg/Kg	SB	NA	NA	2150 *EJ	NA	NA
Antimony	mg/Kg	SB	NA	NA	12.8	NA	NA
Arsenic	mg/Kg	7.5 or SB	NA	NA	57.7 *	NA	NA
Barium	mg/Kg	300 or SB	NA	NA	100	NA	NA
Beryllium	mg/Kg	0.16 or SB	NA	NA	0.29	NA	NA
Calcium	mg/Kg	SB	NA	NA	4630	NA	NA
Chromium	mg/Kg	10 or SB	NA	NA	6.7 *	NA	NA
Cobalt	mg/Kg	30 or SB	NA	NA	3.4	NA	NA
Copper	mg/Kg	25 or SB	NA	NA	24.1 *	NA	NA
Iron	mg/Kg	2000 or SB	NA	NA	20600 *	NA	NA
Lead	mg/Kg	SB	NA	NA	920 *	NA	NA
Magnesium	mg/Kg	SB	NA	NA	1240	NA	NA
Manganese	mg/Kg	SB	NA	NA	157	NA	NA
Mercury	mg/Kg	0.1 or SB	NA	NA	0.738 NJ	NA	NA
Nickel	mg/Kg	13 or SB	NA	NA	6.2	NA	NA
Potassium	mg/Kg	SB	NA	NA	663	NA	NA
Selenium	mg/Kg	2 or SB	NA	NA	3.5	NA	NA
Vanadium	mg/Kg	150 or SB	NA	NA	12.2 *	NA	NA
Zinc	mg/Kg	20 or SB	NA	NA	69.2 *	NA	NA
Cyanide, Total	mg/Kg	NE	0.126 U	1.2	0.004 U	0.004 U	0.003 U
Other Parameters							
Total Organic Carbon	mg/Kg	NE	3100	12000	~~50000 R~~	~~50000 R~~	2600

Notes:
U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit. The method detection limit is the associated numerical value.
J - Estimated concentration. The result is below the quantitation limit but above the method detection limit.
D - The sample was diluted.
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E - Value exceeds calibration range.
N - Spiked sample recovery not within control limits.
SB - Site Background. Site background concentrations have not been established.
NE - Not established.
NA - Not analyzed.
ND - Not detected.
Boxed values indicate concentrations above the NYSDEC Recommended Soil Cleanup Objectives. Boxed and X rejected value.
* - Duplicate analysis is not within control limits.

TABLE 3
GROUNDWATER ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Class GA Groundwater Criteria	MW-101	MW-101 DUP	MW-102	MW-103	PZ-1	PZ-2	PZ-3
			12/14/2004	12/14/2004	12/14/2004	12/15/2004	12/15/2004	12/15/2004	12/15/2004
Volatile Organic Compounds									
BTEX									
Benzene	ug/L	1	0.5 U	0.5 U	2.2 J	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	ug/L	5	0.5 U	0.5 U	2.6 J	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	ug/L	5	0.5 U	0.5 U	1.3 J	0.5 U	0.5 U	0.5 U	8.8 J
o-Xylene	ug/L	5	0.5 U	0.5 U	2.4 J	0.5 U	0.5 U	0.5 U	0.5 U
m&p-Xylenes	ug/L	5	0.5 U	0.5 U	2.7 J	0.5 U	0.5 U	0.5 U	0.5 U
Total BTEX	ug/L	NE	ND	ND	11.2	ND	ND	ND	8.8
Other VOCs									
Carbon disulfide	ug/L	NE	0.5 U	0.5 U	0.5 U	0.5 U	4.1 J	2.5 J	8 J
Semivolatile Organic Compounds									
Acenaphthene	ug/L	NE	1.2 U	1.1 U	3.1 J	1.1 U	1.2 U	1.2 U	NA
Acenaphthylene	ug/L	NE	1.2 U	1.1 U	4.9 J	1.1 U	1.2 U	1.2 U	NA
Fluorene	ug/L	NE	1.2 U	1.1 U	3.7 J	1.1 U	1.2 U	1.2 U	NA
Bis(2-ethylhexyl)phthalate	ug/L	5	2.4 U	2.5 J	2.4 U	2.4 U	2.4 U	2.4 U	NA
Carbazole	ug/L	NE	0.87 U	0.86 U	3.6 J	0.86 U	0.88 U	0.87 U	NA
Dibenzofuran	ug/L	NE	1.1 U	1 U	3.2 J	1 U	1.1 U	1.1 U	NA
2-Methylnaphthalene	ug/L	NE	1.5 U	1.5 U	2.2 J	1.5 U	1.5 U	1.5 U	NA
Total SVOCs	ug/L	NE	ND	2.5	20.7	ND	ND	ND	NA
Inorganic Constituents									
Aluminum	ug/L	NE	3060 J	216 J	220 J	555 J	38400 J	6500 J	NA
Arsenic	ug/L	25	23	24.2	14.5	12.8	49.4	5.54 J	NA
Barium	ug/L	1000	1650	1490	191 J	332	1200	646	NA
Beryllium	ug/L	NE	1.1 U	1.1 U	1.1 U	1.1 U	2.12 J	1.1 U	NA
Calcium	ug/L	NE	217000	211000	103000	181000	146000	161000	NA
Chromium	ug/L	50	11.1	4.02 J	2.4 U	2.4 U	50.7	17.8	NA
Cobalt	ug/L	NE	8.1 J	3.38 J	2.86 J	1.52 J	34.4 J	8.36 J	NA
Copper	ug/L	200	28.6	7.87 J	8.18 J	7.21 J	93.3	55.4	NA
Iron	ug/L	300	29600	24300	4710	6570	109000	15700	NA
Lead	ug/L	25	8.74 J	2.7 U	2.7 U	5.07 J	128	107	NA
Magnesium	ug/L	35000	30900	29700	9460	22700	24600	20600	NA
Manganese	ug/L	300	3320 N	3120 N	291 N	1300 N	2730 N	1460 N	NA

TABLE 3

GROUNDWATER ANALYTICAL RESULTS
DETECTED CONSTITUENTS
FULTON (North Ontario St.) MGP Site
Fulton, New York

Constituent	Units	Class GA Groundwater Criteria	MW-101 12/14/2004	MW-101 DUP 12/14/2004	MW-102 12/14/2004	MW-103 12/15/2004	PZ-1 12/15/2004	PZ-2 12/15/2004	PZ-3 12/15/2004
Mercury	ug/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	1.09	0.2 U	NA
Nickel	ug/L	100	10.5 J	4.9 U	8.67 J	4.9 U	56.8	14.1 J	NA
Potassium	ug/L	NE	18200	17300	2880 J	12100	8370	10700	NA
Selenium	ug/L	10	5.6 U	5.6 U	5.6 U	5.6 U	8.35 J	5.6 U	NA
Silver	ug/L	50	6.11 J	6.47 J	4.9 U	4.9 U	4.9 U	4.9 U	NA
Sodium	ug/L	20000	815000	807000	66400	248000	139000	516000	NA
Vanadium	ug/L	NE	10.8 J	5.32 J	1.6 U	1.6 U	61	9.64 J	NA
Zinc	ug/L	NE	33.8 J	16 J	46.2 J	27.3 J	381	233	NA
Cyanide, Total	ug/L	200	0.76 U	2.2 J	13.7	11	0.76 U	0.76 U	NA

Notes:
U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J - Estimated concentration. The result is below the quantitation limit but above the method detection limit.
N - Spiked sample recovery not within control limits.
NE - Not established.
ND - Not detected
Boxed concentrations are above New York State Class GA Groundwater Standards and Guidance.

TABLE 4
FIELD PARAMETER MEASUREMENTS FOR GROUNDWATER
Fulton (North Ontario St.) MGP Site, Fulton, New York

Well	Date	pH	Temperature (°C)	Specific Conductance (mS/cm)	ORP (mV)	Dissolved Oxygen (mg/l)	Turbidity (NTU)
MW-101	12/14/2004	6.95	10.45	4.81	-121.0	0.99	93.6
MW-102	12/14/2004	6.31	10.79	0.864	31.0	1.00	95.0
MW-103	12/15/2004	6.61	10.55	2.02	-2.0	0.67	45.4
PZ-1	NA	NA	NA	NA	NA	NA	NA
PZ-2	NA	NA	NA	NA	NA	NA	NA
PZ-3	NA	NA	NA	NA	NA	NA	NA

Notes:

°C - degrees centigrade
mS/cm - milliSiemens per centimeter
mV - millivolts
mg/l - milligrams per liter
NTU - nephelometric turbidity units
NA - Not Available

TABLE 5

SUMMARY OF VISUAL/OLFACTORY FIELD OBSERVATIONS
Fulton (North Ontario St.) MGP Site

Location	Depth (ft., BGS)	Description
Soil Borings		
B-104	14-16	Moderate tar odor
	18-20	Slight tar odor
	20-22	Slight odor
	22-24	Brown-black, viscous NAPL in last 6 inches. Strong tar odor.
	24-26	24.5-24.7: Brown-black NAPL. 25-25.3: NAPL in tip of split-spoon. Strong sheen.
	26-28	Soil partially saturated with NAPL. Stained 26.1 to 26.2.
	28-28.2	Strong tar odor. Sheen in water above sample.
B-105		No observations or odor indicative of MGP-related materials.
MW-101	18-20	Slight sheen on bubbles in water with sample.
MW-102	6-8	Moderate tar odor. Stained.
	8-10	Moderate tar odor.
	10-12	10-11.2: Stained throughout. Moderate tar odor. 11.2-12 (top of till): Slight tar odor.
	12-14	Occasional black stain. Stained areas have strong tar odor.
	14-16	Little stain.
MW-103		No observations or odor indicative of MGP-related materials.
Test Pits		
TP-101A		No observations or odor indicative of MGP-related materials.
TP-101B		No observations or odor indicative of MGP-related materials.
TP-102A	8	Viscous tar coating on piece of brick. No odor.
TP-102B		No observations or odor indicative of MGP-related materials.
TP-103	1.5	Black stained soil
	3.5	Hardened tar attached to rotten wood.
TP-104		No observations or odor indicative of MGP-related materials.
Monitoring Wells/Piezometers		
MW-101		No observations or odor indicative of MGP-related materials.
MW-102		Tar-like odor and sheen on water during 12/14/04 groundwater sampling.
MW-103		No observations or odor indicative of MGP-related materials.
PZ-1		No observations or odor indicative of MGP-related materials.
PZ-2		No observations or odor indicative of MGP-related materials.
PZ-3		No observations or odor indicative of MGP-related materials.

FIGURES

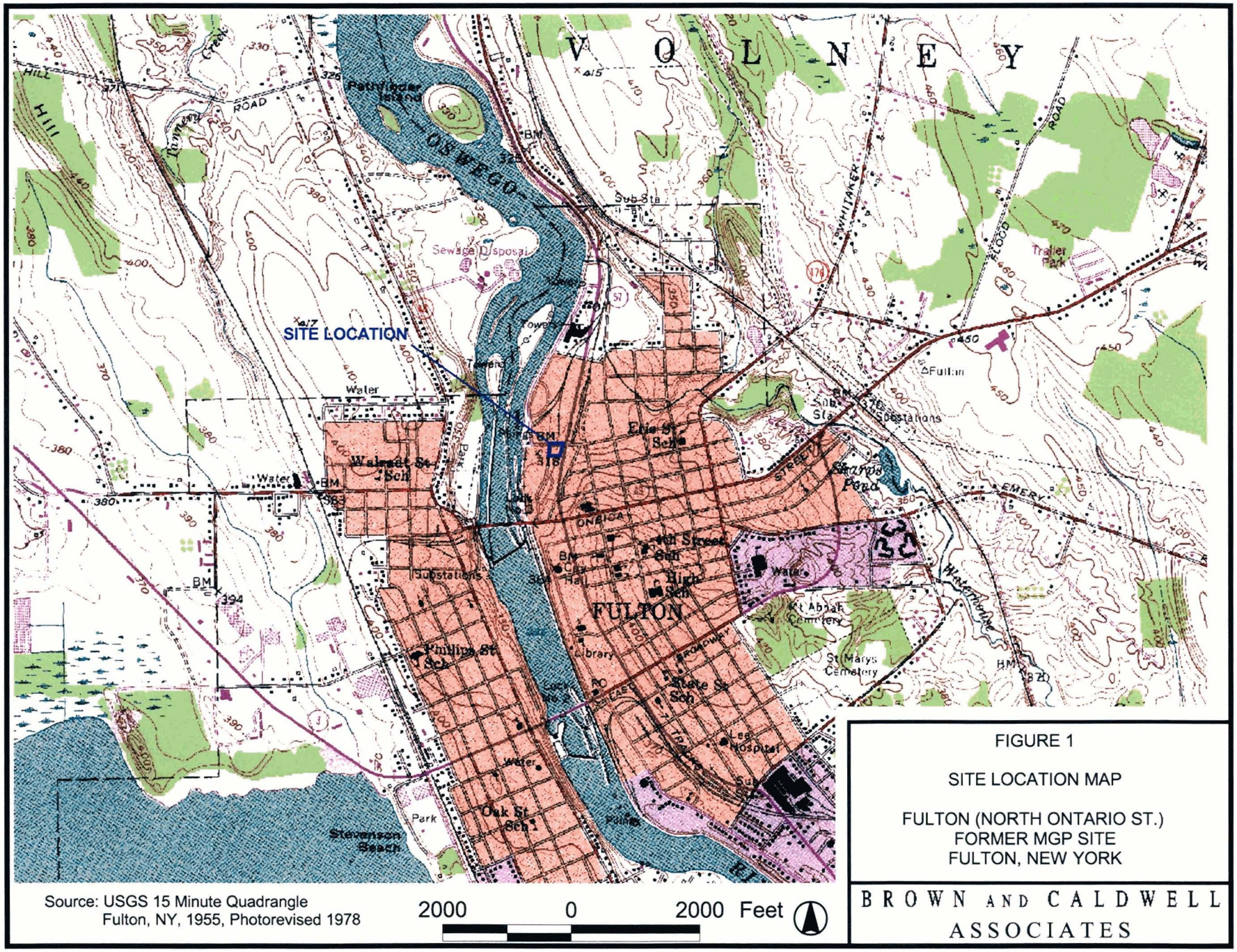
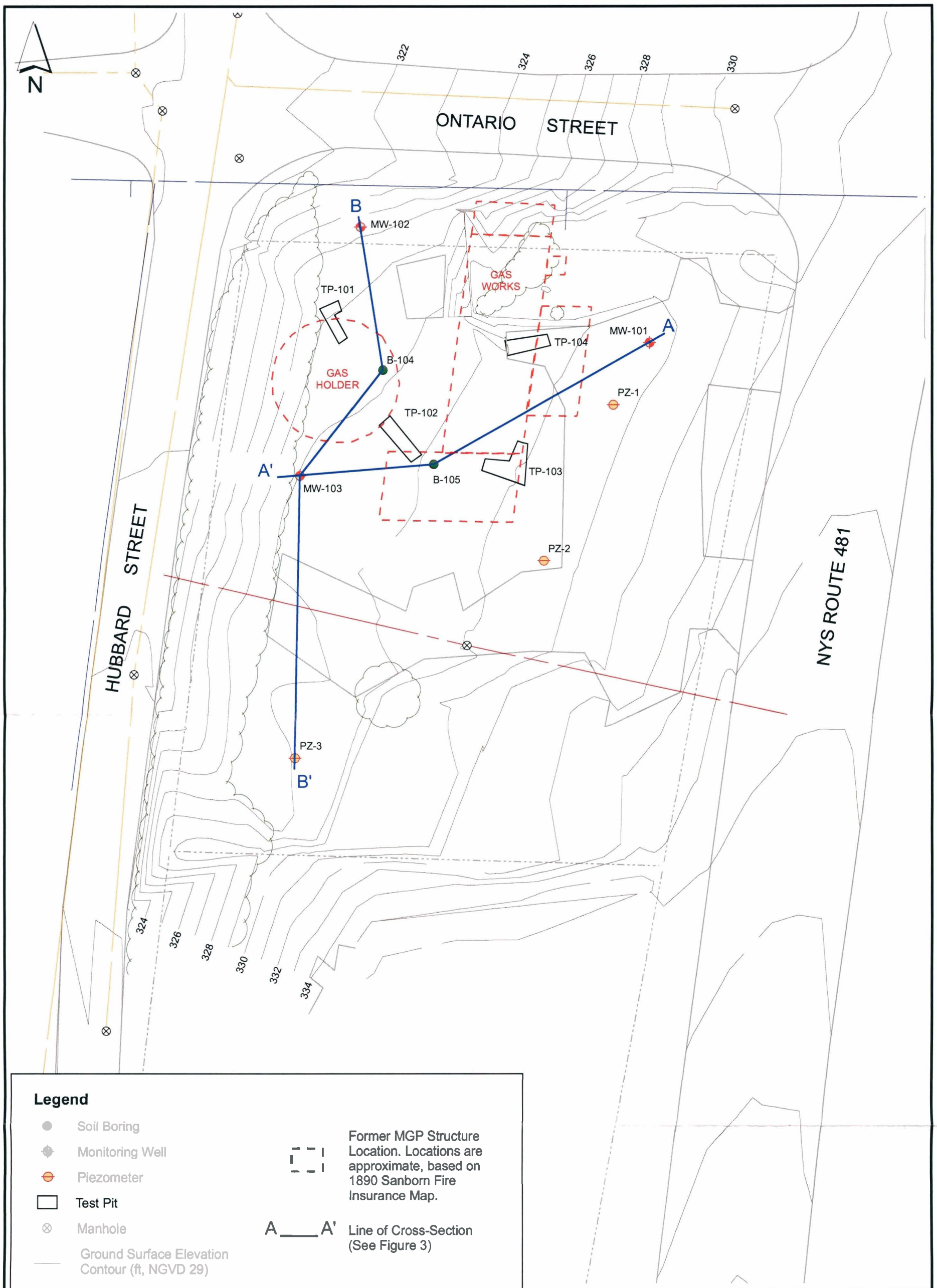


FIGURE 1

SITE LOCATION MAP

FULTON (NORTH ONTARIO ST.)
FORMER MGP SITE
FULTON, NEW YORK

BROWN AND CALDWELL ASSOCIATES



Legend

- Soil Boring
- Monitoring Well
- Piezometer
- Test Pit
- Manhole
- Ground Surface Elevation Contour (ft, NGVD 29)
- Property Line
- Pavement Edge
- Vegetation
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line

Former MGP Structure Location. Locations are approximate, based on 1890 Sanborn Fire Insurance Map.

A____A' Line of Cross-Section (See Figure 3)

Source: Base map developed based on drawing prepared by Snyder Engineering & Land Surveying, LLP (January 11, 2005). Refer to this drawing for site details.

30 15 0 30 Feet

FIGURE 2

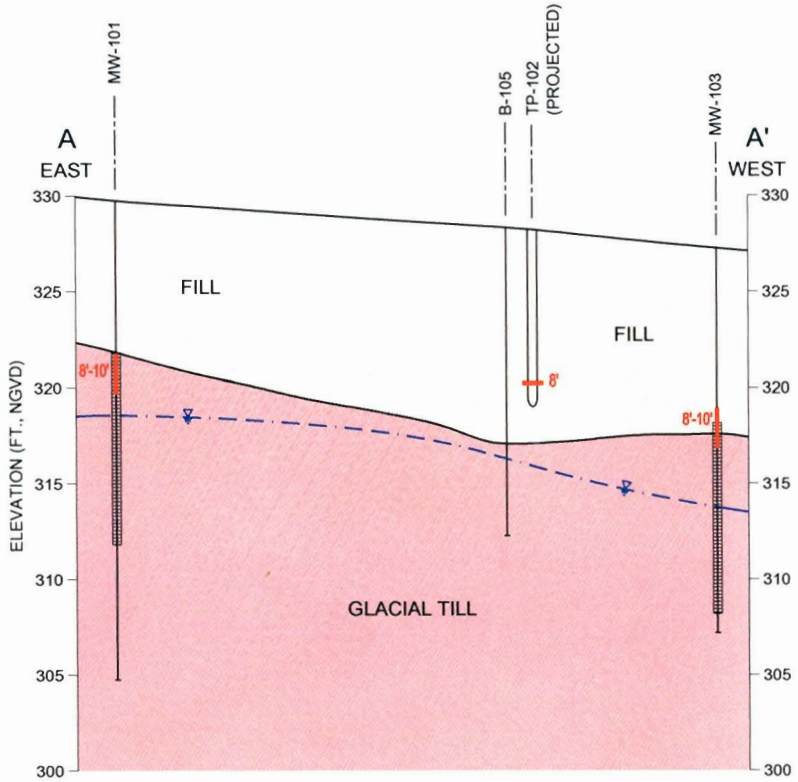
SITE PLAN

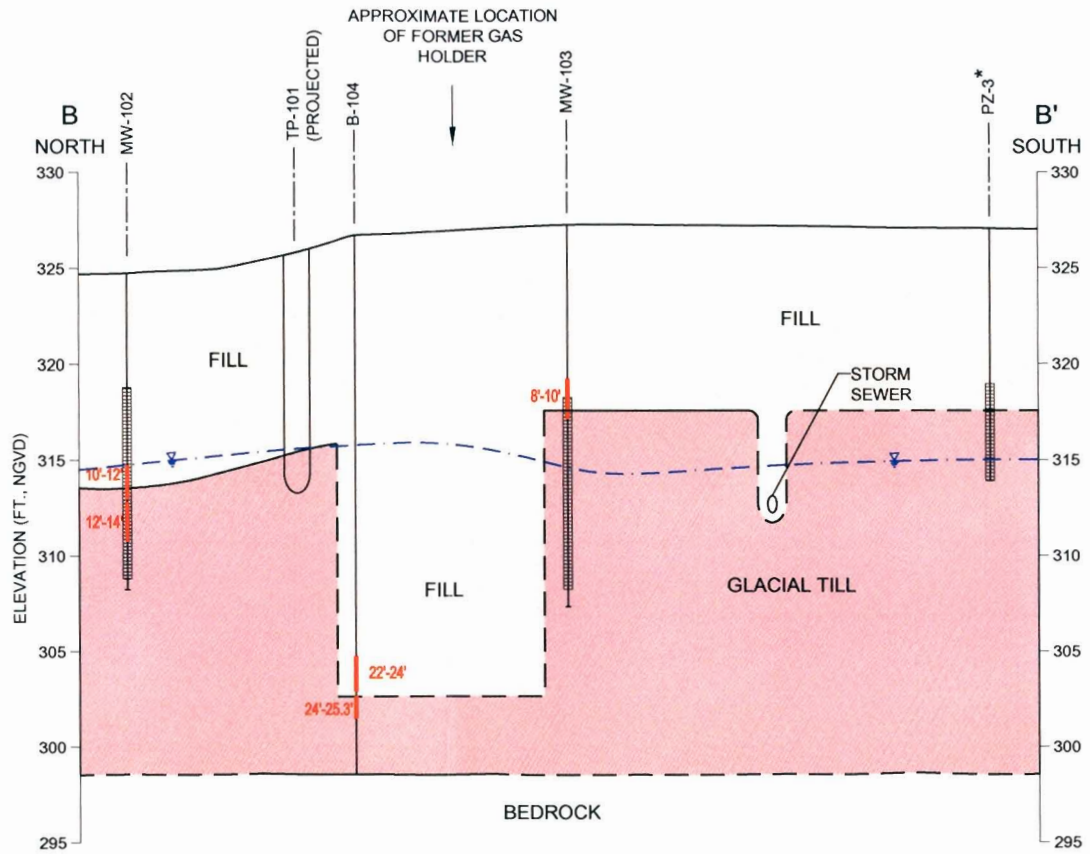
FULTON (NORTH ONTARIO ST.)
FORMER MGP SITE
FULTON, NEW YORK

DATE	PROJECT NUMBER
05/26/05	126409.003

BROWN AND CALDWELL ASSOCIATES

p:/GIS/National_Grid/Fulton/Fulton_Site_Plan.mxd





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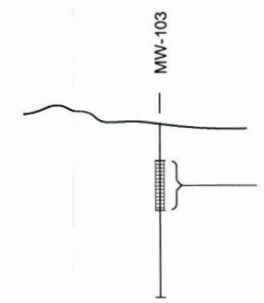


MONITORING WELL / SOIL BORING / TEST PIT IDENTIFICATION AND APPROXIMATE LOCATION

GENERALIZED GROUND SURFACE

WELL SCREEN INTERVAL

FILL

GLACIAL TILL

BEDROCK

8'-10' SOIL SAMPLE INTERVAL SUBMITTED FOR LABORATORY ANALYSIS

* INDICATES THAT TOTAL INSTALLED DEPTH AND SCREENED INTERVALS ARE INFERRED FROM FIELD DATA, AS ACTUAL DATA ARE NOT AVAILABLE

WATER TABLE, DECEMBER 2004

NOTE:

SEE FIGURE 2 FOR CROSS-SECTION LOCATIONS.

20 0 20 40
scale HORIZONTAL feet

5 0 5 10
scale VERTICAL feet

BROWN AND CALDWELL ASSOCIATES
ALLENDALE, NEW JERSEY

SUBMITTED: ROBERT O'NEILL PROJECT MANAGER DATE: 06/22/05
APPROVED: BROWN AND CALDWELL DATE:

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" - SCALE ACCORDINGLY)
DESIGNED: NQK
DRAWN: PL
CHECKED: NQK
CHECKED: RLO
APPROVED:

EXTERNAL REFERENCES

JEFFREY R. CAPUTI
PROFESSIONAL ENGINEER
N.Y. LICENSE NO. 082196-1
DATE

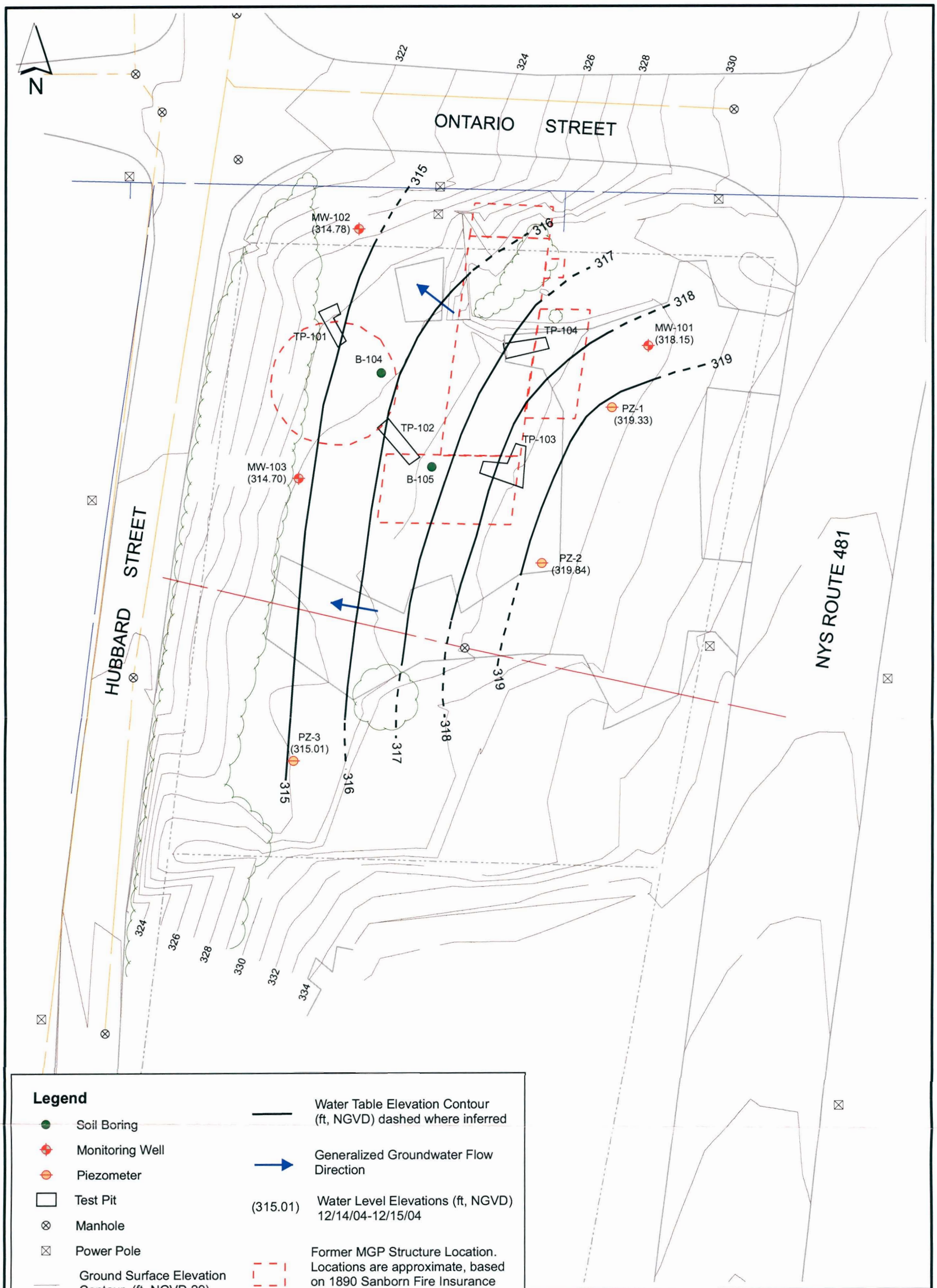
REVISIONS					
ZONE	REV.	DESCRIPTION	BY	DATE	APP.

FIGURE 3
HYDROGEOLOGIC CROSS-SECTIONS A-A' & B-B'

NIAGARA MOHAWK, A NATIONAL GRID COMPANY
FULTON (NORTH ONTARIO STREET) MGP SITE
FULTON, NEW YORK

FILENAME 126409\010C1001.DWG
BC PROJECT NUMBER 126409.003
CLIENT PROJECT NUMBER
DRAWING NUMBER C-1001
SHEET NUMBER OF

plaw
Aug 01, 2005 - 3:48pm
P:\DRAFTING\NATIONAL_GRID\NIMO_FULTON\126409\C1001.dwg



Legend

- Soil Boring
- Monitoring Well
- Piezometer
- Test Pit
- Manhole
- Power Pole
- Ground Surface Elevation Contour (ft, NGVD 29)
- Property Line
- Pavement Edge
- Vegetation
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line
- Water Table Elevation Contour (ft, NGVD) dashed where inferred
- Generalized Groundwater Flow Direction
- (315.01) Water Level Elevations (ft, NGVD) 12/14/04-12/15/04
- Former MGP Structure Location. Locations are approximate, based on 1890 Sanborn Fire Insurance Map.

Source: Base map developed based on drawing prepared by Snyder Engineering & Land Surveying, LLP (January 11, 2005). Refer to this drawing for site details.

0 15 30 60 Feet

FIGURE 4
WATER TABLE CONTOUR MAP
DECEMBER 2004

FULTON (NORTH ONTARIO ST.)
FORMER MGP SITE
FULTON, NEW YORK

DATE 08/01/05

PROJECT NUMBER 126409.003

BROWN AND CALDWELL ASSOCIATES

p:/GIS/National_Grid/Fulton/Fulton_Base.mxd

N

ONTARIO STREET

Location	MW-102	
Depth (Ft)	10-12	12-14
Total BTEX (mg/Kg)	0.043	0.0218
Total PAH (mg/Kg)	39	14
Total Cyanide (mg/Kg)	ND	ND

Location	B-104	
Depth (Ft)	22-24	24-25.3*
Total BTEX (mg/Kg)	8.3	3.0
Total PAH (mg/Kg)	**699**	**1035**
Total Cyanide (mg/Kg)	1	6.2

* - Table lists highest concentration from original and duplicate sample

Location	MW-101
Depth (Ft)	8-10
Total BTEX (mg/Kg)	ND
Total PAH (mg/Kg)	0.208
Total Cyanide (mg/Kg)	ND

Location	MW-103
Depth (Ft)	8-10
Total BTEX (mg/Kg)	0.032
Total PAH (mg/Kg)	**1009**
Total Cyanide (mg/Kg)	1.2

Location	TP-102 A-F
Depth (Ft)	Fill
Total BTEX (mg/Kg)	ND
Total PAH (mg/Kg)	32
Total Cyanide (mg/Kg)	ND

Location	TP-103	
Depth (Ft)	Fill (F)	Native Soil(N)
Total BTEX (mg/Kg)	ND	ND
Total PAH (mg/Kg)	12.7	ND
Total Cyanide (mg/Kg)	ND	ND

TP-101
TP-104
PZ-1
B-105
PZ-2
PZ-3

HUBBARD STREET

NYS ROUTE 481

322 324 326 328 330 324 326 328 330 332 334

Legend

- Soil Boring
- Monitoring Well
- Piezometer
- Test Pit
- Manhole
- Power Pole
- Ground Surface Elevation Contour (ft, NGVD 29)
- Property Line
- Pavement Edge
- Vegetation
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line
- Former MGP Structure Location. Locations are approximate, based on 1890 Sanborn Fire Insurance Map.

Explanation of terms and abbreviations:
BTEX- Benzene, Toluene, Ethylbenzene, Xylenes
PAH- Polycyclic Aromatic Hydrocarbons
mg/Kg- Milligrams per Kilogram
ND- Not Detected
Bold Value- Indicates concentration of total BTEX or total PAHs are above RSCO (TAGM 4046) criteria of 10 mg/kg for total VOCs or 500 mg/kg for total SVOCs respectively

Source: Base map developed based on drawing prepared by Snyder Engineering & Land Surveying, LLP (January 11, 2005). Refer to this drawing for site details.

0 15 30 60 Feet

FIGURE 5

BTEX, PAH, AND CYANIDE CONCENTRATIONS IN SOIL

FULTON (NORTH ONTARIO ST.)
FORMER MGP SITE
FULTON, NEW YORK

DATE 08/01/05

PROJECT NUMBER 126409.003

BROWN AND CALDWELL ASSOCIATES

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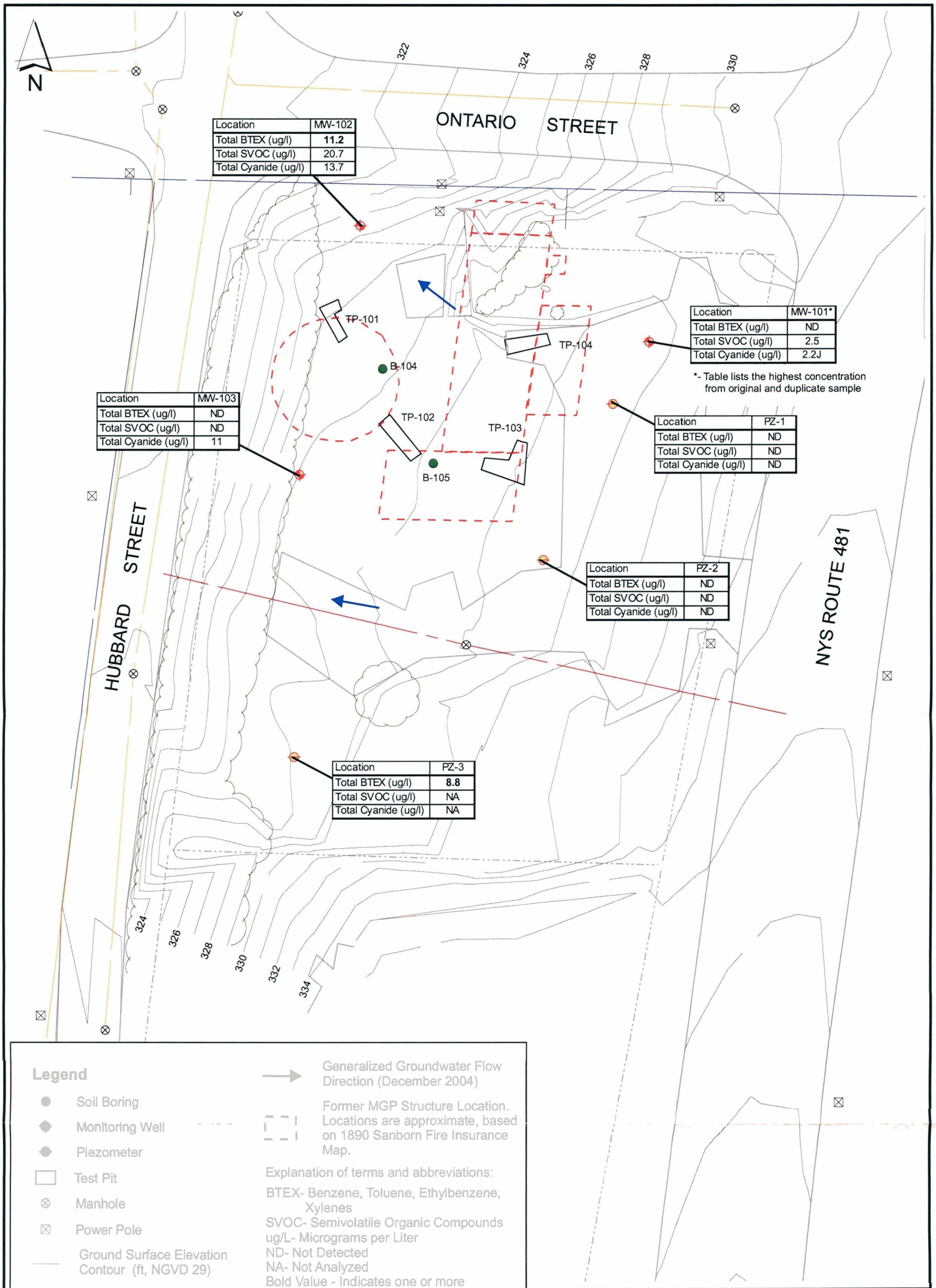

FIGURE 6
BTEX, SVOC, AND CYANIDE CONCENTRATIONS IN GROUNDWATER

FULTON (NORTH ONTARIO ST.) FORMER MGP SITE FULTON, NEW YORK	DATE 08/01/05	PROJECT NUMBER 126409.003
	BROWN AND CALDWELL ASSOCIATES	

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ATTACHMENT 1

TEST PIT LOGS

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	**Fulton, NY, Ontario St.**	**TEST PIT NUMBER**	**TP-101A/B**
PROJECT NUMBER	126409.002	**BC REPRESENTATIVE**	N. Krupinski
GENERAL LOCATION	Area of former gas holder, small structure	**CONTRACTOR**	Parratt Wolff
DATE	11/11/04	**OTHERS**	NA
TIME OPENED	11:15	**TIME CLOSED**	13:05
DEPTH TO WATER (ft. BGS)	>12.5	**EQUIPMENT**	Backhoe excavator
DEPTH TO NATIVE SOILS (ft. BGS)	10.5	**TOTAL LENGTH (ft.)**	17.5
TOTAL DEPTH (ft. BGS)	TP-101A: 12.5 TP-101B: 9.0	**NAPL OBSERVED**	None
ANALYTICAL SAMPLES	NA		

View West:
Filled test pit.

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.	TEST PIT NUMBER	TP-101A/B

View East (TP-101B)

0.5'-2.5': Brown fill with bricks, cinder blocks and concrete

2.5': Stone block (2'x2'x1.5')

2.5'-5.0': Dark brown fill

5.0'-5.5': Red soil

5.5'-6.0': Black coal/ash

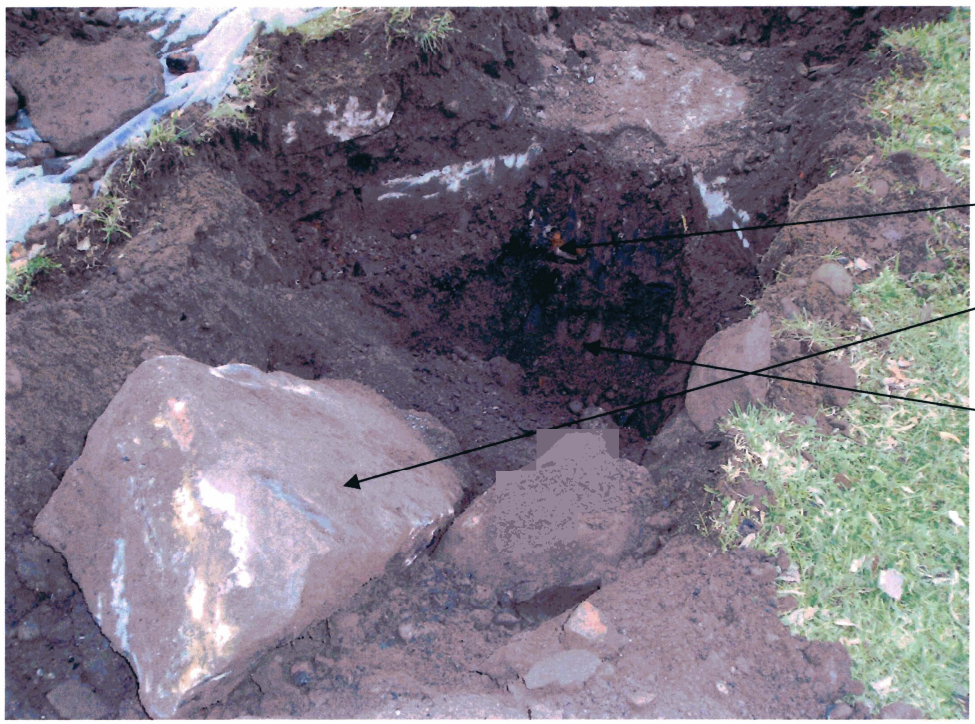
6.0'-7.0': Orange soil with bricks

7.0'-9.0': Dark brown fill with little brick

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	**Fulton, NY, Ontario St.**	**TEST PIT NUMBER**	**TP-102A/B**
PROJECT NUMBER	126409.002	**BC REPRESENTATIVE**	N. Krupinski
GENERAL LOCATION	Area of former gas holder, western portion of MGP building	**CONTRACTOR**	Parratt Wolff
DATE	11/11/04	**OTHERS**	E. Apicello (BC), S. Dyette (DEC)
TIME OPENED	08:25	**TIME CLOSED**	11:00
DEPTH TO WATER (ft. BGS)	>9.5	**EQUIPMENT**	Backhoe excavator
DEPTH TO NATIVE SOILS (ft. BGS)	>9.5	**TOTAL LENGTH (ft.)**	20
TOTAL DEPTH (ft. BGS)	TP-102A: 7.5 TP-102B: 9.5	**NAPL OBSERVED**	Yes, viscous tar coating brick
ANALYTICAL SAMPLES	TP-102A–F(8')		



View Northwest (TP-102A)

1.5'-2.0': Black ash with bricks

Stone block (4'x1.5'x1.5')

8.0'-8.5': Black coal-like material with tar-coated brick. Analytical sample @ 8.0'.

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.	TEST PIT NUMBER	TP-102A/B

View Southwest (TP-102A left, TP-102B right)

Concrete wall

View Southeast (TP-102B foreground, TP-102A background)

Concrete wall

2.0'-3.5': Brown fill with extensive debris (bricks, stone blocks, plastic sheeting)

3.5'-6.0': Black ash/coal with bricks

6.0'-7.0': Orange soil with brick pieces

7.0'-7.5': Black soil with bricks

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	**Fulton, NY, Ontario St.**	**TEST PIT NUMBER**	**TP-103**
PROJECT NUMBER	126409.002	**BC REPRESENTATIVE**	N. Krupinski
GENERAL LOCATION	SE potion of MGP building and associated contamination	**CONTRACTOR**	Parratt Wolff
DATE	11/10/04	**OTHERS**	B. O'Neill (BC), E. Apicello (BC), S. Dyette (DEC)
TIME OPENED	11:03	**TIME CLOSED**	12:40
DEPTH TO WATER (ft. BGS)	>8.5	**EQUIPMENT**	Backhoe excavator
DEPTH TO NATIVE SOILS (ft. BGS)	8.5	**TOTAL LENGTH (ft.)**	9
TOTAL DEPTH (ft. BGS)	8.5	**NAPL OBSERVED**	Hard tar @ ~3.5' BGS
ANALYTICAL SAMPLES	TP-103-F-(1.5'), TP-103-N-(8.5')		

Red-brown mf SAND, some (-) mcf Gravel, little Silt. Analytical sample @ 8.0'.

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.	TEST PIT NUMBER	TP-103

3.5': Hardened tar and wood

View South

1.0'-2.0': Brick and stone

3.0': Black ash

3.5': Brown cmf SAND and mfc GRAVEL, little Silt and Clay. Brick and coal fragments, dry.

5.0': Red-brown mf SAND, some (-) mcf Gravel, little Silt.

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.	TEST PIT NUMBER	TP-103

2.0': Cast iron pipe conduit

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.		TEST PIT NUMBER	TP-104
PROJECT NUMBER	126409.002		BC REPRESENTATIVE	N. Krupinski
GENERAL LOCATION	Area of NE portion of MGP building		CONTRACTOR	Parratt Wolff
DATE	11/10/04		OTHERS	B. O'Neill (BC), E. Apicello (BC), S. Dyette (DEC), S. Stucker (NM)
TIME OPENED	12:49		TIME CLOSED	15:04
DEPTH TO WATER (ft. BGS)	8.5		EQUIPMENT	Backhoe excavator
DEPTH TO NATIVE SOILS (ft. BGS)	East: 2', West: 8'		TOTAL LENGTH (ft.)	12
TOTAL DEPTH (ft. BGS)	8.5		NAPL OBSERVED	None
ANALYTICAL SAMPLES	NA			

View West

BROWN AND CALDWELL

TEST PIT LOG

SITE LOCATION	Fulton, NY, Ontario St.	TEST PIT NUMBER	TP-104

8.5' Native soil: Red-brown mcf SAND, some Clay & Silt, some mfc Gravel. Wet.

Brown fill

View West

Metal fence post

Possible former foundation location (vertical boundary between fill and native soil)

ATTACHMENT 2

SOIL BORING AND WELL CONSTRUCTION LOGS

BORING LOG

OWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	B-104 Page 1 of 2

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
N. Krupinski/Allendale	R. O'Neill	8"		NA"	28.2 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
11/16/04 - 11/16/04	Parratt-Wolff, Inc.	Hammer Type: Manual	NA

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NAD 83 Vert Datum: NGVD 29 Ground Surface Elev: 326.8 ft.	Easting: 864405.5 ft. Northing: 1212669.5 ft. TOC Elev: NA ft.
R. Baldue	Hollow-stem auger	Ingersoll Rand 830		

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recove	Graphic Log: Litholo	Graphic Log: Backfill	OVM Readings (ppm)	Remarks
		SW	**TOPSOIL**	5-6-6-7	1					0.0	
		SW	Brown mcf SAND, some Silt & Clay, little (-) f Gravel. Root matter.								Grouted to surface.
	325										
		SW	**FILL** Brown-tan mcf SAND, some mf Gravel, little Silt & Clay. Bits of coal. Damp.	4-2-2-3	2					0.0	
		SW	Brown mcf SAND, some Clayey Silt, some fm Gravel. Bits of coal, coke, brick. Damp.	2-2-2-2	3					0.0	
5			As above. @ 5.1'-5.3' Black ash/coke. @ 5.3' Red cmf SAND, some Silt & Clay, some fm Gravel. Damp.								
	320	SM SC	Red cmf SAND and SILT & CLAY, little fm Gravel. @ 6.7'-7.0' Black mcf SAND and f Gravel, some Silt. Coal bits, ash, coke.	3-2-3-6	4					0.0	
		SW	@ 7.0' Orange-yellow Clayey SILT and mcf SAND, trace fm Gravel. Wet.	1-2-1-1	5					0.8	
10			As above (Orange). @9.5' Red cmf SAND, some f Gravel, some Silt & Clay. @ 9.6'								
		GW SW	Black fm GRAVEL and cmf SAND, little Silt & Clay. Coal, coke throughout, occ. ash, brick. Wet.	3-1-1-5	6					0.8	Note: Boring is within area of gas holder as depicted in 1896 Sanborn Fire Insurance Map
	315										
		GW SW	Orange-yellow/black/brown fm GRAVEL and cmf SAND, some (-) Silt & Clay. Pieces of coke, coal, ash, brick throughout. Wet.	6-2-2-3	7					0.0	
		GW	Piece of brown sandstone. @ 13.6 Red cmf SAND and fm GRAVEL, some Silt & Clay.	4-3-3-2	8					0.0	
15			Red brick chunks, little Black-brown cmf Sand. Moderate tar odor. Saturated.								
	310	GW	Red and yellow brick chunks, little Brown cmf SAND, trace Silt. Saturated.	5-6-6-5	9					0.0	
		SW GW	Brown cmf SAND and fm GRAVEL (brick), some Silt & Clay. Slight tar odor. Saturated.	11-2-2-3	10					0.0	
20		GW SW	Brown fm GRAVEL and cmf SAND, little (+) Silt & Clay. Slight odor.	3-5-8-4	11					0.0	
	305										
		SW GW	Red brick chunks. Brown cmf SAND and fm GRAVEL, some Silt & Clay. Brown-black NAPL in last 6", viscous, strong tar odor, fills pore spaces.	5-6-13-17	12					59.2	22'-24' Soil sample sent for laboratory analysis
		SW GW	**GLACIAL TILL** Red-brown-black cmf SAND and mf GRAVEL, little Silt & Clay. Brown-black NAPL @ 24.5'-24.7' and in tip of shoe @ 25.0'-25.3', highly viscous, fills pore spaces in some intervals. Strong sheen. Saturated w/ water, some NAPL.	24-17-50/0.3'	13					14.2	24'-25.3' Soil sample sent for laboratory analysis
25											
	300	SW		50/0.3'	14					17.3	
		GW SW	Red-brown cmf SAND, some fm Gravel, little Silt & Clay. Stained @ 26.1-26.2'. Sheen. Saturated w/ water and NAPL. Red mf Gravel (red sandstone. fragments)	50/0.2'	15					152	28.2' End of Boring.

BORING LOG

BROWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	Boring No. B-104 Page 2 of 2

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Backfill	OVM Readings (ppm)	Remarks
			and cmf SAND some Clay & Silt. Strong tar odor, sheen in water above sample.								

BORING LOG

BROWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	Boring B-105 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
N. Krupinski/Allendale	R. O'Neill	8"		NA"	16.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
11/16/04 - 11/16/04	Parratt-Wolff, Inc.	Hammer Type: Manual	NA

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NAD 83 Vert Datum: NGVD 29 Ground Surface Elev: 328.3 ft.	Easting: 864421.9 ft. Northing: 1212639.1 ft. TOC Elev: NA ft.
R. Baldue	Hollow-stem auger	Ingersoll Rand 830		

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int / Recovery / Lithology / Backfill	OVM Readings (ppm)	Remarks
		ML CL	**TOPSOIL** Brown SILT & CLAY, some (+) cmf Sand.	6-6-3-3	1		0.0	
		SM	**FILL** Brown mcf SAND and SILT, some (-) fm Gravel. Brick fragments, ash, coal bits. @ 1.6' lens of Black material, mostly wood and coal. Moist.	3-2-3-6	2		0.0	Grouted to surface.
	325	SW GW						
5		SW	Brown cmf SAND and fm GRAVEL, some Clayey Silt. Occ. black wood bits. Damp.	6-5-6-7	3		0.0	
			Brown cmf SAND, some Silt & Clay, some fm Gravel. Brick fragments. Damp.	7-4-3-3	4		0.0	
		SW GW	Brown cmf SAND and fm GRAVEL, some Silt & Clay. Coal bits, occ. ash,Tan wood. Pieces of Red sandstone.					
	320	SM	Brown-red-yellow cmf SAND and Clayey SILT, some fm Gravel. Bits of coal, ash. Moist/wet. @ 10' Black coal.	3-3-2-7	5		0.0	
10				9-9-8-6	6		0.0	
		SW	**GLACIAL TILL**					
		SW	Orange cmf SAND, some fm Gravel, some Silt & Clay. @ 11.5' Red. @ 11.8' Brown SILT & CLAY and mcf SAND. Saturated.	9-7-7-9	7		8.2	
	315							
		GW SW	Red cmf SAND, some fm Gravel, some (-) Silt & Clay. @ 13.3' piece of Black rock.	14-13-14-17	8		0.0	
15			Red mf GRAVEL and cmf SAND, some (-) Silt & Clay. @ 15.7' Tan-orange lens. Saturated.					16' End of Boring.

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	Well No. MW-101 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
N. Krupinski/Allendale	R. O'Neill	8"	2" slotted PVC	0.02"	25.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
11/12/04 - 11/12/04	Parratt-Wolff, Inc.	Hammer Type: Manual	Surge & Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NAD 83 Vert Datum: NGVD 29 Ground Surface Elev: 329.8 ft.	Easting: 864491.7 ft. Northing: 1212678.1 ft. TOC Elev: 329.6 ft.
R. Baldue	Hollow-stem auger	Ingersoll Rand 830		

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Traffic Rated Vault Box)	OVM Readings (ppm)	Remarks
		SW/GW	**FILL** Light Brown cmf SAND and mcf GRAVEL, little Silt.	-	1					0.5	0'-1' Concrete pad
		SC/SM	Brown mcf SAND and SILT & CLAY, some fm Gravel.	-	2					-	1.0'-4.5' Cement/Bentonite grout
		SW	Brown cmf SAND, some mfc Gravel, some (-) Silt & Clay. Piece of Pink brick.	6-4	3					0.0	
	325	SW/GW	Red-brown-pink cmf SAND and mf GRAVEL (Red rock/brick), little (-) Silt & Clay. Lens of Brown mcf SAND, trace Silt.	10-7-3-3	4					1.6	4.5'-6.5' Bentonite seal
5		SC/SM	Pieces of coal throughout. Red mcf SAND and SILT & CLAY, some rounded fm Gravel. Bits of coal.	3-3-3-3	5					0.0	6.5'-7.50 Choker sand (00)
		ML	**GLACIAL TILL** Red-pink/black SILT, some fm Sand, little (-) m Gravel. Gray @ 9.2'-9.5'. Bits of white fine shell-like material. Wet.	2-2-3-3	6					1.4	7.0'-19.0' Filter sand (1) 8'-10' Soil sample sent for laboratory analysis
	320										
10		ML	Red-pink/black SILT, some f Sand, little m Gravel. Gray @ 11.6'-11.7'. Wet.	3-3-4-7	7					1.3	
		SM	Red-pink SILT and f SAND, some rounded mcf Gravel. Piece of rock. Saturated.	7-3-10-11	8					3.2	8'-18' 0.02" Slot screen
	315	SM	Red-pink-brown cmf SAND and Clayey SILT, some (+) fm Gravel (rounded). Saturated.	10-50/0.3'	9					0.0	
15		SW/GW	Red-pink-brown mcf SAND and fm GRAVEL, some (-) Clayey Silt. Saturated. Rounded gravel.	7-8-12-22	10					0.5	
		SW/GW	Red-pink-brown cmf SAND and fm GRAVEL, little Silt. Saturated. Slight sheen on bubbles in water. Black-gray lens @ 19.6'-19.7'.	10-12-15-18	11					1.9	
	310										19'-22' Bentonite seal
20		SW/GW	Red-brown-pink cmf SAND and fm GRAVEL, little (-) Silt. Saturated.	8-10-8-9	12					0.0	
		SW/GW	As above.	7-8-9-12	13					0.0	22'-25' Sand (1)
	305										
25											25' - End of Borehole

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	Well No. MW-102 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
N. Krupinski/Allendale	R. O'Neill	8"	2" slotted PVC	0.02"	16.5 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
11/12/04 - 11/15/04	Parratt-Wolff, Inc.	Hammer Type: Manual	Surge & Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NAD 83 Vert Datum: NGVD 29 Ground Surface Elev: 324.8 ft.	Easting: 864398.3 ft. Northing: 1212715.7 ft. TOC Elev: 324.6 ft.
R. Baldue	Hollow-stem auger	Ingersoll Rand 830		

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Traffic Rated Vault Box)	OVM Readings (ppm)	Remarks
		SC SM SW	**TOPSOIL** Brown fm SAND and SILT & CLAY. Some root matter.	32-22-12-10	1					0	0'-1.5' Concrete pad
		GW	**FILL** @ 0.2' Red mcf SAND and mf GRAVEL, little Silt.	4-5-4-4	2					0	1.5'-2.5' Cement/Bentonite grout 2.5'-4.5' Bentonite seal
		SW	Material is topsoil that has fallen in from above.	12-14-16-16	3					0	
5	320	GW	Red-brown/black cmf SAND and fm GRAVEL, some (+) Silt & Clay. Black layer @ 4.9'-5.2', coal bits throughout.								4.5'-5.0' Choker sand (00) 5'-16.5' Filter sand (1)
		SW GW	Red-brown and black-stained cmf SAND and mc GRAVEL (brick and rock), some (+) Silt & Clay. Moderate tar odor, stained.	3-4-12-14	4					0.7	
		MH	Dry.	3-3-4-47	5					0.3	
10	315	MH	Red-black (stained) SILT, some (+) mf Gravel, little (+) mcf Sand. Moderate tar odor. @ 9.5'-9.7' Ash layer (black and gray).	10-14-16-16	6					1.7	10'-12' Soil sample sent for laboratory analysis 6'-16' 0.02" Slot screen
		SW GW	Red-black-brown SILT, some mf Gravel, some mcf Sand. Stained throughout, strong tar odor.								
		CL ML	**GLACIAL TILL** @ 11.2' Red-pink mcf SAND and mfc GRAVEL, some (-) Silt & Clay. Slight tar odor.	8-16-21-24	7					2.7	12'-14' Soil sample sent for laboratory analysis
15	310	CL ML	Saturated. Red-pink mcf SAND and CLAY & SILT, some fm GRAVEL. Occ. Black staining, strong tar odor in stained areas. Saturated.	18-30-17-7	8					0.6	
		GC SC	As above, very little staining. Red-brown fm GRAVEL and cmf SAND, some Silt & Clay.	7-10-10-11	9					0.1	16.5' - End of Borehole

MONITORING WELL LOG

BROWN AND CALDWELL	Project Name: SC Fulton (Ontario St.) MGP Site Project Number: 126409.002 Project Location: Fulton, NY (Ontario St.)	Permit Number: NA	Well No. MW-103 Page 1 of 1

Geologist/Office	Checked By:	Borehole Diameter:	Screen Diameter and Type:	Slot Size:	Total Boring Depth (ft)
N. Krupinski/Allendale	R. O'Neill	8"	2" slotted PVC	0.02"	20.0 ft.

Start/Finish Date	Drilling Contractor:	Sampling: Split Spoon	Development Method:
11/15/04 - 11/15/04	Parratt-Wolff, Inc.	Hammer Type: Manual	Surge & Pump

Driller:	Drilling Method:	Drilling Equipment:	Horiz Datum/Proj: State Plane NAD 83 Vert Datum: NGVD 29 Ground Surface Elev: 327.3 ft.	Easting: 864378.8 ft. Northing: 1212635.4 ft. TOC Elev: 327.1 ft.
R. Baldue	Hollow-stem auger	Ingersoll Rand 830		

Depth (feet)	Elevation (feet)	USC Soil Type	Description	Blow Counts	Sample No.	Graphic Log: Sample Int	Graphic Log: Recovery	Graphic Log: Lithology	Graphic Log: Well (Traffic Rated Vault Box)	OVM Readings (ppm)	Remarks
		ML	**TOPSOIL**	5-10-9-10	1					0.0	0'-1.5' Concrete pad
		ML	Brown Clayey SILT, little fmc Sand. Some root matter.								
	325	SM	**FILL @ 0.3'** Brown Clayey SILT, some fm Gravel, little (-) fmc Sand. Bits of brick, coal, concrete. Dry.	8-10-50/0.0'	2					0.0	1.5'-4.5' Cement/Bentonite grout
		SM	Brown mfc SAND and Clayey SILT, some fm Gravel. Bits of brick, coal. Dry.	6-8-10-6	3					0.0	
5			As above, pieces of concrete. Piece of brick in shoe. Dry.								4.5'-6.5' Bentonite seal
		SM	Brown fmc SAND and Clayey SILT, some fm Gravel. Pieces of brick, coal concrete. Dry.	10-50/0.3'	4					0.0	6.5'-7.0' Choker sand (00) 7.0'-20.0' Filter Sand (1)
	320	SM	Dark brown/black fmc SAND and Clayey SILT, some fm Gravel. @ 8.5'-8.8' Ash layer.	8-10-10-8	5					0.0	8'-10' Soil sample sent for laboratory analysis
10		SM	**GLACIAL TILL @ 9.6'**	10-11-13-16	6					0.0	
		SW	Red mfc SAND and Clayey SILT, some mf Gravel. Dry.								
	315	SW	Red fmc SAND and fm GRAVEL, some Clayey Silt. Dry.	18-16-14-12	7					0.0	
		GW	As above. @ 13.6'-13.9' lens of gray fm SAND. Dry.								
		SC SM	Red fm SAND and SILT & CLAY, some mf Gravel. Occ. lenses of Gray throughout. Saturated.	31-16-8-8	8					0.0	9'-19' 0.02" Slot screen
15		SC SM	As above.	3-10-18-16	9					0.0	
	310										
		SW GW	Red-brown (w/ lenses of gray) mfc SAND and fm GRAVEL (sandstone), some Clayey Silt.	15-17-19-22	10					0.0	
20											20.0' End of Borehole