1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0413

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0413
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1469
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 12. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	57000.	U
100-02-7	4-Nitrophenol	57000.	U
132-64-9	Dibenzofuran	5600.	J
121-14-2	2,4-Dinitrotoluene	11000.	U
84-66-2	Diethylphthalate	11000.	U
7005-72-3	4-Chlorophenyl-phenylether	11000.	U
86-73-7	Fluorene	11000.	J
100-01-6	4-Nitroaniline	57000.	U
534-52-1	4,6-Dinitro-2-methylphenol	57000.	U
86-30-6	N-Nitrosodiphenylamine	11000.	U
101-55-3	4-Bromophenyl-phenylether	11000.	U
118-74-1	Hexachlorobenzene	11000.	U
87-86-5	Pentachlorophenol	57000.	U
85-01-8	Phenanthrene	70000.	
120-12-7	Anthracene	20000.	
86-74-8	Carbazole	4800.	J
84-74-2	Di-n-Butylphthalate	11000.	U
206-44-0	Fluoranthene	77000.	
129-00-0	Pyrene	62000.	
85-68-7	Butylbenzylphthalate	11000.	U
91-94-1	3,3'-Dichlorobenzidine	11000.	U
56-55-3	Benzo(a)Anthracene	49000.	
218-01-9	Chrysene	41000.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	11000.	U
117-84-0	Di-n-octyl phthalate	11000.	U
205-99-2	Benzo(b)fluoranthene	45000.	
207-08-9	Benzo(k)Fluoranthene	29000.	
50-32-8	Benzo(a)Pyrene	48000.	
193-39-5	Indeno(1,2,3-cd)Pyrene	31000.	
53-70-3	Dibenzo(a,h)Anthracene	7200.	J
191-24-2	Benzo(g,h,i)Perylene	36000.	

(1) - Cannot be separated from diphenylamine

PPM

tPAH 551.5

cPAH 250.2

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0612

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0612
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1489
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 33. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/03/01
Injection Volume: 1.0 (uL) Dilution Factor: 4.0
GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	60000.	U
111-44-4	bis(-2-Chloroethyl)Ether	60000.	U
95-57-8	2-Chlorophenol	60000.	U
541-73-1	1,3-Dichlorobenzene	60000.	U
106-46-7	1,4-Dichlorobenzene	60000.	U
95-50-1	1,2-Dichlorobenzene	60000.	U
95-48-7	2-Methylphenol	60000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	60000.	U
106-44-5	4-Methylphenol	60000.	U
621-64-7	N-Nitroso-Di-n-propylamine	60000.	U
67-72-1	Hexachloroethane	60000.	U
98-95-3	Nitrobenzene	60000.	U
78-59-1	Isophorone	60000.	U
88-75-5	2-Nitrophenol	60000.	U
105-67-9	2,4-Dimethylphenol	60000.	U
111-91-1	bis(-2-Chloroethoxy)Methane	60000.	U
120-83-2	2,4-Dichlorophenol	60000.	U
120-82-1	1,2,4-Trichlorobenzene	60000.	U
91-20-3	Naphthalene	600000.	
106-47-8	4-Chloroaniline	60000.	U
87-68-3	Hexachlorobutadiene	60000.	U
59-50-7	4-Chloro-3-methylphenol	60000.	U
91-57-6	2-Methylnaphthalene	120000.	
77-47-4	Hexachlorocyclopentadiene	60000.	U
88-06-2	2,4,6-Trichlorophenol	60000.	U
95-95-4	2,4,5-Trichlorophenol	60000.	U
91-58-7	2-Chloronaphthalene	60000.	U
88-74-4	2-Nitroaniline	300000.	U
131-11-3	Dimethyl Phthalate	60000.	U
208-96-8	Acenaphthylene	48000.	J
606-20-2	2,6-Dinitrotoluene	60000.	U
99-09-2	3-Nitroaniline	300000.	U
83-32-9	Acenaphthene	120000.	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0612

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0612
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1489
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 33. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/03/01
Injection Volume: 1.0 (uL) Dilution Factor: 4.0
GPC Cleanup: (Y/N) N pH: 7.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	300000.	U
100-02-7	4-Nitrophenol	300000.	U
132-64-9	Dibenzofuran	11000.	J
121-14-2	2,4-Dinitrotoluene	60000.	U
84-66-2	Diethylphthalate	60000.	U
7005-72-3	4-Chlorophenyl-phenylether	60000.	U
86-73-7	Fluorene	92000.	
100-01-6	4-Nitroaniline	300000.	U
534-52-1	4,6-Dinitro-2-methylphenol	300000.	U
86-30-6	N-Nitrosodiphenylamine	60000.	U
101-55-3	4-Bromophenyl-phenylether	60000.	U
118-74-1	Hexachlorobenzene	60000.	U
87-86-5	Pentachlorophenol	300000.	U
85-01-8	Phenanthrene	280000.	
120-12-7	Anthracene	73000.	
86-74-8	Carbazole	60000.	U
84-74-2	Di-n-Butylphthalate	60000.	U
206-44-0	Fluoranthene	120000.	
129-00-0	Pyrene	230000.	
85-68-7	Butylbenzylphthalate	60000.	U
91-94-1	3,3'-Dichlorobenzidine	60000.	U
56-55-3	Benzo(a)Anthracene	65000.	
218-01-9	Chrysene	74000.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	60000.	U
117-84-0	Di-n-octyl phthalate	60000.	U
205-99-2	Benzo(b)fluoranthene	42000.	J
207-08-9	Benzo(k)Fluoranthene	45000.	J
50-32-8	Benzo(a)Pyrene	65000.	
193-39-5	Indeno(1,2,3-cd)Pyrene	9300.	J
53-70-3	Dibenzo(a,h)Anthracene	60000.	U
191-24-2	Benzo(g,h,i)Perylene	45000.	J

(1) - Cannot be separated from diphenylamine

PPM

tPAH 2,039.

cPAH 300.3

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0719

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0719
Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1465
Level: (low/med) LOW Date Received: 07/13/01
% Moisture: 14. decanted: (Y/N) N Date Extracted: 07/17/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/01/01
Injection Volume: 1.0 (uL) Dilution Factor: 5.0
GPC Cleanup: (Y/N) N pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1900.	U
111-44-4	bis(-2-Chloroethyl)Ether	1900.	U
95-57-8	2-Chlorophenol	1900.	U
541-73-1	1,3-Dichlorobenzene	1900.	U
106-46-7	1,4-Dichlorobenzene	1900.	U
95-50-1	1,2-Dichlorobenzene	1900.	U
95-48-7	2-Methylphenol	1900.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	1900.	U
106-44-5	4-Methylphenol	1900.	U
621-64-7	N-Nitroso-Di-n-propylamine	1900.	U
67-72-1	Hexachloroethane	1900.	U
98-95-3	Nitrobenzene	1900.	U
78-59-1	Isophorone	1900.	U
88-75-5	2-Nitrophenol	1900.	U
105-67-9	2,4-Dimethylphenol	1900.	U
111-91-1	bis(-2-Chloroethoxy)Methane	1900.	U
120-83-2	2,4-Dichlorophenol	1900.	U
120-82-1	1,2,4-Trichlorobenzene	1900.	U
91-20-3	Naphthalene	21000.	
106-47-8	4-Chloroaniline	1900.	U
87-68-3	Hexachlorobutadiene	1900.	U
59-50-7	4-Chloro-3-methylphenol	1900.	U
91-57-6	2-Methylnaphthalene	23000.	
77-47-4	Hexachlorocyclopentadiene	1900.	U
88-06-2	2,4,6-Trichlorophenol	1900.	U
95-95-4	2,4,5-Trichlorophenol	1900.	U
91-58-7	2-Chloronaphthalene	1900.	U
88-74-4	2-Nitroaniline	9700.	U
131-11-3	Dimethyl Phthalate	1900.	U
208-96-8	Acenaphthylene	2000.	
606-20-2	2,6-Dinitrotoluene	1900.	U
99-09-2	3-Nitroaniline	9700.	U
83-32-9	Acenaphthene	13000.	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0719

Lab Name: AES, Inc.   Contract:

Lab Code: AES   Case No.: NEG0119 SAS No.:   SDG No.: BSVCSW0413

Matrix: (soil/water) SOIL   Lab Sample ID: BSVCSW0719

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: A1465

Level: (low/med) LOW   Date Received: 07/13/01

% Moisture: 14. decanted: (Y/N) N   Date Extracted: 07/17/01

Concentrated Extract Volume: 1000.0 (uL)   Date Analyzed: 08/01/01

Injection Volume: 1.0 (uL)   Dilution Factor: 5.0

GPC Cleanup: (Y/N) N   pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	9700.	U
100-02-7	4-Nitrophenol	9700.	U
132-64-9	Dibenzofuran	1000.	J
121-14-2	2,4-Dinitrotoluene	1900.	U
84-66-2	Diethylphthalate	1900.	U
7005-72-3	4-Chlorophenyl-phenylether	1900.	U
86-73-7	Fluorene	10000.	
100-01-6	4-Nitroaniline	9700.	U
534-52-1	4,6-Dinitro-2-methylphenol	9700.	U
86-30-6	N-Nitrosodiphenylamine	1900.	U
101-55-3	4-Bromophenyl-phenylether	1900.	U
118-74-1	Hexachlorobenzene	1900.	U
87-86-5	Pentachlorophenol	9700.	U
85-01-8	Phenanthrene	31000.	E
120-12-7	Anthracene	9200.	
86-74-8	Carbazole	1900.	U
84-74-2	Di-n-Butylphthalate	1900.	U
206-44-0	Fluoranthene	13000.	
129-00-0	Pyrene	19000.	
85-68-7	Butylbenzylphthalate	1900.	U
91-94-1	3,3'-Dichlorobenzidine	1900.	U
56-55-3	Benzo(a)Anthracene	9500.	
218-01-9	Chrysene	8100.	
117-81-7	Bis(2-Ethylhexyl)Phthalate	1900.	U
117-84-0	Di-n-octyl phthalate	1900.	U
205-99-2	Benzo(b)fluoranthene	3300.	
207-08-9	Benzo(k)Fluoranthene	3900.	
50-32-8	Benzo(a)Pyrene	7200.	
193-39-5	Indeno(1,2,3-cd)Pyrene	2700.	
53-70-3	Dibenzo(a,h)Anthracene	1900.	U
191-24-2	Benzo(g,h,i)Perylene	3500.	

(1) - Cannot be separated from diphenylamine

FORM I SV-2   3/90

ppm

cPAH 180.4

tPAH 34.70

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0916

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0916
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1467
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	12000.	U
111-44-4	bis(-2-Chloroethyl)Ether	12000.	U
95-57-8	2-Chlorophenol	12000.	U
541-73-1	1,3-Dichlorobenzene	12000.	U
106-46-7	1,4-Dichlorobenzene	12000.	U
95-50-1	1,2-Dichlorobenzene	12000.	U
95-48-7	2-Methylphenol	12000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	12000.	U
106-44-5	4-Methylphenol	12000.	U
621-64-7	N-Nitroso-Di-n-propylamine	12000.	U
67-72-1	Hexachloroethane	12000.	U
98-95-3	Nitrobenzene	12000.	U
78-59-1	Isophorone	12000.	U
88-75-5	2-Nitrophenol	12000.	U
105-67-9	2,4-Dimethylphenol	12000.	U
111-91-1	bis(-2-Chloroethoxy)Methane	12000.	U
120-83-2	2,4-Dichlorophenol	12000.	U
120-82-1	1,2,4-Trichlorobenzene	12000.	U
91-20-3	Naphthalene	68000.	
106-47-8	4-Chloroaniline	12000.	U
87-68-3	Hexachlorobutadiene	12000.	U
59-50-7	4-Chloro-3-methylphenol	12000.	U
91-57-6	2-Methylnaphthalene	21000.	
77-47-4	Hexachlorocyclopentadiene	12000.	U
88-06-2	2,4,6-Trichlorophenol	12000.	U
95-95-4	2,4,5-Trichlorophenol	12000.	U
91-58-7	2-Chloronaphthalene	12000.	U
88-74-4	2-Nitroaniline	62000.	U
131-11-3	Dimethyl Phthalate	12000.	U
208-96-8	Acenaphthylene	3700.	J
606-20-2	2,6-Dinitrotoluene	12000.	U
99-09-2	3-Nitroaniline	62000.	U
83-32-9	Acenaphthene	35000.	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0916

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0916
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1467
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 6.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	62000.	U
100-02-7	4-Nitrophenol	62000.	U
132-64-9	Dibenzofuran	2400.	J
121-14-2	2,4-Dinitrotoluene	12000.	U
84-66-2	Diethylphthalate	12000.	U
7005-72-3	4-Chlorophenyl-phenylether	12000.	U
86-73-7	Fluorene	23000.	
100-01-6	4-Nitroaniline	62000.	U
534-52-1	4,6-Dinitro-2-methylphenol	62000.	U
86-30-6	N-Nitrosodiphenylamine	12000.	U
101-55-3	4-Bromophenyl-phenylether	12000.	U
118-74-1	Hexachlorobenzene	12000.	U
87-86-5	Pentachlorophenol	62000.	U
85-01-8	Phenanthrene	42000.	
120-12-7	Anthracene	7100.	J
86-74-8	Carbazole	12000.	U
84-74-2	Di-n-Butylphthalate	12000.	U
206-44-0	Fluoranthene	5700.	J
129-00-0	Pyrene	5700.	J
85-68-7	Butylbenzylphthalate	12000.	U
91-94-1	3,3'-Dichlorobenzidine	12000.	U
56-55-3	Benzo(a)Anthracene	3300.	J
218-01-9	Chrysene	2900.	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	12000.	U
117-84-0	Di-n-octyl phthalate	12000.	U
205-99-2	Benzo(b)fluoranthene	12000.	U
207-08-9	Benzo(k)Fluoranthene	12000.	U
50-32-8	Benzo(a)Pyrene	12000.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	12000.	U
53-70-3	Dibenzo(a,h)Anthracene	12000.	U
191-24-2	Benzo(g,h,i)Perylene	12000.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 ppm 3/90

tPAH 219.8

cPAH 6.200

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0918

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0918
Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1462
Level: (low/med) LOW Date Received: 07/13/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/17/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/01/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410.	U
111-44-4	bis(-2-Chloroethyl)Ether	410.	U
95-57-8	2-Chlorophenol	410.	U
541-73-1	1,3-Dichlorobenzene	410.	U
106-46-7	1,4-Dichlorobenzene	410.	U
95-50-1	1,2-Dichlorobenzene	410.	U
95-48-7	2-Methylphenol	410.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	410.	U
106-44-5	4-Methylphenol	410.	U
621-64-7	N-Nitroso-Di-n-propylamine	410.	U
67-72-1	Hexachloroethane	410.	U
98-95-3	Nitrobenzene	410.	U
78-59-1	Isophorone	410.	U
88-75-5	2-Nitrophenol	410.	U
105-67-9	2,4-Dimethylphenol	410.	U
111-91-1	bis(-2-Chloroethoxy)Methane	410.	U
120-83-2	2,4-Dichlorophenol	410.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U
91-20-3	Naphthalene	410.	U
106-47-8	4-Chloroaniline	410.	U
87-68-3	Hexachlorobutadiene	410.	U
59-50-7	4-Chloro-3-methylphenol	410.	U
91-57-6	2-Methylnaphthalene	410.	U
77-47-4	Hexachlorocyclopentadiene	410.	U
88-06-2	2,4,6-Trichlorophenol	410.	U
95-95-4	2,4,5-Trichlorophenol	410.	U
91-58-7	2-Chloronaphthalene	410.	U
88-74-4	2-Nitroaniline	2100.	U
131-11-3	Dimethyl Phthalate	410.	U
208-96-8	Acenaphthylene	410.	U
606-20-2	2,6-Dinitrotoluene	410.	U
99-09-2	3-Nitroaniline	2100.	U
83-32-9	Acenaphthene	410.	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0918

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0918

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A1462

Level: (low/med) LOW Date Received: 07/13/01

% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/17/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/01/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 6.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2100.	U
100-02-7	4-Nitrophenol	2100.	U
132-64-9	Dibenzofuran	410.	U
121-14-2	2,4-Dinitrotoluene	410.	U
84-66-2	Diethylphthalate	410.	U
7005-72-3	4-Chlorophenyl-phenylether	410.	U
86-73-7	Fluorene	410.	U
100-01-6	4-Nitroaniline	2100.	U
534-52-1	4,6-Dinitro-2-methylphenol	2100.	U
86-30-6	N-Nitrosodiphenylamine	410.	U
101-55-3	4-Bromophenyl-phenylether	410.	U
118-74-1	Hexachlorobenzene	410.	U
87-86-5	Pentachlorophenol	2100.	U
85-01-8	Phenanthrene	110.	J
120-12-7	Anthracene	410.	U
86-74-8	Carbazole	410.	U
84-74-2	Di-n-Butylphthalate	410.	U
206-44-0	Fluoranthene	410.	U
129-00-0	Pyrene	410.	U
85-68-7	Butylbenzylphthalate	410.	U
91-94-1	3,3'-Dichlorobenzidine	410.	U
56-55-3	Benzo(a)Anthracene	410.	U
218-01-9	Chrysene	410.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	410.	U
117-84-0	Di-n-octyl phthalate	410.	U
205-99-2	Benzo(b)fluoranthene	410.	U
207-08-9	Benzo(k)Fluoranthene	410.	U
50-32-8	Benzo(a)Pyrene	410.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	410.	U
53-70-3	Dibenzo(a,h)Anthracene	410.	U
191-24-2	Benzo(g,h,i)Perylene	410.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

ppm

+ PAH 0.110

c PAH <0.410

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1015

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1015

Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1466

Level: (low/med) MED Date Received: 07/11/01

% Moisture: 22. decanted: (Y/N) N Date Extracted: 07/13/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	13000.	U
111-44-4	bis(-2-Chloroethyl)Ether	13000.	U
95-57-8	2-Chlorophenol	13000.	U
541-73-1	1,3-Dichlorobenzene	13000.	U
106-46-7	1,4-Dichlorobenzene	13000.	U
95-50-1	1,2-Dichlorobenzene	13000.	U
95-48-7	2-Methylphenol	13000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	13000.	U
106-44-5	4-Methylphenol	13000.	U
621-64-7	N-Nitroso-Di-n-propylamine	13000.	U
67-72-1	Hexachloroethane	13000.	U
98-95-3	Nitrobenzene	13000.	U
78-59-1	Isophorone	13000.	U
88-75-5	2-Nitrophenol	13000.	U
105-67-9	2,4-Dimethylphenol	13000.	U
111-91-1	bis(-2-Chloroethoxy)Methane	13000.	U
120-83-2	2,4-Dichlorophenol	13000.	U
120-82-1	1,2,4-Trichlorobenzene	13000.	U
91-20-3	Naphthalene	83000.	
106-47-8	4-Chloroaniline	13000.	U
87-68-3	Hexachlorobutadiene	13000.	U
59-50-7	4-Chloro-3-methylphenol	13000.	U
91-57-6	2-Methylnaphthalene	34000.	
77-47-4	Hexachlorocyclopentadiene	13000.	U
88-06-2	2,4,6-Trichlorophenol	13000.	U
95-95-4	2,4,5-Trichlorophenol	13000.	U
91-58-7	2-Chloronaphthalene	13000.	U
88-74-4	2-Nitroaniline	64000.	U
131-11-3	Dimethyl Phthalate	13000.	U
208-96-8	Acenaphthylene	1600.	J
606-20-2	2,6-Dinitrotoluene	13000.	U
99-09-2	3-Nitroaniline	64000.	U
83-32-9	Acenaphthene	15000.	

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1015

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1015
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1466
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 22. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.2

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	64000.	U
100-02-7	4-Nitrophenol	64000.	U
132-64-9	Dibenzofuran	13000.	U
121-14-2	2,4-Dinitrotoluene	13000.	U
84-66-2	Diethylphthalate	13000.	U
7005-72-3	4-Chlorophenyl-phenylether	13000.	U
86-73-7	Fluorene	7200.	J
100-01-6	4-Nitroaniline	64000.	U
534-52-1	4,6-Dinitro-2-methylphenol	64000.	U
86-30-6	N-Nitrosodiphenylamine	13000.	U
101-55-3	4-Bromophenyl-phenylether	13000.	U
118-74-1	Hexachlorobenzene	13000.	U
87-86-5	Pentachlorophenol	64000.	U
85-01-8	Phenanthrene	19000.	
120-12-7	Anthracene	4300.	J
86-74-8	Carbazole	13000.	U
84-74-2	Di-n-Butylphthalate	13000.	U
206-44-0	Fluoranthene	5800.	J
129-00-0	Pyrene	8300.	J
85-68-7	Butylbenzylphthalate	13000.	U
91-94-1	3,3'-Dichlorobenzidine	13000.	U
56-55-3	Benzo(a)Anthracene	3800.	J
218-01-9	Chrysene	2900.	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	13000.	U
117-84-0	Di-n-octyl phthalate	13000.	U
205-99-2	Benzo(b)fluoranthene	1300.	J
207-08-9	Benzo(k)Fluoranthene	1500.	J
50-32-8	Benzo(a)Pyrene	13000.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	13000.	U
53-70-3	Dibenzo(a,h)Anthracene	13000.	U
191-24-2	Benzo(g,h,i)Perylene	13000.	U

(1) - Cannot be separated from diphenylamine

ppm
tPAH 187.7
cPAH 9.500

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1017

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1017

Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1468

Level: (low/med) MED Date Received: 07/11/01

% Moisture: 28. decanted: (Y/N) N Date Extracted: 07/13/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	14000.	U
111-44-4	bis(-2-Chloroethyl)Ether	14000.	U
95-57-8	2-Chlorophenol	14000.	U
541-73-1	1,3-Dichlorobenzene	14000.	U
106-46-7	1,4-Dichlorobenzene	14000.	U
95-50-1	1,2-Dichlorobenzene	14000.	U
95-48-7	2-Methylphenol	14000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	14000.	U
106-44-5	4-Methylphenol	14000.	U
621-64-7	N-Nitroso-Di-n-propylamine	14000.	U
67-72-1	Hexachloroethane	14000.	U
98-95-3	Nitrobenzene	14000.	U
78-59-1	Isophorone	14000.	U
88-75-5	2-Nitrophenol	14000.	U
105-67-9	2,4-Dimethylphenol	14000.	U
111-91-1	bis(-2-Chloroethoxy)Methane	14000.	U
120-83-2	2,4-Dichlorophenol	14000.	U
120-82-1	1,2,4-Trichlorobenzene	14000.	U
91-20-3	Naphthalene	27000.	
106-47-8	4-Chloroaniline	14000.	U
87-68-3	Hexachlorobutadiene	14000.	U
59-50-7	4-Chloro-3-methylphenol	14000.	U
91-57-6	2-Methylnaphthalene	8100.	J
77-47-4	Hexachlorocyclopentadiene	14000.	U
88-06-2	2,4,6-Trichlorophenol	14000.	U
95-95-4	2,4,5-Trichlorophenol	14000.	U
91-58-7	2-Chloronaphthalene	14000.	U
88-74-4	2-Nitroaniline	69000.	U
131-11-3	Dimethyl Phthalate	14000.	U
208-96-8	Acenaphthylene	14000.	U
606-20-2	2,6-Dinitrotoluene	14000.	U
99-09-2	3-Nitroaniline	69000.	U
83-32-9	Acenaphthene	2400.	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1017

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1017
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1468
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 28. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	69000.	U
100-02-7	4-Nitrophenol	69000.	U
132-64-9	Dibenzofuran	14000.	U
121-14-2	2,4-Dinitrotoluene	14000.	U
84-66-2	Diethylphthalate	14000.	U
7005-72-3	4-Chlorophenyl-phenylether	14000.	U
86-73-7	Fluorene	14000.	U
100-01-6	4-Nitroaniline	69000.	U
534-52-1	4,6-Dinitro-2-methylphenol	69000.	U
86-30-6	N-Nitrosodiphenylamine	14000.	U
101-55-3	4-Bromophenyl-phenylether	14000.	U
118-74-1	Hexachlorobenzene	14000.	U
87-86-5	Pentachlorophenol	69000.	U
85-01-8	Phenanthrene	3200.	J
120-12-7	Anthracene	14000.	U
86-74-8	Carbazole	14000.	U
84-74-2	Di-n-Butylphthalate	14000.	U
206-44-0	Fluoranthene	14000.	U
129-00-0	Pyrene	1900.	J
85-68-7	Butylbenzylphthalate	14000.	U
91-94-1	3,3'-Dichlorobenzidine	14000.	U
56-55-3	Benzo(a)Anthracene	14000.	U
218-01-9	Chrysene	14000.	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	14000.	U
117-84-0	Di-n-octyl phthalate	14000.	U
205-99-2	Benzo(b)fluoranthene	14000.	U
207-08-9	Benzo(k)Fluoranthene	14000.	U
50-32-8	Benzo(a)Pyrene	14000.	U
193-39-5	Indeno(1,2,3-cd)Pyrene	14000.	U
53-70-3	Dibenzo(a,h)Anthracene	14000.	U
191-24-2	Benzo(g,h,i)Perylene	14000.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

PPM
tPAH 42.60
cPAH < 14.00

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1114

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1114
Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1472
Level: (low/med) MED Date Received: 07/11/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/13/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01
Injection Volume: 1.0 (uL) Dilution Factor: 10.0
GPC Cleanup: (Y/N) N pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	120000.	U
111-44-4	bis(-2-Chloroethyl)Ether	120000.	U
95-57-8	2-Chlorophenol	120000.	U
541-73-1	1,3-Dichlorobenzene	120000.	U
106-46-7	1,4-Dichlorobenzene	120000.	U
95-50-1	1,2-Dichlorobenzene	120000.	U
95-48-7	2-Methylphenol	120000.	U
108-60-1	2,2'-oxybis(1-Chloropropane)	120000.	U
106-44-5	4-Methylphenol	120000.	U
621-64-7	N-Nitroso-Di-n-propylamine	120000.	U
67-72-1	Hexachloroethane	120000.	U
98-95-3	Nitrobenzene	120000.	U
78-59-1	Isophorone	120000.	U
88-75-5	2-Nitrophenol	120000.	U
105-67-9	2,4-Dimethylphenol	120000.	U
111-91-1	bis(-2-Chloroethoxy)Methane	120000.	U
120-83-2	2,4-Dichlorophenol	120000.	U
120-82-1	1,2,4-Trichlorobenzene	120000.	U
91-20-3	Naphthalene	1200000.	
106-47-8	4-Chloroaniline	120000.	U
87-68-3	Hexachlorobutadiene	120000.	U
59-50-7	4-Chloro-3-methylphenol	120000.	U
91-57-6	2-Methylnaphthalene	510000.	
77-47-4	Hexachlorocyclopentadiene	120000.	U
88-06-2	2,4,6-Trichlorophenol	120000.	U
95-95-4	2,4,5-Trichlorophenol	120000.	U
91-58-7	2-Chloronaphthalene	120000.	U
88-74-4	2-Nitroaniline	620000.	U
131-11-3	Dimethyl Phthalate	120000.	U
208-96-8	Acenaphthylene	38000.	J
606-20-2	2,6-Dinitrotoluene	120000.	U
99-09-2	3-Nitroaniline	620000.	U
83-32-9	Acenaphthene	280000.	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW1114

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0119 SAS No.: SDG No.: BSVCSW0413

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW1114

Sample wt/vol: 1.000 (g/mL) G Lab File ID: A1472

Level: (low/med) MED Date Received: 07/11/01

% Moisture: 19. decanted: (Y/N) N Date Extracted: 07/13/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/02/01

Injection Volume: 1.0 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: 7.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	620000.	U
100-02-7	4-Nitrophenol	620000.	U
132-64-9	Dibenzofuran	27000.	J
121-14-2	2,4-Dinitrotoluene	120000.	U
84-66-2	Diethylphthalate	120000.	U
7005-72-3	4-Chlorophenyl-phenylether	120000.	U
86-73-7	Fluorene	150000.	
100-01-6	4-Nitroaniline	620000.	U
534-52-1	4,6-Dinitro-2-methylphenol	620000.	U
86-30-6	N-Nitrosodiphenylamine	120000.	U
101-55-3	4-Bromophenyl-phenylether	120000.	U
118-74-1	Hexachlorobenzene	120000.	U
87-86-5	Pentachlorophenol	620000.	U
85-01-8	Phenanthrene	610000.	
120-12-7	Anthracene	130000.	
86-74-8	Carbazole	120000.	U
84-74-2	Di-n-Butylphthalate	120000.	U
206-44-0	Fluoranthene	150000.	
129-00-0	Pyrene	210000.	
85-68-7	Butylbenzylphthalate	120000.	U
91-94-1	3,3'-Dichlorobenzidine	120000.	U
56-55-3	Benzo(a)Anthracene	57000.	J
218-01-9	Chrysene	65000.	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	120000.	U
117-84-0	Di-n-octyl phthalate	120000.	U
205-99-2	Benzo(b)fluoranthene	33000.	J
207-08-9	Benzo(k)Fluoranthene	20000.	J
50-32-8	Benzo(a)Pyrene	81000.	J
193-39-5	Indeno(1,2,3-cd)Pyrene	120000.	U
53-70-3	Dibenzo(a,h)Anthracene	120000.	U
191-24-2	Benzo(g,h,i)Perylene	120000.	U

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

TPAH 3,561

CPAH 256.0

Adirondack Environmental Services, Inc.
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

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Client Name: NYSEG	Address: Kirkwood Industrial Park Binghamton, NY 13902
Send Report To: John Ruspantini	Project Name (Location): Binghamton Court St
Client Phone No: (607) 762-8787	Samplers: (Names): Brian Balchkonis
Client Fax No: (607) 762-8451	PO Number:
	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	A/P	Matrix	Comp	Grab	Number of Cont's	Analysis Required
010711 F01	BSVCSW0612	7/9/01	1115	A	Soil		X	2	TCL Volatiles (8260)
F02	BSVCSW0413	7/9/01	1315	P			X	2	TCL Semivolatiles (8270)
F03	BSVCSW1114	7/9/01	1420	P			X	2	
F04	BSVCSW1015	7/10/01	0825	A			X	2	
F05	BSVCSW0916	7/10/01	0905	A			X	2	
F06	BSVCSW1017	7/10/01	1305	P			X	2	
				A / P					
				A / P					
				A / P					
				A / P					
				A / P					
				A / P					
				A / P					
				A / P					

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☒ Normal
☐ 2 Day ☐ 5 Day

Special Instructions/Remarks: ASP PROTOCOL

CC Report To:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received at Laboratory by: M.L.	Date/Time 7/11/01 943

Temperature	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y N	Y N
Notes: 2°C	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

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Albany, New York 12207
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CHAIN OF CUSTODY RECORD

Client Name: NYSEG	Address: KIRKWOOD INDUSTRIAL PARK BINGHAMTON, NY 13902	
Send Report To: JOHN RUSPANTINI	Project Name (Location): BINGHAMTON COURT ST.	Samplers: (Names) BRIAN BALCHIKONIS
Client Phone No: (607) 762-8787 Client Fax No: (607) 762-8451	PO Number:	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type: Matrix	Comp	Grab	Number of Cont's	Analysis Required
010713K01	BSVCSW0918	7/11/01	0910	A	SOIL		X	2	TCL VOLATILES (8260) TCL SEMI-VOLATILES (8270)
010713K02	BSVCSW0719	7/12/01	1500	P	↓		X	2	↓ ↓
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Turnaround Time Request:
- ☐ 1 Day ☐ 3 Day ☒ Normal
- ☐ 2 Day ☐ 5 Day

Special Instructions/Remarks: ASP PROTOCOL

CC Report To:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by:	Date/Time 7/13/01 9:50am

TEMPERATURE	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or Chilled	Y N	Y N
Notes: 2°C	Notes:	Notes:

WHITE - Lab Copy   YELLOW - Sampler Copy   PINK - Generator Copy

Adirondack Environmental Services, Inc.

Adirondack Environmental Services, Inc.
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TITLE PAGE

On July 20, 2001 one soil sample was received by Adirondack Environmental Services, Inc. from New York State Electric & Gas at the Binghamton Court Street MGP site. **This sample had the requirement of a data package added after the original analysis was complete.** These samples were analyzed for Volatile Organics and Semi-Volatile Organics in accordance with methodology as detailed by the contract. The project was completed on September 11, 2001.

Laboratory Manager

Date: 9/11/01

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Case Narrative

Client: New York State Electric & Gas - Binghamton Court Street MGP

Case: NEG 0122

SDG: BSVCSW0620

Sample ID	Laboratory Sample ID	Date Received	VTSR	Matrix
BSVCSW0620	010720L-01	07/20/01	09:40	Soil

The requirement of a data package was added for this sample on August 8, 2001. The original analysis had already completed by this time. The client asked to have a data package compiled as best as possible for this sample.

Volatile Organics

1) The sample was analyzed using EPA Method 8260.

2) The RRF's for the compounds Trichloroethene and 1,1,2,2-Tetrachloroethane in the initial calibration analyzed on 6/29/01 were outside the required limits. The RRF's for these compounds were 0.292 and 0.471, respectively. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % or the specified RRF as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.

3) The RRF's for the compounds Trichloroethene and 1,1,2,2-Tetrachloroethane in the continuing calibration analyzed on 7/24/01 were outside the criteria established by the method. The RRF's for these compounds were 0.295 and 0.475, respectively. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for these compounds.

4) A matrix spike and the matrix spike duplicate were not analyzed. According to the method a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all the recoveries were within acceptable limits.

5) The sample was initially analyzed on 7/24/01 and had Acetone present due to carry-over from another sample. The sample was re-analyzed on 7/26/01 and no Acetone was present. Both analyses are included in the raw data, but only one Form 1 is presented.

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6) The column used in Instrument D for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm.

Semi-Volatile Organics

1) The sample was analyzed using EPA Method 8270. The sample was re-analyzed on 8/21/01 to achieve better quality control data for the data package requirement.

2) The %RSD's for the compounds Phenol and 4-Methylphenol in the initial calibration analyzed on 8/9/01 were outside the required limit. The %RSD's for these compounds were 27.9 % and 28.3 %, respectively. The RRF for the compound Acenaphthylene in the initial calibration analyzed on 8/9/01 was below the minimum required RRF. The RRF for this compound was 1.004. According to the protocol, four semi-volatile organic compounds may exceed the %RSD limit of 20.5 % and the minimum RRF values as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.

3) The %D's for the compounds 4-Methylphenol, N-Nitroso-di-n-propylamine, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene in the continuing calibration analyzed on 8/21/01 were outside the required limit. The %D's for these compounds were 33.2 %, 27.8 %, 28.9 %, 25.3 % and 25.4 %, respectively. The RRF for the compound Acenaphthylene in the continuing calibration analyzed on 8/21/01 was below the minimum required RRF. The RRF for this compound was 1.158. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % and the minimum RRF values as long as the %D is less than 40 % and the RRF is above 0.010. The compounds 4-Methylphenol and N-Nitroso-di-n-propylamine were not present in the sample.

4) A matrix spike and the matrix spike duplicate were not analyzed. According to the method a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all the recoveries were within acceptable limits.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0620

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0122 SAS No.: SDG No.: BSVCSW0620
Matrix: (soil/water) SOIL Lab Sample ID: SW0620
Sample wt/vol: 5.000 (g/mL) G Lab File ID: D1187
Level: (low/med) LOW Date Received: 07/20/01
% Moisture: not dec. 18. Date Analyzed: 07/24/01
GC Column: RTX502.2 ID: .32 (mm) Dilution Factor: 1.0
Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
156-60-5	1,2-Dichloroethene-trans	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
156-59-2	1,2-Dichloroethene-cis	6.	U
106-42-3	m,p-Xylenes	6.	U
95-47-6	o-Xylene	6.	U

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0620

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0122 SAS No.: SDG No.: BSVCSW0620

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0620

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1542

Level: (low/med) LOW Date Received: 07/20/01

% Moisture: 18. decanted: (Y/N) N Date Extracted: 07/23/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/21/01

Injection Volume: 1.0 (uL) Dilution Factor: 2.0

GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	810.	U
111-44-4	bis(2-Chloroethyl)ether	810.	U
95-57-8	2-Chlorophenol	810.	U
541-73-1	1,3-Dichlorobenzene	810.	U
106-46-7	1,4-Dichlorobenzene	810.	U
95-50-1	1,2-Dichlorobenzene	810.	U
95-48-7	2-Methylphenol	810.	U
108-60-1	bis(2-chloroisopropyl)ether	810.	U
106-44-5	4-Methylphenol	810.	U
621-64-7	n-Nitroso-di-n-propylamine	810.	U
67-72-1	Hexachloroethane	810.	U
98-95-3	Nitrobenzene	810.	U
78-59-1	Isophorone	810.	U
88-75-5	2-Nitrophenol	810.	U
105-67-9	2,4-Dimethylphenol	810.	U
111-91-1	bis(2-Chloroethoxy)methane	810.	U
120-83-2	2,4-Dichlorophenol	810.	U
120-82-1	1,2,4-Trichlorobenzene	810.	U
91-20-3	Naphthalene	150.	J
106-47-8	4-Chloroaniline	810.	U
87-68-3	Hexachlorobutadiene	810.	U
59-50-7	4-Chloro-3-methylphenol	810.	U
91-57-6	2-Methylnaphthalene	150.	J
77-47-4	Hexachlorocyclopentadiene	810.	U
88-06-2	2,4,6-Trichlorophenol	810.	U
95-95-4	2,4,5-Trichlorophenol	810.	U
91-58-7	2-Chloronaphthalene	810.	U
88-74-4	2-Nitroaniline	4100.	U
131-11-3	Dimethylphthalate	810.	U
208-96-8	Acenaphthylene	550.	J
606-20-2	2,6-Dinitrotoluene	810.	U
99-09-2	3-Nitroaniline	4100.	U
83-32-9	Acenaphthene	110.	J

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0620

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0122 SAS No.: SDG No.: BSVCSW0620
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0620
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1542
Level: (low/med) LOW Date Received: 07/20/01
% Moisture: 18. decanted: (Y/N) N Date Extracted: 07/23/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/21/01
Injection Volume: 1.0 (uL) Dilution Factor: 2.0
GPC Cleanup: (Y/N) N pH: 7.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	4100.	U
100-02-7	4-Nitrophenol	4100.	U
132-64-9	Dibenzofuran	810.	U
121-14-2	2,4-Dinitrotoluene	810.	U
84-66-2	Diethylphthalate	810.	U
7005-72-3	4-Chlorophenyl-phenylether	810.	U
86-73-7	Fluorene	170.	J
100-01-6	4-Nitroaniline	4100.	U
534-52-1	4,6-Dinitro-2-methylphenol	4100.	U
86-30-6	n-Nitrosodiphenylamine	810.	U
101-55-3	4-Bromophenyl-phenylether	810.	U
118-74-1	Hexachlorobenzene	810.	U
87-86-5	Pentachlorophenol	4100.	U
85-01-8	Phenanthrene	3400.	
120-12-7	Anthracene	1300.	
86-74-8	Carbazole	810.	U
84-74-2	Di-n-butylphthalate	810.	U
206-44-0	Fluoranthene	6200.	
129-00-0	Pyrene	7300.	
85-68-7	Butylbenzylphthalate	810.	U
91-94-1	3,3'-Dichlorobenzidine	1600.	U
56-55-3	Benzo(a)anthracene	2700.	
218-01-9	Chrysene	2500.	
117-81-7	bis(2-Ethylhexyl)phthalate	810.	U
117-84-0	Di-n-octylphthalate	810.	U
205-99-2	Benzo(b)fluoranthene	2100.	
207-08-9	Benzo(k)fluoranthene	1800.	
50-32-8	Benzo(a)pyrene	3700.	
193-39-5	Indeno(1,2,3-cd)pyrene	2100.	
53-70-3	Dibenzo(a,h)anthracene	300.	J
191-24-2	Benzo(g,h,i)perylene	2500.	

(1) - Cannot be separated from diphenylamine

PPM
tPAH 37.84
cPAH 1.52

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Client Name: NYSEG	Address: Kirkwood Industrial Park Binghamton NY 13902	
Send Report To: John Ruspantini	Project Name (Location): Binghamton MGP	Samplers: (Names) Brian Balchironis
Client Phone No: (607) 762-8787	PO Number:	Samplers: (Signature)
Client Fax No: (607) 762-8451		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.	Matrix	Comp	Grab	Number of Cont's	Analysis Required
010720 L01	BSVCSW0620	7/17/01	1300 P	Soil		X	2	TCL Volatiles (8260) TCL Semi-Volatiles (827[illegible]
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					
			A P					

Turnaround Time Request:
☐ 1 Day ☐ 3 Day ☐ Normal
☐ 2 Day ☐ 5 Day

Special Instructions/Remarks

CC Report To:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: M-	Date/Time 7/20/01 940

Temperature	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y N	Y N
Notes: 3°C	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

230480
C00026

ROM : NYSEG BINGHAMTON COURT ST. MGP PHONE NO. : 607 772 1055 Jul. 20 2001 10:31AM P2

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TITLE PAGE

On August 2, 2001 two soil samples were received by Adirondack Environmental Services, Inc. from New York State Electric & Gas at the Binghamton Court Street MGP site. On August 7, 2001 one soil sample was received by Adirondack Environmental Services, Inc. from New York State Electric & Gas at the Binghamton Court Street MGP site. These samples were analyzed for Volatile Organics and Semi-Volatile Organics in accordance with methodology as detailed by the contract. The project was completed on September 7, 2001.

Laboratory Manager

Date: 9/7/01

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Case Narrative

Client: New York State Electric & Gas - Binghamton Court Street MGP

Case: NEG 0121

SDG: BSVCSW0821

Sample ID	Laboratory Sample ID	Date Received	VTSR	Matrix
BSVCSW0821	010802J-01	08/02/01	09:41	Soil
BSVCSW0722	010802J-02	08/02/01	09:41	Soil
BSVCSW0923	010807M-01	08/07/01	10:16	Soil

Volatile Organics

1) The samples were analyzed using EPA Method 8260.

2) The %RSD for the compound Bromomethane in the initial calibration analyzed on 7/31/01 was outside the required limit. The %RSD for this compound was 24.9 %. According to the protocol, two volatile organic compounds may exceed the %RSD limit of 20.5 % and the minimum RRF values as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.

3) The RRF for the compounds 1,1,2,2-Tetrachloroethane in the continuing calibration analyzed on 8/7/01 was outside the criteria established by the method. The RRF for this compound was 0.473. According to the protocol, two volatile organic compounds may exceed the %D limit of 25.0 % as long as the %D is less than 40 % and the RRF is above 0.010. The %D was less than 40 % and the RRF was greater than 0.010 for this compound.

4) Sample BSVCSW0821 (AES sample number 010802J-01) was used for the low level matrix spike and the matrix spike duplicate analysis. All the recoveries were within acceptable limits.

5) Sample BSVCSW0722 (AES sample number 010802J-02) was used for the medium level matrix spike and the matrix spike duplicate analysis. All the recoveries were within acceptable limits.

6) The following samples were analyzed using a medium level extraction due to the high level of compounds present. The overall dilution is based on the amount of sample extracted and the volume of methanol used for analysis.

Client ID	Laboratory ID	Overall Dilution
BSVCSW0722	010802J-02	1:10

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7) The column used in Instrument D for analysis was an RTX-502.2, 60 meters long with an internal diameter of 0.32 mm.

Semi-Volatile Organics

1) The samples were analyzed using EPA Method 8270.

2) The %RSD's for the compounds Phenol and 4-Methylphenol in the initial calibration analyzed on 8/9/01 were outside the required limit. The %RSD's for these compounds were 27.9 % and 28.3 %, respectively. The RRF for the compound Acenaphthylene in the initial calibration analyzed on 8/9/01 was below the minimum required RRF. The RRF for this compound was 1.004. According to the protocol, four semi-volatile organic compounds may exceed the %RSD limit of 20.5 % and the minimum RRF values as long as the %RSD is less than 40 % and the RRF is above 0.010. The %RSD was below 40 % and the RRF was greater than 0.010 for these compounds.

3) The %D's for the compounds 4-Methylphenol and Benzo(k)fluoranthene in the continuing calibration analyzed on 8/16/01 were outside the required limit. The %D's for these compounds were 25.5 % and 34.3 %, respectively. The RRF for the compound Acenaphthylene in the continuing calibration analyzed on 8/16/01 was below the minimum required RRF. The RRF for this compound was 1.150. According to the protocol, four semi-volatile organic compounds may exceed the %D limit of 25.0 % and the minimum RRF values as long as the %D is less than 40 % and the RRF is above 0.010. The %D was below 40 % and the RRF was greater than 0.010 for these compounds.

4) Sample BSVCSW0821 (AES sample number 010802J-01) was used for the matrix spike and the matrix spike duplicate analysis. Several of the recoveries were outside required limits. According to the method a matrix spike blank must be analyzed. A matrix spike blank was analyzed and all the recoveries were within acceptable limits.

5) Sample BSVCSW0722 (AES sample number 010802J-02) was diluted 1:5 prior to analysis due to the high level of compounds present.

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"I certify that this data package is in compliance with the terms and conditions of the protocol, both technically and for completeness, to the best of my knowledge, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Laboratory Manager

Date: 9/7/01

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0722

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0722
Sample wt/vol: 5.000 (g/mL) G Lab File ID: D1339
Level: (low/med) MED Date Received: 08/02/01
% Moisture: not dec. 19. Date Analyzed: 08/06/01
GC Column: RTX502.2 ID: .32 (mm) Dilution Factor: 1.0
Soil Extract Volume: _10000 (uL) Soil Aliquot Volume: 1000 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	120.	U
74-83-9	Bromomethane	120.	U
75-01-4	Vinyl Chloride	120.	U
75-00-3	Chloroethane	120.	U
75-09-2	Methylene Chloride	62.	U
67-64-1	Acetone	120.	U
75-15-0	Carbon Disulfide	62.	U
75-35-4	1,1-Dichloroethene	62.	U
75-34-3	1,1-Dichloroethane	62.	U
156-60-5	1,2-Dichloroethene-trans	62.	U
67-66-3	Chloroform	62.	U
107-06-2	1,2-Dichloroethane	62.	U
78-93-3	2-Butanone	120.	U
71-55-6	1,1,1-Trichloroethane	62.	U
56-23-5	Carbon Tetrachloride	62.	U
75-27-4	Bromodichloromethane	62.	U
78-87-5	1,2-Dichloropropane	62.	U
10061-01-5	cis-1,3-Dichloropropene	62.	U
79-01-6	Trichloroethene	62.	U
124-48-1	Dibromochloromethane	62.	U
79-00-5	1,1,2-Trichloroethane	62.	U
71-43-2	Benzene	62.	U
10061-02-6	trans-1,3-Dichloropropene	62.	U
75-25-2	Bromoform	62.	U
108-10-1	4-Methyl-2-Pentanone	120.	U
591-78-6	2-Hexanone	120.	U
127-18-4	Tetrachloroethene	62.	U
79-34-5	1,1,2,2-Tetrachloroethane	62.	U
108-88-3	Toluene	62.	U
108-90-7	Chlorobenzene	62.	U
100-41-4	Ethylbenzene	66.	
100-42-5	Styrene	62.	U
156-59-2	1,2-Dichloroethene-cis	62.	U
106-42-3	m,p-Xylenes	630.	
95-47-6	o-Xylene	370.	

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0821

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0821
Sample wt/vol: 5.000 (g/mL) G Lab File ID: D1342
Level: (low/med) LOW Date Received: 08/02/01
% Moisture: not dec. 23. Date Analyzed: 08/06/01
GC Column: RTX502.2 ID: .32 (mm) Dilution Factor: 1.0
Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13.	U
74-83-9	Bromomethane	13.	U
75-01-4	Vinyl Chloride	13.	U
75-00-3	Chloroethane	13.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	13.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
156-60-5	1,2-Dichloroethene-trans	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	13.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	13.	U
591-78-6	2-Hexanone	13.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
156-59-2	1,2-Dichloroethene-cis	6.	U
106-42-3	m,p-Xylenes	6.	U
95-47-6	o-Xylene	6.	U

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0923

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0923

Sample wt/vol: 5.000 (g/mL) G Lab File ID: D1393

Level: (low/med) LOW Date Received: 08/07/01

% Moisture: not dec. 19. Date Analyzed: 08/09/01

GC Column: RTX502.2 ID: .32 (mm) Dilution Factor: 1.0

Soil Extract Volume: ______ (uL) Soil Aliquot Volume: ______ (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12.	U
74-83-9	Bromomethane	12.	U
75-01-4	Vinyl Chloride	12.	U
75-00-3	Chloroethane	12.	U
75-09-2	Methylene Chloride	6.	U
67-64-1	Acetone	12.	U
75-15-0	Carbon Disulfide	6.	U
75-35-4	1,1-Dichloroethene	6.	U
75-34-3	1,1-Dichloroethane	6.	U
156-60-5	1,2-Dichloroethene-trans	6.	U
67-66-3	Chloroform	6.	U
107-06-2	1,2-Dichloroethane	6.	U
78-93-3	2-Butanone	12.	U
71-55-6	1,1,1-Trichloroethane	6.	U
56-23-5	Carbon Tetrachloride	6.	U
75-27-4	Bromodichloromethane	6.	U
78-87-5	1,2-Dichloropropane	6.	U
10061-01-5	cis-1,3-Dichloropropene	6.	U
79-01-6	Trichloroethene	6.	U
124-48-1	Dibromochloromethane	6.	U
79-00-5	1,1,2-Trichloroethane	6.	U
71-43-2	Benzene	6.	U
10061-02-6	trans-1,3-Dichloropropene	6.	U
75-25-2	Bromoform	6.	U
108-10-1	4-Methyl-2-Pentanone	12.	U
591-78-6	2-Hexanone	12.	U
127-18-4	Tetrachloroethene	6.	U
79-34-5	1,1,2,2-Tetrachloroethane	6.	U
108-88-3	Toluene	6.	U
108-90-7	Chlorobenzene	6.	U
100-41-4	Ethylbenzene	6.	U
100-42-5	Styrene	6.	U
156-59-2	1,2-Dichloroethene-cis	6.	U
106-42-3	m,p-Xylenes	3.	J
95-47-6	o-Xylene	1.	J

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0722

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0722
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1515
Level: (low/med) LOW Date Received: 08/02/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 08/06/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/17/01
Injection Volume: 1.0 (uL) Dilution Factor: 5.0
GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	2100.	U
111-44-4	bis(2-Chloroethyl)ether	2100.	U
95-57-8	2-Chlorophenol	2100.	U
541-73-1	1,3-Dichlorobenzene	2100.	U
106-46-7	1,4-Dichlorobenzene	2100.	U
95-50-1	1,2-Dichlorobenzene	2100.	U
95-48-7	2-Methylphenol	2100.	U
108-60-1	bis(2-chloroisopropyl)ether	2100.	U
106-44-5	4-Methylphenol	2100.	U
621-64-7	n-Nitroso-di-n-propylamine	2100.	U
67-72-1	Hexachloroethane	2100.	U
98-95-3	Nitrobenzene	2100.	U
78-59-1	Isophorone	2100.	U
88-75-5	2-Nitrophenol	2100.	U
105-67-9	2,4-Dimethylphenol	2100.	U
111-91-1	bis(2-Chloroethoxy)methane	2100.	U
120-83-2	2,4-Dichlorophenol	2100.	U
120-82-1	1,2,4-Trichlorobenzene	2100.	U
91-20-3	Naphthalene	30000.	
106-47-8	4-Chloroaniline	2100.	U
87-68-3	Hexachlorobutadiene	2100.	U
59-50-7	4-Chloro-3-methylphenol	2100.	U
91-57-6	2-Methylnaphthalene	32000.	
77-47-4	Hexachlorocyclopentadiene	2100.	U
88-06-2	2,4,6-Trichlorophenol	2100.	U
95-95-4	2,4,5-Trichlorophenol	2100.	U
91-58-7	2-Chloronaphthalene	2100.	U
88-74-4	2-Nitroaniline	10000.	U
131-11-3	Dimethylphthalate	2100.	U
208-96-8	Acenaphthylene	1900.	J
606-20-2	2,6-Dinitrotoluene	2100.	U
99-09-2	3-Nitroaniline	10000.	U
83-32-9	Acenaphthene	2200.	

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0722

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0722
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1515
Level: (low/med) LOW Date Received: 08/02/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 08/06/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/17/01
Injection Volume: 1.0 (uL) Dilution Factor: 5.0
GPC Cleanup: (Y/N) N pH: 6.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	10000.	U
100-02-7	4-Nitrophenol	10000.	U
132-64-9	Dibenzofuran	650.	J
121-14-2	2,4-Dinitrotoluene	2100.	U
84-66-2	Diethylphthalate	2100.	U
7005-72-3	4-Chlorophenyl-phenylether	2100.	U
86-73-7	Fluorene	6700.	
100-01-6	4-Nitroaniline	10000.	U
534-52-1	4,6-Dinitro-2-methylphenol	10000.	U
86-30-6	n-Nitrosodiphenylamine	2100.	U
101-55-3	4-Bromophenyl-phenylether	2100.	U
118-74-1	Hexachlorobenzene	2100.	U
87-86-5	Pentachlorophenol	10000.	U
85-01-8	Phenanthrene	20000.	
120-12-7	Anthracene	4200.	
86-74-8	Carbazole	2100.	U
84-74-2	Di-n-butylphthalate	2100.	U
206-44-0	Fluoranthene	4300.	
129-00-0	Pyrene	5900.	
85-68-7	Butylbenzylphthalate	2100.	U
91-94-1	3,3'-Dichlorobenzidine	4100.	U
56-55-3	Benzo(a)anthracene	3000.	
218-01-9	Chrysene	2900.	
117-81-7	bis(2-Ethylhexyl)phthalate	2100.	U
117-84-0	Di-n-octylphthalate	2100.	U
205-99-2	Benzo(b)fluoranthene	690.	J
207-08-9	Benzo(k)fluoranthene	910.	J
50-32-8	Benzo(a)pyrene	1500.	J
193-39-5	Indeno(1,2,3-cd)pyrene	370.	J
53-70-3	Dibenzo(a,h)anthracene	2100.	U
191-24-2	Benzo(g,h,i)perylene	430.	J

(1) - Cannot be separated from diphenylamine

FORM I SV-2 3/90

ppm

+PAH 117.65

cPAH 9.37

1B
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0821

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0821
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1511
Level: (low/med) LOW Date Received: 08/02/01
% Moisture: 23. decanted: (Y/N) N Date Extracted: 08/06/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/16/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	430.	U
111-44-4	bis(2-Chloroethyl)ether	430.	U
95-57-8	2-Chlorophenol	430.	U
541-73-1	1,3-Dichlorobenzene	430.	U
106-46-7	1,4-Dichlorobenzene	430.	U
95-50-1	1,2-Dichlorobenzene	430.	U
95-48-7	2-Methylphenol	430.	U
108-60-1	bis(2-chloroisopropyl)ether	430.	U
106-44-5	4-Methylphenol	430.	U
621-64-7	n-Nitroso-di-n-propylamine	430.	U
67-72-1	Hexachloroethane	430.	U
98-95-3	Nitrobenzene	430.	U
78-59-1	Isophorone	430.	U
88-75-5	2-Nitrophenol	430.	U
105-67-9	2,4-Dimethylphenol	430.	U
111-91-1	bis(2-Chloroethoxy)methane	430.	U
120-83-2	2,4-Dichlorophenol	430.	U
120-82-1	1,2,4-Trichlorobenzene	430.	U
91-20-3	Naphthalene	430.	U
106-47-8	4-Chloroaniline	430.	U
87-68-3	Hexachlorobutadiene	430.	U
59-50-7	4-Chloro-3-methylphenol	430.	U
91-57-6	2-Methylnaphthalene	430.	U
77-47-4	Hexachlorocyclopentadiene	430.	U
88-06-2	2,4,6-Trichlorophenol	430.	U
95-95-4	2,4,5-Trichlorophenol	430.	U
91-58-7	2-Chloronaphthalene	430.	U
88-74-4	2-Nitroaniline	2200.	U
131-11-3	Dimethylphthalate	430.	U
208-96-8	Acenaphthylene	430.	U
606-20-2	2,6-Dinitrotoluene	430.	U
99-09-2	3-Nitroaniline	2200.	U
83-32-9	Acenaphthene	430.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0821

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0821
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1511
Level: (low/med) LOW Date Received: 08/02/01
% Moisture: 23. decanted: (Y/N) N Date Extracted: 08/06/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/16/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 6.8

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2200.	U
100-02-7	4-Nitrophenol	2200.	U
132-64-9	Dibenzofuran	430.	U
121-14-2	2,4-Dinitrotoluene	430.	U
84-66-2	Diethylphthalate	430.	U
7005-72-3	4-Chlorophenyl-phenylether	430.	U
86-73-7	Fluorene	430.	U
100-01-6	4-Nitroaniline	2200.	U
534-52-1	4,6-Dinitro-2-methylphenol	2200.	U
86-30-6	n-Nitrosodiphenylamine	430.	U
101-55-3	4-Bromophenyl-phenylether	430.	U
118-74-1	Hexachlorobenzene	430.	U
87-86-5	Pentachlorophenol	2200.	U
85-01-8	Phenanthrene	430.	U
120-12-7	Anthracene	430.	U
86-74-8	Carbazole	430.	U
84-74-2	Di-n-butylphthalate	430.	U
206-44-0	Fluoranthene	430.	U
129-00-0	Pyrene	430.	U
85-68-7	Butylbenzylphthalate	430.	U
91-94-1	3,3'-Dichlorobenzidine	870.	U
56-55-3	Benzo(a)anthracene	430.	U
218-01-9	Chrysene	430.	U
117-81-7	bis(2-Ethylhexyl)phthalate	430.	U
117-84-0	Di-n-octylphthalate	430.	U
205-99-2	Benzo(b)fluoranthene	430.	U
207-08-9	Benzo(k)fluoranthene	430.	U
50-32-8	Benzo(a)pyrene	430.	U
193-39-5	Indeno(1,2,3-cd)pyrene	430.	U
53-70-3	Dibenzo(a,h)anthracene	430.	U
191-24-2	Benzo(g,h,i)perylene	430.	U

(1) - Cannot be separated from diphenylamine

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0923

Lab Name: AES, Inc. Contract:

Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821

Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0923

Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1514

Level: (low/med) LOW Date Received: 08/07/01

% Moisture: 19. decanted: (Y/N) N Date Extracted: 08/08/01

Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/17/01

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	410.	U
111-44-4	bis(2-Chloroethyl)ether	410.	U
95-57-8	2-Chlorophenol	410.	U
541-73-1	1,3-Dichlorobenzene	410.	U
106-46-7	1,4-Dichlorobenzene	410.	U
95-50-1	1,2-Dichlorobenzene	410.	U
95-48-7	2-Methylphenol	410.	U
108-60-1	bis(2-chloroisopropyl)ether	410.	U
106-44-5	4-Methylphenol	410.	U
621-64-7	n-Nitroso-di-n-propylamine	410.	U
67-72-1	Hexachloroethane	410.	U
98-95-3	Nitrobenzene	410.	U
78-59-1	Isophorone	410.	U
88-75-5	2-Nitrophenol	410.	U
105-67-9	2,4-Dimethylphenol	410.	U
111-91-1	bis(2-Chloroethoxy)methane	410.	U
120-83-2	2,4-Dichlorophenol	410.	U
120-82-1	1,2,4-Trichlorobenzene	410.	U
91-20-3	Naphthalene	410.	U
106-47-8	4-Chloroaniline	410.	U
87-68-3	Hexachlorobutadiene	410.	U
59-50-7	4-Chloro-3-methylphenol	410.	U
91-57-6	2-Methylnaphthalene	410.	U
77-47-4	Hexachlorocyclopentadiene	410.	U
88-06-2	2,4,6-Trichlorophenol	410.	U
95-95-4	2,4,5-Trichlorophenol	410.	U
91-58-7	2-Chloronaphthalene	410.	U
88-74-4	2-Nitroaniline	2100.	U
131-11-3	Dimethylphthalate	410.	U
208-96-8	Acenaphthylene	410.	U
606-20-2	2,6-Dinitrotoluene	410.	U
99-09-2	3-Nitroaniline	2100.	U
83-32-9	Acenaphthene	410.	U

1C
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

BSVCSW0923

Lab Name: AES, Inc. Contract:
Lab Code: AES Case No.: NEG0121 SAS No.: SDG No.: BSVCSW0821
Matrix: (soil/water) SOIL Lab Sample ID: BSVCSW0923
Sample wt/vol: 30.0 (g/mL) G Lab File ID: B1514
Level: (low/med) LOW Date Received: 08/07/01
% Moisture: 19. decanted: (Y/N) N Date Extracted: 08/08/01
Concentrated Extract Volume: 1000.0 (uL) Date Analyzed: 08/17/01
Injection Volume: 1.0 (uL) Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: 7.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	2100.	U
100-02-7	4-Nitrophenol	2100.	U
132-64-9	Dibenzofuran	410.	U
121-14-2	2,4-Dinitrotoluene	410.	U
84-66-2	Diethylphthalate	410.	U
7005-72-3	4-Chlorophenyl-phenylether	410.	U
86-73-7	Fluorene	410.	U
100-01-6	4-Nitroaniline	2100.	U
534-52-1	4,6-Dinitro-2-methylphenol	2100.	U
86-30-6	n-Nitrosodiphenylamine	410.	U
101-55-3	4-Bromophenyl-phenylether	410.	U
118-74-1	Hexachlorobenzene	410.	U
87-86-5	Pentachlorophenol	2100.	U
85-01-8	Phenanthrene	410.	U
120-12-7	Anthracene	410.	U
86-74-8	Carbazole	410.	U
84-74-2	Di-n-butylphthalate	410.	U
206-44-0	Fluoranthene	86.	J
129-00-0	Pyrene	160.	J
85-68-7	Butylbenzylphthalate	410.	U
91-94-1	3,3'-Dichlorobenzidine	820.	U
56-55-3	Benzo(a)anthracene	58.	J
218-01-9	Chrysene	54.	J
117-81-7	bis(2-Ethylhexyl)phthalate	410.	U
117-84-0	Di-n-octylphthalate	410.	U
205-99-2	Benzo(b)fluoranthene	54.	J
207-08-9	Benzo(k)fluoranthene	71.	J
50-32-8	Benzo(a)pyrene	86.	J
193-39-5	Indeno(1,2,3-cd)pyrene	50.	J
53-70-3	Dibenzo(a,h)anthracene	410.	U
191-24-2	Benzo(g,h,i)perylene	90.	J

(1) - Cannot be separated from diphenylamine

+PAH 0.709

cPAH 0.373

Adirondack Environmental Services, Inc.®
314 North Pearl Street
Albany, New York 12207
518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: NYSEG	Address: Kirkwood Industrial Park Binghamton, NY 13902	
Send Report To: John Ruspantini	Project Name (Location): Binghamton MGP	Samplers: (Names) Brian Balcaikonu
Client Phone No: (607) 762-8787	PO Number:	Samplers: (Signature)
Client Fax No: (607) 762-8451		

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
010802J01	BSVCSW0821	7/30/01	1015	A	Soil		X	2	TCL Volatiles (8260) TCL Semi-Volatiles (8270)
J02	BSVCSW0722	8/1/01	1020	A			X	2	
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					
				A P					

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☒ Normal
☐ 2 Day ☐ 5 Day

Special Instructions/Remarks: ASP Protocol

CC Report To:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: M. L	Date/Time 8/2/01 941

Temperature	Properly Preserved	Received Within Holding Times
Ambient or Chilled	Y N	Y N
Notes: 3°C	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

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314 North Pearl Street
Albany, New York 12207
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CHAIN OF CUSTODY RECORD

A full service analytical research laboratory offering solutions to environmental concerns

Client Name: NYSEG	Address: KIRKWOOD INDUSTRIAL PARK BINGHAMTON, NY 13902	
Send Report To: JOHN RUSPANTINI	Project Name (Location) BINGHAMTON MGP	Samplers: (Names) BRIAN BALCHIKONIS
Client Phone No: (607) 762-8787 / Client Fax No: (607) 762-8457	PO Number:	Samplers: (Signature)

AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=a.m. P=p.m.		Sample Type Matrix	Comp	Grab	Number of Cont's	Analysis Required
010807 M01	BSVCSW0923	8/3/01	1100	A	SOIL		X	2	TCL VOLATILES (8260) TCL SEMI-VOLATILES (8270)
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					
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				A					
				P					
				A					
				P					
				A					
				P					
				A					
				P					

Turnaround Time Request:

☐ 1 Day ☐ 3 Day ☒ Normal

☐ 2 Day ☐ 5 Day

Special Instructions/Remarks: ASP PROTOCOL

CC Report To:

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received for Laboratory by: M. L	Date/Time 8/7/01 10[15]

TEMPERATURE	PROPERLY PRESERVED	RECEIVED WITHIN HOLDING TIMES
Ambient or Chilled	Y N	Y N
Notes: 2.5°C	Notes:	Notes:

WHITE - Lab Copy YELLOW - Sampler Copy PINK - Generator Copy

Adirondack Environmental Services, Inc.

Remediation Technician's Notes
December 11, 2000
Columbia Gas Transmission Building
Odor Complaint Investigation

11:45: Took air readings in Columbia Gas building (0.0 - PID). Also took bag sample to be sent to Performance Analytical (Method TO-14 BTEX) in left front office of secretary (Patty). No odors noticed.

APPENDIX F

DATA USABILITY SUMMARY REPORT

BINGHAMTON COURT STREET MGP SITE

DATA USABILITY
SUMMARY REPORT

SAMPLED 12/07/00 - 8/03/01

Prepared for:

NEW YORK STATE ELECTRIC and GAS CORP.
P.O. Box 5224
Binghamton, NY 13902-5224

Prepared by:

DATAVAL, Inc.
520 Hooper Rd., PMB 283
Endwell, NY 13760

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1001
Sampled 07Dec00 and 14Dec00

SOIL SAMPLES for VOLATILE ORGANICS

BSVCBM1001 (001208G-01) BSVCBM1002 (001215M-01)

DATA ASSESSMENT

A volatile organics data package containing analytical results for two soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6, Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichlooethylene, tetrachloroethylene, 1,1,2,2-tetrachloroethane and vinyl chloride results reported from BSVCBM1001, and the trichlooethylene and 1,1,2,2-tetrachloroethane results reported from BSVCBM1002 have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded. The presence and condition of custody seals was not documented. The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Reported data should be considered technically defensible and completely usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY
Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included two soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 07Dec00 and 14Dec00. The samples were shipped to the laboratory, via UPS, on the day of collection, and arrived the following morning. BSVCBM1001 arrived on 08Dec00, BSVCBM1002 on 15Dec00. The shipment was receive intact. However, the laboratory record does not indicate that custody seals were affixed to each sample cooler.

The field custody records indicate that BSVCBM1002 was chilled at the time of laboratory receipt. Cooler temperatures were not recorded for either shipment of samples. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

BSVCBM1001 was analyzed on 11Dec00; BSVCBM1002 on 20Dec01. The program holding time limitations were satisfied.

BLANKS
Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. VBLK02 contained 60 μg/kg of chloroform. The presence of this artifact warrants no concern, similar contamination was not observed in program samples. The blanks were otherwise clean.

MS TUNING
Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 04Dec00 and 20Dec00. Standards of 10, 20, 50, 100, and 200 μg/L were included. During the 04Dec00 calibration, trichlooethylene, tetrachloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required levels of instrument response. Vinyl chloride demonstrated poor linearity. Similarly, on 20Dec00, trichloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required minimum levels of instrument response. The remaining analytes demonstrated the required levels of response and an acceptable degree of linearity. Based on these observations, the trichlooethylene, tetrachloroethylene, 1,1,2,2-tetrachloroethane and vinyl chloride results reported from BSVCBM1001, and the trichlooethylene and 1,1,2,2-tetrachloroethane results reported from BSVCBM1002 have been qualified as estimations.

Calibration performance was verified on 11Dec00, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. Although a low recovery was reported for the bromofluorobenzene addition to a matrix spiked blank, acceptable recoveries were reported for the surrogate additions to each program sample. Data qualifications are not required.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS
Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Sample BSVCBM1002 was selected for matrix spiking. Of the analytes added to two portions of this sample, only the additions of benzene and toluene produced unacceptably low recoveries. This performance also produced a poor measurement of precision. It is noted, however, that the precision demonstrated by duplicate measurements of 1,1-dichloroethylene, trichloroethylene and chlorobenzene was excellent. Benzene and toluene were also recovered successfully from a matrix spiked blank. Based on these observations, the performance reported for benzene and toluene is assumed to be caused by the non-homogeneous nature of the sample selected for spiking. Data has been left unqualified.

DUPLICATES
Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION
Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1001

Sampled: 07Dec00, 14Dec00

	CALIBRATE TCE	CALIBRATE 1122TCA	CALIBRATE 1122TCE	CALIBRATE VINYL CHLORIDE
BSVCBM1001 (001208G-01)	UJ	UJ	UJ	UJ
BSVCBM1002 (001215M-01)	UJ	UJ		

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1001
Sampled 07Dec00 and 14Dec00

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCBM1001 (001208G-01) BSVCBM1002 (001215M-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for two soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The identifications of chrysene in BSVCBM1001 and BSVCBM1002 were not conclusive, based on the mass spectra reference provided by the laboratory. Chrysene should be considered undetected in both samples.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded at the time of receipt. The presence and condition of custody seals was not documented. The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included two soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 07Dec00 and 14Dec00. The samples were shipped to the laboratory, via UPS, on the day of collection, and arrived the following morning. BSVCBM1001 arrived on 08Dec00, BSVCBM1002 on 15Dec00. The shipment was receive intact. However, the laboratory record does not indicate that custody seals were affixed to each sample cooler.

Although field custody records indicate that BSVCBM1002 was chilled at the time of laboratory receipt, cooler temperatures were not recorded for either shipment of samples. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

This pair of samples was extracted on 08Dec00 and 19Dec00. Analyses were completed by 20Dec00. Program holding time limitations were satisfied.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Both were free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 14Dec00. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity.

Calibration performance was verified on 19Dec00 and 20Dec00, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCBM1001 was selected for matrix spiking. The analyte additions to two portions of this sample demonstrated acceptable levels of measurement accuracy and precision. Acceptable recoveries were also reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples. Based on the mass spectra reference supplied by the laboratory, the identifications of chrysene in BSVCBM1001 and BSVCBM1002 were not conclusive. Chrysene should be considered undetected in both samples.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1001

Sampled: 07Dec00, 14Dec00

	SPECTRA ID CHRYSENE
BSVCBM1001 (001208G-01)	12000U
BSVCBM1002 (001215M-01)	48000U

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1003
Sampled: 19Dec00

SOIL SAMPLES for VOLATILE ORGANICS

BSVCBM1003 (001221S-01)

DATA ASSESSMENT

A volatile organics data package containing analytical results for one soil sample was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The sample, taken from the Binghamton Court Street MGP site, was identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene, 1,1,2,2-tetrachloroethane and bromoform results reported from BSVCBM1003 have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded. The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Reported data should be considered technically defensible and completely usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY
Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included one soil, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 19Dec00. The sample was shipped to the laboratory, via UPS, the following day, arriving on 21Dec00. The shipment was receive intact, with custody seals in place.

It is noted that the field custody record does not document that the sample shipment was properly chilled, and maintained at a temperature between 2°C and 6°C from the time of collection. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

Sample BSVCBM1003 was analyzed on 27Dec00, satisfying the program holding time requirement.

BLANKS
Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. Targeted analytes were not detected in this blank.

MS TUNING
Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION
Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 20Dec00. Standards of 10, 20, 50, 100, and 200 μg/L were included. With two exceptions, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required minimum levels of instrument response. Based on this performance, trichloroethylene and 1,1,2,2-tetrachloroethane results have been qualified as estimations.

Calibration performance was verified on 05Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability. The response of trichloroethylene and 1,1,2,2-tetrachloroethane was again low. The resposne of bromoform was also low. Based on this performance, the bromoform result reported from BSVCBM1003 has been qualified as an estimation. Because trichloroethylene and 1,1,2,2-tetrachloroethane results were previously qualified, an action at this time is not required.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples was recovered within the range of acceptance.

INTERNAL STANDARDS
Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Sample BSVCBM1003 was selected for matrix spiking. The recoveries reported from additions to two portions of this sample demonstrated acceptable levels of measurement accuracy and precision. Acceptable recoveries were also reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample nonhomogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1003 Sampled: 19Dec00

	CALIBRATE TCE	CALIBRATE 1122TCA	CALIBRATE BROMOFORM
BSVCBM1003 (001221S-01)	UJ	UJ	UJ

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1003
Sampled: 19Dec00

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCBM1003 (001221S-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for one soil sample was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The sample, taken from the Binghamton Court Street MGP site, was identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The pentachlorophenol result reported from BSVCBM1003 has been qualified as an estimation due to poor calibration performance.

Sample BSVCBM1003 was held in the laboratory for seven days prior to extraction, the program holding time limitation being five days. Due to this error, the results reported from BSVCBM1003 have been qualified as estimations

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded. The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be

guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included one soil, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 19Dec00. The sample was shipped to the laboratory, via UPS, the following day, arriving on 21Dec01. The shipment was receive intact, with custody seals in place.

It is noted that the field custody record does not document that the sample shipment was properly chilled, and maintained at a temperature between 2°C and 6°C from the time of collection. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

BSVCBM1003 was extracted on 28Dec00 and analyzed on 05Jan01. 04Jan01. Because the holding time limitation had expired two days prior to date of extraction, data reported from BSVCBM1003 has been qualified as an estimation.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. This blank was free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 14Dec00. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity.

Calibration performance was verified on 05Jan01 and 08Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, most analytes demonstrated an acceptable level of instrument stability. A large shift in the response of pentachlorophenol was observed on 05Jan01. Based on this performance, the pentachlorophenol result reported from BSVCBM1003 has been qualified as an estimation.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

Although low recoveries were reported for each of the internal standard additions to the matrix spiked sample, acceptable recoveries were reported for the spiked duplicate and every program sample. Data qualifications are not required.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCBM1003 was selected for matrix spiking. The analyte additions to two portions of this sample demonstrated acceptable levels of measurement accuracy and precision. Acceptable recoveries were also reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. Targeted analytes were not detected in this sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1003

Sampled: 19Dec00

	HOLD TIME	CALIBRATE PENTACHLOROPHENOL
BSVCBM1003 (001221S-01)	ALL UJ	UJ

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0804
Sampled 27Dec00, 02Jan01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCSW0804 (001229I-01) BSVCSW0805 (010103H-01)

DATA ASSESSMENT

A volatile organics data package containing analytical results for two soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6, Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene and 1,1,2,2-tetrachloroethane results reported from this pair of samples have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. The temperature of BSVCSW0804 was not recorded at the time of receipt. The presence of custody seals on the cooler containing BSVCSW0805 was not verified.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Reported data should be considered technically defensible and completely usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included two soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 27Dec00 and 02Jan01. One sample was collected on 27Dec00 and shipped to the laboratory, via UPS, the following day. It arrived on 29Dec01. The second sample was collected on 02Jan01 and shipped, via UPS, the same afternoon. It arrived the following morning. A cooler temperature of 4°C was recorded at the time of sample receipt.

It is noted that the field custody record does not document that the first sample shipment was properly chilled, and maintained at a temperature between 2°C and 6°C from the time of collection. The documentation for the second shipment does not confirm the presence of a custody seal on the sample cooler. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

Both samples were analyzed on 05Jan01, satisfying program holding time requirements.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. Targeted analytes were not detected in this blank.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 20Dec00. Standards of 10, 20, 50, 100, and 200 μg/L were included. With two exceptions, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required minimum levels of instrument response. Based on this performance, trichloroethylene and 1,1,2,2-tetrachloroethane results have been qualified as estimations.

Calibration performance was verified on 05Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability. The response of trichloroethylene and 1,1,2,2-tetrachloroethane was again low. Because trichloroethylene results were previously qualified, an action at this time is not required.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples was recovered within the range of acceptance.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS
Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Sample BSVCSW0804 was selected for matrix spiking. Of the analytes added to two portions of this sample, only the additions of benzene and toluene produced unacceptably high recoveries. This performance also produced a poor measurement of precision. It is noted, however, that the precision demonstrated by duplicate measurements of 1,1-dichloroethylene, trichloroethylene and chlorobenzene was excellent. Benzene and toluene were also recovered successfully from a matrix spiked blank. Based on these observations, the performance reported for benzene and toluene is assumed to be caused by the non-homogeneous nature of the sample selected for spiking. Data has been left unqualified.

DUPLICATES
Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION
Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0804 Sampled: 27Dec00, 02Jan01

	CALIBRATE TCE	CALIBRATE 1122TCA
BSVCSW0804 (001229I-01)	UJ	UJ
BSVCSW0805 (010103H-01)	UJ	UJ

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0804
Sampled 27Dec00, 02Jan01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCSW0804 (001229I-01) BSVCSW0805 (010103H-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for two soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The identification of chrysene in BSVCSW0805 was not conclusive, based on the mass spectra reference provided by the laboratory. Chrysene should be considered undetected in this sample.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. The temperature of BSVCSW0804 was not recorded at the time of receipt. The presence of custody seals on the cooler containing BSVCSW0805 was not verified.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, weaken its defensibility. It is strongly recommended that, in the future, a temperature blank be packaged in each cooler of program samples.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be

guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, and a matrix spike duplicate.

This group of samples, which included two soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 27Dec00 and 02Jan01. One sample was collected on 27Dec01 and shipped to the laboratory, via UPS, the following day. It arrived on 29Dec01. The second sample was collected on 02Jan01 and shipped, via UPS, the same afternoon. It arrived on 03Jan01. A cooler temperature of 4°C was recorded at the time of sample receipt.

It is noted that the field custody record does not document that the first sample shipment was properly chilled, and maintained at a temperature between 2°C and 6°C from the time of collection. The documentation for the second shipment does not confirm the presence of a custody seal on the sample cooler. The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

This pair of samples was extracted on 02Jan01 and 04Jan01. Analyses were completed by 09Jan01. Program holding time limitations were satisfied.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Both were free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 14Dec00. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity.

Calibration performance was verified on 08Jan01 and 09Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

Although low recoveries were reported for five of the six internal standard additions to the matrix spiked sample, acceptable recoveries were reported for the spiked duplicate and every program sample. Data qualifications are not required.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW0805 was selected for matrix spiking. The analyte additions to two portions of this sample demonstrated acceptable levels of measurement accuracy and precision. Acceptable recoveries were also reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples. Based on the mass spectra reference supplied by the laboratory, the identification of chrysene in BSVCSW0805 was not conclusive. Chrysene should be considered undetected in this sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0804 Sampled: 27Dec00, 02Jan01

	SPECTRA ID CHRYSENE
BSVCSW0804 (001229I-01)	
BSVCSW0805 (010103H-01)	14000U

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1206
Sampled: 09Jan01, 10Jan01, 12Jan01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCBM1206 (010112J-01)   BSVCSW1107 (010112J-02)
BSVCSW0908 (010117F-01)

DATA ASSESSMENT
A volatile organics data package containing analytical results for three soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene, 1,1,2,2-tetrachloroethane and bromoform results reported from this group of samples have been qualified as estimations due to poor calibration performance.

The chloroform concentrations detected in each program sample are assumed to represent laboratory artifacts and have been removed from Form 1.

The benzene, toluene, ethylbenzene concentrations detected in BSVCSW0908 have been qualified as estimations due to a high surrogate standard recovery.

CORRECTNESS AND USABILITY
The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded. The laboratory's documentation does not indicate if custody seals were preset on the sample coolers. Custody transfers affecting BSVCSW0908, between the time of collection and the time of laboratory receipt, were also not recorded.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, seriously weaken its defensibility.

It is strongly recommended that these areas be addressed in the future.

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included three soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site between 09Jan01 and 12Jan01. Two samples were collected on 09Jan01 and 10Jan01 and shipped to the laboratory, via UPS, on 11Jan01. They arrived on 12Jan01. BSVCSW0908 was collected on 12Jan01 and shipped to the laboratory, via UPS. It arrived on 17Jan01. The date of shipment and the custody of this sample between 12Jan01 and 17Jan01 were undocumented. The condition of both shipments at the time of laboratory receipt was not documented. Cooler temperatures were not recorded.

The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

BSVCBM1206 and BSVCSW1107 were analyzed on 17Jan01, BSVCSW0908 on 22Jan01. The site holding time limitations were satisfied. Although BSVCSW0908 was held in the field for several days prior to shipment, it was analyzed within ten days of collection. Sample holding time does not present a concern.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Targeted analytes were not detected in either blank.

Chloroform was detected in each sample included in this delivery group. Although chloroform was not present in the associated blanks, it was present in method blanks included in delivery groups BSVCBM1001 and BSVCSW0413. Chloroform was removed from each sample report.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 20Dec00. Standards of 10, 20, 50, 100, and 200 µg/L were included. In most cases, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene, 1,1,2,2-tetrachloroethane and bromoform failed to produce the required minimum levels of instrument response. Based on this performance, trichloroethylene, 1,1,2,2-tetrachloroethane and bromoform results have been qualified as estimations.

Calibration performance was verified on 17Jan01 and 22Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability. The response of trichloroethylene, 1,1,2,2-tetrachloroethane and bromoform was again low. Because each of these analytes were previously qualified, an action at this time is not required.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. With one exception, acceptable recoveries were reported for the surrogate additions to each program sample. Only the addition of bromofluorobenzene to BSVCSW0908 produced a high recovery of 114%. Based on this evidence of positive bias, positive analyte results reported from this sample have been qualified as estimations. Benzene, toluene, ethylbenzene and xylene results were affected.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Sample BSVCSW1107 was selected for matrix spiking. The recoveries reported for analyte additions to two portions of this sample demonstrate acceptable levels of measurement accuracy and precision.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1206

Sampled: 09Jan01-12Jan01

	CALIBRATE TCE	CALIBRATE 1122TCA	CALIBRATE BROMOFORM	BLANKS CHLOROFORM	SURROGATES
BSVCBM1206 (010112J-01)	UJ	UJ	UJ	1200U	
BSVCSW1107 (010112J-02)	UJ	UJ	UJ	4300U	
BSVCSW0908 (010117F-01)	UJ	UJ	UJ	62U	ALL POS J

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1206
Sampled: 09Jan01, 10Jan01, 12Jan01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCBM1206 (010112J-01) BSVCSW1107 (010112J-02)
BSVCSW0908 (010117F-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for three soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The acenaphthylene and 4-chloro-3-methylphenol results reported from each program sample have been qualified as estimations due to poor calibration performance. The pentachlorophenol results from BSVCBM1206 and BSVCSW0908, and the indeno(1,2,3-cd)pyrene result from BSVCSW1107 have been likewise qualified.

The presence of bis(2-ethylhexyl)phthalate in BSVCBM1206 most likely represents a laboratory artifact. However, because the phthalate was not detected in associated blanks, it cannot be removed from Form 1. The bis(2-ethylhexyl)phthalate concentration reported from BSVCBM1206 has been qualified as an estimation and should only be considered significant if consistent with site history.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded and the field custody chain was incomplete. The laboratory's documentation does not indicate if custody seals were preset on the sample coolers.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, seriously weaken its defensibility.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included three soils, two matrix spikes, and two matrix spike duplicates, was collected from the Binghamton Court Street MGP site between 09Jan01 and 12Jan01. Two samples were collected on 09Jan01 and 10Jan01 and shipped to the laboratory, via UPS, on 11Jan01. They arrived on 12Jan01. BSVCSW0908 was collected on 12Jan01 and shipped to the laboratory, via UPS. It arrived on 17Jan01. The date of shipment and the custody of this sample between 12Jan01 and 17Jan01 were undocumented. The condition of both shipments, at the time of laboratory receipt, was not documented. Cooler temperatures were not recorded.
The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

BSVCBM1206 and BSVCSW1107 were extracted on 15Jan01. BSVCSW0908 was extracted on 17Jan01, with a second extraction of BSVCBM1206. Each sample extraction was performed within five days of laboratory receipt. Although delayed in the field, BSVCSW0908 was extracted within five days of collection. The analysis of each sample was completed by 23Jan01. Program holding time limitations were satisfied.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Both were free of targeted analyte contamination.

Although not present in the associated blanks, bis(2-ethylhexyl)-phthalate was detected in BSVCBM1206. Because this analyte is frequently present as a laboratory artifact, it has been qualified as an estimation. It has not been removed from Form 1 because it was not detected in blanks. The presence of bis(2-ethylhexyl)-phthalate should only be considered significant if consistent with site history.

MS TUNING
Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION
Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 14Dec00. Standards of 20, 50, 80, 120, and 160 ng were included. With one exception, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Each acenaphthylene standard failed to produce the required minimum level of instrument response. The acenaphthylene results reported from this group of samples have been qualified as estimations.

Calibration performance was verified on 22Jan01 and 23Jan01, prior to the analysis of program samples. When compared to the initial instrument calibration, unacceptable changes were observed in the response of 4-chloro-3-methylphenol and indeno(1,2,3-cd)pyrene on 22Jan01, and 4-chloro-3-methylphenol and pentachlorophenol on 23Jan01. The response of acenaphthylene was again low during both calibration checks. Based on this performance, 4-chloro-3-methylphenol, indeno(1,2,3-cd)pyrene and pentachlorophenol results have been qualified as estimations in associated samples. Acenaphthylene results have been previously qualified.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

Low recoveries were reported for the surrogate additions to BSVCSW0908. This performance may be attributed to a 1:20 dilution of the sample that was performed after the surrogates were added. The observed performance does not warrant data qualifications.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

Although the internal standard additions to two matrix spiked samples produced an unacceptable response, a stable response and retention time was reported for every internal standard that was added to program samples. Data qualifications are not required.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW1107 and BSVCBM1206 were selected for matrix spiking. The analyte additions to two portions of BSVCSW1107 produced high recoveries of phenol (96%), 4-chloro-3-methylphenol (115%,127%) and pentachlorophenol (125%), and a low recovery of acenaphthene (21%). Because this performance may be attributed to the non-homogeneous matrix of the sample selected for spiking, data qualifications are not deemed necessary.

Low analyte recoveries were also reported for the 2,4-dinitrotoluene (0%) and pentachlorophenol (10%) additions to BSVCBM1206. A high recovery of pyrene (172%) was also reported. The reported recoveries produced an unacceptable precision measurement for every spiked analyte except 2-chlorophenol, n-nitroso-di-n-propylamine and 4-nitrophenol. The large differences observed between this pair of spikes is again indicative of a non-homogeneous sample matrix. Data has again been left unqualified.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1206

Sampled: 09Jan01-12Jan01

	CALIBRATE ACENAPHTHYLENE	CALIBRATE 4-CHLORO-3 METHYLPHENOL	CALIBRATE PENTACHLORO PHENOL	CALIBRATE INDENO(1,2,3-CD) PYRENE
BSVCBM1206 (010112J-01)	18000J	UJ	UJ	
BSVCSW1107 (010112J-02)	160J	UJ		190J
BSVCSW0908 (010117F-01)	94000J	UJ	UJ	

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1206

Sampled: 09Jan01-12Jan01

	BLANKS BIS(2-ETHYLHEXYL)PHTHALATE
BSVCBM1206 (010112J-01)	4700J
BSVCSW1107 (010112J-02)	
BSVCSW0908 (010117F-01)	

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1009
Sampled: 25Jan01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCBM1009 (010129F-01) BSVCSW0810 (010129F-02)
BSVCSW0711 (010129F-03)

DATA ASSESSMENT

A volatile organics data package containing analytical results for three soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6, Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded. The laboratory's documentation does not indicate if custody seals were preset on the sample coolers. Custody transfers that occurred between the time of collection and the time of laboratory receipt were not recorded.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, seriously weaken its defensibility. It is strongly recommended that these areas be addressed in the future.

Reported data should be considered technically accurate in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included three soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 25Jan01. The samples were shipped to the laboratory, via UPS. They arrived on 29Jan01. The date of shipment and the custody of this group of samples between 25Jan01 and 29Jan01 were undocumented. The condition of the shipment at the time of laboratory receipt was not documented. Cooler temperatures were not recorded. The laboratory record does not indicate if custody seals were placed on the sample coolers.

The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

The analysis of each sample was completed by 02Feb01, well within the site holding time limitation. Although the samples were held in the field for several days prior to shipment, they were analyzed within eight days of collection. Sample holding time does not present a concern.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Targeted analytes were not detected in either blank.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 30Jan01. Standards of 10, 20, 50, 100, and 200 μg/L were included. The calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity.

Calibration performance was verified on 01Feb01 and 02Feb01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared. Although an incorrect acceptance criteria was applied, the recovery of each surrogate that was added to program samples was recovered within the ASP range of acceptance.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

Sample BSVCBM1009 was selected for matrix spiking. The recoveries reported for the analyte additions to two portions of this sample demonstrated an acceptable level of measurement accuracy. Although the recoveries reported for benzene were within the range of acceptance, the pair of measurements demonstrated poor precision (27% RPD). This performance alone, however, does not require the qualification of reported data.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1009

Sampled: 25Jan01

BSVCBM1009 (010129F-01)
BSVCSW0810 (010129F-02)
BSVCSW0711 (010129F-03)

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCBM1009
Sampled: 25Jan01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCBM1009 (010129F-01)   BSVCSW0810 (010129F-02)
BSVCSW0711 (010129F-03)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for three soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6, Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The benzo(k)fluoranthene result reported from each program sample has been qualified as an estimation due to poor calibration performance.

The 4-chloro-3-methylphenol results reported from this group of samples have been rejected due to a low matrix spike recovery.

The identification of benzo(a)anthracene in BSVCSW0810 could not be confirmed using the mass spectra reference supplied by the laboratory. Benzo(a)anthracene should be considered undetected in the affected sample.

The naphthalene concentration reported from BSVCSW0810 was obtained from a measurement that exceeded the range of calibration. The result has been qualified as an estimation.

CORRECTNESS AND USABILITY

The field custody record, and the records furnished by the laboratory, failed to document the condition of samples at the time of laboratory receipt. Cooler temperatures were not recorded and the field custody chain was incomplete. The laboratory's documentation does not indicate if custody seals were preset on the sample coolers.

The NYSE&G program manager has indicated that samples are packed with ice as a matter of routine. Such handling is a requirement of the Quality Assurance Plan.

The laboratory has indicated that cooler temperatures were not recorded because the sample coolers did not contain a temperature blank. The laboratory also indicated that a record would have been initiated if the integrity of the samples was suspect at the time of receipt. A notation would have been made on the custody record if the sample coolers did not contain ice.

Based on this information, laboratory data obtained from this group of samples may be assumed to be technically accurate. The missing documentation would, however, seriously weaken its defensibility.

Reported data should be considered technically accurate in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Unreliable data has been identified with a single red line and flagged "R". Rejected data should not be included in data tables. Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included three soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site on 25Jan01. The samples were shipped to the laboratory, via UPS. They arrived on 29Jan01. The date of shipment and the custody of this group of samples between 25Jan01 and 29Jan01 were undocumented. The condition of the shipment at the time of laboratory receipt was not documented. Cooler temperatures were not recorded. The laboratory record does not indicate if custody seals were placed on the sample coolers.

The laboratory indicates that a note would have been made at the time of receipt if it appeared that the samples were not properly handled. This area of record-keeping should be improved.

This group of samples was extracted on 01Feb01 and analyzed on 26Feb01, well within the site holding time limitations. Although the samples were held in the field for several days prior to shipment, they were extracted within seven days of collection. Sample holding time does not present a concern.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. This blank was free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 21Feb01 Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity.

Calibration performance was verified on 26Feb01, prior to the analysis of program samples. When compared to the initial instrument calibration, most analytes demonstrated an acceptable level of instrument stability. An unacceptable shift was identified in the response of benzo(k)fluoranthene (26.1%D). Based on this performance, the benzo(k)fluoranthene result reported from each program sample has been qualified as an estimation.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

It is nted that low recoveries were reported for the surrogate additions to BSVCSW0810 and BSVCSW0711. This performance may be attributed to a 1:20 dilution of each sample that was performed after the surrogates were added. The observed performance does not warrant data qualifications.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCBM1009 was selected for matrix spiking. The analyte additions to two portions of this sample produced unacceptable recoveries of phenol (107%,98%), 2-chlorophenol (107%), 4-chloro-3-methylphenol (131%,0%) and pentachlorophenol (131%,123%). The recoveries reported for phenol, 2-chlorophenol and pentachlorophenol warrant no concern. Acid analytes were not detected in program samples. Based on spiking performance, the 4-chloro-3-methylphenol result reported from each program sample has been rejected.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples. The identification of benzo(a)anthracene in BSVCSW0810 could not be confirmed, based on the reference mass spectra supplied by the laboratory. Benzo(a)anthracene should be considered undetected in the affected sample.

The naphthalene concentration reported from BSVCBM1009 was obtained from a measurement that exceeded the range of calibration. The reported concentration has been qualified as an estimation.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1009

Sampled: 25Jan01

	CALIBRATE BENZO(K)FLUORANTHENE	MATRIX SPIKES 4-CHLORO-3-METHYLPHENOL	MASS SPECTRA ID BENZO(A)ANTHRACENE
BSVCBM1009 (010129F-01)	19000J	REJECT	
BSVCSW0810 (010129F-02)	280000J	REJECT	310000U
BSVCSW0711 (010129F-03)	200000J	REJECT	

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCBM1009 Sampled: 25Jan01

	MEASUREMENT NAPHTHALENE
BSVCBM1009 (010129F-01)	400000EJ
BSVCSW0810 (010129F-02)	
BSVCSW0711 (010129F-03)	

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0413
Sampled 09Jul01 - 12Jul01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCSW0612 (010711F-01)	BSVCSW0413 (010711F-02)
BSVCSW1114 (010711F-03)	BSVCSW1015 (010711F-04)
BSVCSW0916 (010711F-05)	BSVCSW1017 (010711F-06)
BSVCSW0918 (010713K-01)	BSVCSW0719 (010713K-02)

DATA ASSESSMENT
A volatile organics data package containing analytical results for eight soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene and 1,1,2,2-tetrachloroethane results reported from this group of samples have been qualified as estimations due to poor calibration performance.

Methylene chloride and chloroform were detected in blanks associated with this group of samples. Similar artifacts have been removed from BSVCSW1114, BSVCSW1015 and BSVCSW1017.

The presence of toluene in BSVCSW1017 and BSVCSW0916 could not be confirmed, using the mass spectra references supplied by the laboratory. Toluene should be considered undetected in these samples.

The benzene, ethylbenzene and xylene concentrations reported from BSVCSW1017 have been qualified as estimations due to a high surrogate standard recovery.

CORRECTNESS AND USABILITY
Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01
James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included eight soils, two matrix spikes, and two matrix spike duplicates, was collected from the Binghamton Court Street MGP site between 09Jul01 and 12Jul01. Six samples were collected on 09Jul01 and 10Jul01, and delivered to the laboratory on 11Jul01. Two additional samples were collected on 11Jul01 and 12Jul01 and delivered on 13Jul01. The samples were intact and properly chilled at the time of receipt. Both shipments produced cooler temperatures of 2°C. The analysis of each sample was completed by 17Jul01, satisfying the program holding time limitation.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. VBLK01 contained 5 μg/kg of methylene chloride. Chloroform (5μg/kg) was present in VBLK02. Similar traces of chloroform were present in BSVCSW1015, BSVCSW1017 and BSVCSW1114. Methylene chloride was detected in BSVCSW1017. Chloroform and methylene chloride should be considered undetected in the affected samples.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION
Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 29Jun01. Standards of 10, 20, 50, 100, and 200 µg/L were included. With two exceptions, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required minimum levels of instrument response. Based on this performance, trichloroethylene and 1,1,2,2-tetrachloroethane results have been qualified as estimations.

Calibration performance was verified on 16Jul01 and 17Jul01, prior to the analysis of program samples. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability. The response of trichloroethylene and 1,1,2,2-tetrachloroethane was again low. Because trichloroethylene results were previously qualified, an action at this time is not required.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared. However, an incorrect acceptance criteria was applied. When compared to ASP requirements, the bromofluorobenzene addition to BSVCSW1017 was seen to produce an unacceptably high recovery. Based on this evidence of positive bias, the benzene, ethylbenzene and xylene results reported from the affected sample have been qualified as estimations. The remaining program samples produced acceptable surrogate recoveries.

INTERNAL STANDARDS
Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW0918 and BSVCSW1017 were selected for matrix spiking. The recoveries of analyte additions to two portions of these samples demonstrated acceptable levels of measurement accuracy and precision.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference. The identifications of toluene in BSVCSW1017 and BSVCSW0916 were not considered inconclusive, based on the mass spectra references supplied by the laboratory. Toluene should be considered undetected in these samples.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0413

Sampled: 09Jul01-12Jul01

	BLANKS CHLOROFORM	CALIBRATE TCE	CALIBRATE 1122TCA	BLANK METH CL	MS ID TOLUENE	SURROGATES
BSVCSW0612 (010711F-01)		UJ	UJ			
BSVCSW0413 (010711F-02)		UJ	UJ			
BSVCSW1114 (010711F-03)	6200U	UJ	UJ			
BSVCSW1015 (010711F-04)	3200U	UJ	UJ			
BSVCSW0916 (010711F-05)		UJ	UJ		120U	
BSVCSW1017 (010711F-06)	1700U	UJ	UJ	1700U	1700U	ALL POS J
BSVCSW0918 (010713K-01)		UJ	UJ			
BSVCSW0719 (010713K-02)		UJ	UJ			

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0413
Sampled 09Jul01 - 12Jul01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCSW0612 (010711F-01)	BSVCSW0413 (010711F-02)
BSVCSW1114 (010711F-03)	BSVCSW1015 (010711F-04)
BSVCSW0916 (010711F-05)	BSVCSW1017 (010711F-06)
BSVCSW0918 (010713K-01)	BSVCSW0719 (010713K-02)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for eight soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The bis(2-chloroethyl)ether and naphthalene results from every program sample have been qualified as estimations due to poor calibration performance. Similarly, the N-nitroso-di-n-propylamine results from every sample except BSVCSW0918 and BSVCSW0719 have been qualified.

The phenanthrene, anthracene and fluoranthene results reported from BSVCSW1114 have been qualified as estimations due to a low internal standard response.

The results reported from every medium level soil sample have been qualified as estimations due to extremely poor matrix spike recoveries. The results reported from every sample except BSVCSW-0918 and BSVCSW0719 are affected.

The identifications of carbazole in BSVCSW0413, chrysene in BSVCSW1114, BSVCSW1015 and BSVCSW0916, and dibenzofuran and benzo(a)anthracene in BSVCSW114 could not be confirmed using the mass spectra references supplied by the laboratory. These analytes should be considered undetected in the affected samples.

The phenanthrene concentration reported from BSVCSW0719 was obtained from a measurement that exceeded the range of calibration. The result has been qualified as an estimation.

CORRECTNESS AND USABILITY

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included eight soils, two matrix spikes, and two matrix spike duplicates, was collected from the Binghamton Court Street MGP site between 09Jul01 and 12Jul01. Six samples were collected on 09Jul01 and 10Jul01, and delivered to the laboratory on 11Jul01. Two additional samples were collected on 11Jul01 and 12Jul01 and delivered on 13Jul01. The samples were intact and properly chilled at the time of receipt. Both shipments produced cooler temperatures of 2°C. Each sample was extracted for semivolatile analysis within four days of receipt, The analysis of each sample was completed by 03Aug01, satisfying the program holding time limitations.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Both were free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 01Aug01. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for most targeted analytes demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. The calibration curves for naphthalene and bis(2-chloroethyl)ether, however, demonstrated poor linearity. Based on this performance, naphthalene and bis(2-chloroethyl)ether results have been qualified as estimations.

Calibration performance was verified on 01Aug01, 02Aug01 and 03Aug01, prior to the analysis of program samples. When compared to the initial instrument calibrations, unacceptable shifts were noted in the response of bis(2-chloroethyl)ether on 01Aug01 and 03Aug01, and N-nitroso-di-n-propylamine on 02Aug01. This performance requires the qualification of bis(2-chloroethyl)ether and N-nitroso-di-n-propylamine results from associated samples.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. Unacceptably low recoveries were reported for surrogate additions to two samples. Low nitrobenzene-d5 (base/neutral) and phenol-5 (acid) recoveries were reported from BSVCSW0719. Because no more than one acid and/or base-neutral surrogate produced an unacceptable recovery, data qualifications are not required.

Four low surrogate recoveries were reported from a 1:10 dilution of BSVCSW1114. Because the low recoveries reflect the dilution, data qualifications are again not required. The surrogates added to the remaining samples were recovered successfully.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. In most cases, the response of internal standard additions to this group of samples fell within the calculated range of acceptance.

A low response was reported for the phenanthrene-d10 addition to BSVCSW1114. Based on this performance, the positive phenanthrene, anthracene and fluoranthene results reported from BSVCSW1114 have been qualified as estimations. Negative results linked to the affected internal standard have been left unqualified. Similar results were reported from the matrix spiked aliquot of BSVCSW1114 which demonstrated acceptable internal standard performance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW0918 and BSVCSW1114 were selected for matrix spiking. The analyte additions to two portions of BSVCSW0918, a low level soil, were recovered successfully. It is noted that elevated recoveries were reported for phenol (192%,104%) and pentachlorophenol (112%,112%). This performance alone does not require data qualifications.

Unacceptably low recoveries were reported for fifteen of twenty-two additions to BSVCSW1114, a medium level soil. Eight of these additions were completely unrecovered (0%). Although this performance is likely caused by the non-homogeneous nature of the sample matrix, the observed performance cannot be ignored. Based on matrix spike performance, the results reported from each medium level soil have been qualified as estimations.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples.

The identifications of carbazole in BSVCSW0413, dibenzofuran and benzo(a)anthracene in BSVCSW114, and chrysene in BSVCSW0916, BSVCSW1015 and BSVCSW1114 could not be confirmed using the mass spectra references provided by the laboratory. These analytes should be considered undetected in the affected samples.

The phenanthrene concentration reported from BSVCSW0719 was obtained from a measurement that exceeded the range of calibration. This result has been qualified as an estimation.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0413

Sampled: 09Jul01-12Jul01

	CALIBRATE bis(2-ClEth)ETHER	CALIBRATE N-NITROSO-di-n-PROPYLAMINE	CALIBRATE NAPHTHALENE	INTERNAL STANDARD
BSVCSW0612 (010711F-01)	UJ		600000J	
BSVCSW0413 (010711F-02)	UJ	UJ	4300J	
BSVCSW1114 (010711F-03)	UJ	UJ	1200000J	I/S J
BSVCSW1015 (010711F-04)	UJ	UJ	83000J	
BSVCSW0916 (010711F-05)	UJ	UJ	68000J	
BSVCSW1017 (010711F-06)	UJ	UJ	27000J	
BSVCSW0918 (010713K-01)	UJ		UJ	
BSVCSW0719 (010713K-02)	UJ		21000J	

I/S = phenanthrene, anthracene and fluoranthene

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0413

Sampled: 09Jul01-12Jul01

	MATRIX SPIKE	MS ID CARBAZOLE	MS ID CHRYSENE	MS ID DIBENZOFURAN BENZO(A)ANTHRACENE	CALIBR RANGE PHENANTHRENE
BSVCSW0612 (010711F-01)	ALL J/UJ				
BSVCSW0413 (010711F-02)	ALL J/UJ	11000UJ			
BSVCSW1114 (010711F-03)	ALL J/UJ		120000UJ	120000UJ	
BSVCSW1015 (010711F-04)	ALL J/UJ		13000UJ		
BSVCSW0916 (010711F-05)	ALL J/UJ		12000UJ		
BSVCSW1017 (010711F-06)	ALL J/UJ				
BSVCSW0918 (010713K-01)					
BSVCSW0719 (010713K-02)					31000J

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0620
Sampled 17Jul01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCSW0620 (010720L-01)

DATA ASSESSMENT

A volatile organics data package containing analytical results for one soil sample was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The sample, taken from the Binghamton Court Street MGP site, was identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6, Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene and 1,1,2,2-tetrachloroethane results reported from BSVCSW0620 have been qualified as estimations due to poor calibration performance.

The negative acetone result reported from BSVCSW0620 has been qualified as an estimation. The result was obtained from a repeated analysis of the sample which was submitted without associated QC information. The chromatography from the original analysis contained a large artifact in the region of acetone.

CORRECTNESS AND USABILITY

Several omissions were noted in the preparation of this data package. The field custody record was incomplete, and a laboratory custody record was not provided. The analysis of BSVCSW0620 was performed without an associated matrix spiked sample from the Binghamton Court Street site. As noted above, the acetone result reported from BSVCSW0620 was submitted without supporting QC. The result in question could have been verified if MS/MSD samples had been prepared. Although the results reported from BSVCSW0620 may be considered technically usable, there defensibility must be considered severely compromised.

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be

guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included one soil, was collected from the Binghamton Court Street MGP site on 17Jul01. The field custody record indicates that the sample arrived at the laboratory on 20Jul01. However, there are no documented custody transfers between 17Jul01 and 20Jul01. The record does indicate that the sample was properly chilled (3°C) when it arrived at the laboratory. Sample BSVCSW0620 was analyzed on 24Jul01. Again, the custody of the sample between 20Jul01 and 24Jul01 was undocumented. Although data obtained from this sample may be considered technically usable, its defensibility is significantly weakened by the absence of custody records.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. Targeted analytes were not detected in this blank.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 29Jun01. Standards of 10, 20, 50, 100, and 200 μg/L were included. With two exceptions, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene and 1,1,2,2-tetrachloroethane failed to produce the required minimum levels of instrument response. Based on this performance, trichloroethylene and 1,1,2,2-tetrachloroethane results have been qualified as estimations.

Calibration performance was verified on 24Jul01, prior to the analysis of BSVCSW0620. When compared to the initial instrument calibration, each analyte demonstrated an acceptable level of instrument stability. The response of trichloroethylene and 1,1,2,2-tetrachloroethane was again low. Because trichloroethylene and 1,1,2,2-tetrachloroethane results were previously qualified, an action at this time is not required.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared. Although an incorrect acceptance criteria was applied to surrogate performance, the error had no impact on the interpretation of results. The recovery of each surrogate that was added to program samples was recovered within the ASP range of acceptance.

INTERNAL STANDARDS
Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS
Matrix spiking refers to the addition of known analyte concentra-

tions to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

A matrix spiked sample was not prepared with BSVCSW0620. Without this information, it is impossible to evaluate sample matrix effects that might bias measurements. Because the sample matrix did not interfere with spikes to low level soil samples in other data packages from this site, data has not been qualified. However, the defensibility of data obtained from BSVCSW0620 must again be considered weakened.

Acceptable recoveries were reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

Sample BSVCSW0620 was analyzed on 24Jul01. The analysis was repeated on 29Jul01 because the chromatography of the initial analysis contained a large baseline disruption that was associated with an acetone result of 5500 μg/kg. The repeated analysis demonstrated this to be an artifact. However, because the second analysis of BSVCSW0620 was submitted without supporting QC information, the negative result reported on Form 1 has been qualified as an estimation.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0620

Sampled: 17Jul01

	CALIBRATE TCE	CALIBRATE 1122TCA	ARTIFACT ACETONE
BSVCSW0620 (010720L-01)	UJ	UJ	UJ

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0620
Sampled 17Jul01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCSW0620 (010720L-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for one soil sample was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The sample, taken from the Binghamton Court Street MGP site, was identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The 2-chloronaphthalene, acenaphthylene, phenol, 4-methylphenol benzo(k)fluoranthene, dibenzo(a,h)anthracene, and benzo(g,h,i)-perylene results reported from BSVCSW0620 have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

Several omissions were noted in the preparation of this data package. The field custody record was incomplete, and a laboratory custody record was not provided. Also, the analysis of BSVCSW0620 was performed without an associated matrix spiked sample from the Binghamton Court Street site. Although the results reported from BSVCSW0620 may be considered technically usable, their defensibility must be considered severely compromised.

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01
James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included one soil, was collected from the Binghamton Court Street MGP site on 17Jul01. The field custody record indicates that the sample arrived at the laboratory on 20Jul01. However, there are no documented custody transfers between 17Jul01 and 20Jul01. The record does indicate that the sample was properly chilled (3°C) when it arrived at the laboratory. Sample BSVCSW0620 was extracted on 23Jul01 and analyzed on 21Aug01, satisfying program holding time requirements. Again, the custody of the sample between 20Jul01 and 23Jul01 was undocumented. Although data obtained from this sample may be considered technically usable, its defensibility is significantly weakened by the absence of custody records.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

One Method Blank was analyzed with this group of samples. This blank was free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 09Aug01. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for most targeted analytes demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. 2-Chloronaphthalene and acenaphthylene standards failed to produce the required minimum levels of response, and the calibration curves for phenol and 4-methylphenol demonstrated poor linearity. Based on this performance, the 2-chloronaphthalene, acenaphthylene, phenol and 4-methylphenol results reported from this group of samples have been qualified as estimations.

Calibration performance was verified on 21Aug01, prior to the analysis of program samples. When compared to the initial instrument calibration, unacceptable shifts were noted in the response of 4-methylphenol, benzo(k)fluoranthene, dibenzo(a,h)anthracene and benzo(g,h,i)perylene. Acenaphthylene again produced a low response. Because acenaphthylene and 4-methylphenol have been previously qualified, an action at this time is not required. Benzo(k)fluoranthene, dibenzo(a,h)anthracene and benzo(g,h,i)-perylene results have been qualified as estimations.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS
Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

A matrix spiked sample was not prepared with BSVCSW0620. Without this information, it is impossible to evaluate sample matrix effects that might bias measurements. Because the sample matrix did not interfere with spikes to low level soil samples in other data packages from this site, data has not been qualified. However, the defensibility of data obtained from BSVCSW0620 must again be considered weakened.

Acceptable recoveries were reported from a matrix spiked blank.

DUPLICATES
Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION
Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0620

Sampled: 17Jul01

	CALIBRATE CAL1	CALIBRATE ACENAPHTHYLENE	CALIBRATE BENZO(K)	CALIBRATE DIBENZO(A,H)	CALIBRATE BENZO(G,H,I)
BSVCSW0620 (010720L-01)	810UJ	550J	1800J	300J	2500J

CAL1 = phenol, 4-methylphenol, 2-chloronaphthalene

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0821
Sampled 30Jul01, 01Aug01, 03Aug01

SOIL SAMPLES for VOLATILE ORGANICS

BSVCSW0821 (010802J-01)   BSVCSW0722 (010802J-02)
BSVCSW0923 (010807M-01)

DATA ASSESSMENT

A volatile organics data package containing analytical results for three samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8260, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The trichloroethylene and bromomethane results reported from this pair of samples have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: [signature] Date: 11/13/01
James B. Baldwin

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Sample holding times are calculated from the time of receipt, by the laboratory. Samples must remain chilled to between 2°C and 6°C from the time of collection. Soil samples and groundwater preserved with HCl must be analyzed within 10 days of receipt; unpreserved samples within 7 days. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike, matrix spike duplicate, and a rinsate blank.

This group of samples, which included three soils, two matrix spikes, and two matrix spike duplicates, was collected from the Binghamton Court Street MGP site between 30Jul01 and 03Aug01. Two samples collected on 30Jul01 and 01Aug01 were delivered to the laboratory on 2Aug01. The third sample was collected on 03Aug01 and delivered to the laboratory on 07Aug01. The laboratory record indicates that the shipments were properly chilled to 3°C and 2.5°C, respectively.

Although the shipment of BSVCSW0923 was delayed for four days, the sample was analyzed within two days of receipt. Because only six days lapsed between sampling and analysis, data has been left unqualified. The entire group of samples was analyzed within seven days of laboratory receipt. The site holding time limitations were satisfied.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Three Method Blanks were analyzed with this group of samples. Each was free of targeted compound contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of BFB was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each BFB evaluation. Each BFB check associated with this group of samples satisfied the program acceptance criteria.

CALIBRATION
Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 31Jul01. Standards of 10, 20, 50, 100, and 200 μg/L were included. With two exceptions, the calibration for each targeted analyte demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. Trichloroethylene failed to produce the required minimum level of instrument response for two of five calibration standards. The calibration curve for bromomethane displayed poor linearity. Based on this performance, trichloroethylene and bromomethane results have been qualified as estimations.

Calibration performance was verified on 06Aug01, 07Aug01 and 09Aug01. Each of these checks incorporated a heated purge. It is noted that the initial calibration was not performed with heated samples. Data has not been qualified due to this break in protocol. When compared to the initial instrument calibration, each calibration verification demonstrated an acceptable level of instrument stability. A shift in analyte response was not observed.

During the calibration check on 07Aug01, 1,1,2,2-tetrachloroethane failed to produced the required minimum level of response. Data has not been qualified based on this performance. The affected calibration check was followed by the analysis of MS/MSD samples. Program samples were not affected.

SURROGATES
Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared. Although an incorrect acceptance criteria was applied, this error had no effect on the interpretation of reported data. Data qualifications are not required.

INTERNAL STANDARDS
Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of

two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW0821 and BSVCSW0722 were selected for matrix spiking. BSVCSW0722 was processed as a medium level soil. The recoveries reported for analyte additions to two portions of each of these samples demonstrated acceptable levels of measurement accuracy and precision.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. The presence of targeted analytes, when detected in samples, was confirmed by a matching mass spectra reference.

The analyte concentrations and CRDL's reported from this group of samples have been adjusted to reflect the moisture content of each sample.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0821

Sampled: 30Jul01-03Aug01

	CALIBRATE TCE	CALIBRATE BROMOMETHANE
BSVCSW0821 (010802J-01)	UJ	UJ
BSVCSW0722 (010802J-02)	UJ	UJ
BSVCSW0923 (010807M-01)	UJ	UJ

DATA USABILITY SUMMARY REPORT

for

NEW YORK STATE ELECTRIC AND GAS CORPORATION

P.O. BOX 5224

BINGHAMTON, NEW YORK 13902-5224

Binghamton, Court Street MGP Project
SDG BSVCSW0821
Sampled 30Jul01, 01Aug01, 03Aug01

SOIL SAMPLES for SEMIVOLATILE ORGANICS

BSVCSW0821 (010802J-01) BSVCSW0722 (010802J-02)
BSVCSW0923 (010807M-01)

DATA ASSESSMENT

A semivolatile organics data package containing analytical results for three soil samples was received from NYSE&G Corp. on 24Sep01. The ASP deliverables package included formal reports, raw data, the necessary QC, and supporting information. The samples, taken from the Binghamton Court Street MGP site, were identified by Chain of Custody documents and trackable through the work of Adirondack Environmental Services, Inc., the laboratory contracted for analysis. Analyses, performed by EPA Method 8270, addressed Target Compound List analytes. Laboratory data was evaluated according to the requirements of the New York State Department of Environmental Conservation's Analytical Services Protocol (ASP) and the cited method. Where the required protocols were not followed, the current Region II Functional Guidelines (SOW HW-6,Rev 8, CLP Organics Data Review and Preliminary Review, Jan. 1992) was used as a technical reference.

The chloronaphthalene, acenaphthylene, phenol and 4-methylphenol results reported from this group of samples have been qualified as estimations due to poor calibration performance.

CORRECTNESS AND USABILITY

Reported data should be considered technically usable in its present form. Reported concentrations that are felt to provide a usable estimation of the conditions being measured have been flagged "J" or "UJ". Estimated data should be used with caution. A detailed discussion of the review process follows.

Two facts should be considered by all data users. No compound concentration, even if it has passed all QC testing, can be guaranteed to be accurate. Strict QC serves to increase confidence in data, but any value potentially contains error. Secondly. DATAVAL, Inc. guarantees the quality of this data assessment. However, DATAVAL, Inc. does not warrant any interpretation or utilization of this data by a third party.

Reviewer's signature: James B. Baldwin Date: 11/13/01

SAMPLE HISTORY

Analyte concentrations can deteriorate with time due to chemical instability, bacterial degradation or volatility. Samples that are not properly preserved or are not analyzed within established holding times may no longer be considered representative. Holding times are calculated from the verified time of sample receipt (VTSR). Samples must remain chilled to between 2°C and 6°C from the time of collection. Extractions must begin within 5 days of receipt. Analyses must be completed within 40 days of extraction. Each sample delivery group, containing up to 20 samples, should include a field duplicate, a matrix spike and a matrix spike duplicate.

This group of samples, which included three soils, a matrix spike, and a matrix spike duplicate, was collected from the Binghamton Court Street MGP site between 30Jul01 and 03Aug01. Two samples collected on 30Jul01 and 01Aug01 were delivered to the laboratory on 2Aug01. The third sample was collected on 03Aug01 and delivered to the laboratory on 07Aug01. The laboratory record indicates that the shipments were properly chilled to 3°C and 2.5°C, respectively.

Although the shipment of BSVCSW0923 was delayed for four days, the sample was extracted within two days of receipt. Because only six days lapsed between sampling and extraction, data has been left unqualified. The entire group of samples was extracted within five days of receipt and analyzed within ten days of extraction. The site holding time limitations were satisfied.

BLANKS

Blanks are analyzed to evaluate various sources of sample contamination. Field blanks monitor sampling activities. Method blanks are analyzed to verify instrument integrity. Samples are considered compromised by conditions causing contamination in any blank. Any sample concentration less than 5 times the level determined in a blank must be qualified.

Two Method Blanks were analyzed with this group of samples. Both were free of targeted analyte contamination.

MS TUNING

Mass spectrometer tuning and performance criteria are established to ensure sufficient mass resolution and sensitivity to accurately detect and identify targeted analytes. Verification is accomplished using a certified standard.

An Instrument Performance Check Standard of DFTPP was analyzed prior to each analytical sequence and during every 12 hour period of instrument operation. An Instrument Performance Check Form is present for each DFTPP evaluation. Each DFTPP standard satisfied the program acceptance criteria.

CALIBRATION

Requirements for instrument calibration are established to ensure that laboratory equipment is capable of producing accurate, quantitative data. Initial calibrations demonstrate a range through which measurements may be made. Continuing calibration standards verify instrument stability.

The required levels of initial calibration were performed on 09Aug01. Standards of 20, 50, 80, 120, and 160 ng were included. The calibration for most targeted analytes demonstrated the required minimum levels of instrument response and an acceptable degree of linearity. 2-Chloronaphthalene and acenaphthylene standards failed to produce the required minimum levels of response, and the calibration curves for phenol and 4-methylphenol demonstrated poor linearity. Based on this performance, the 2-chloronaphthalene, acenaphthylene, phenol and 4-methylphenol results reported from this group of samples have been qualified as estimations.

Calibration performance was verified on 16Aug01, prior to the analysis of program samples. When compared to the initial instrument calibration, an unacceptable shift was noted in the response of 4-methylphenol. Acenaphthylene again produced a low response. Because both of these analytes have been previously qualified, an action at this time is not required.

SURROGATES

Each sample, blank and standard is spiked with surrogate compounds prior to analysis. The structures of surrogates are similar to analytes of interest, but they are not normally found in environmental samples. Surrogate recoveries are monitored to evaluate overall laboratory performance and the efficiency of laboratory technique.

Surrogate Standard Summary Sheets were properly prepared, the correct acceptance criteria applied. The recovery of each surrogate that was added to program samples satisfied the program acceptance criteria.

INTERNAL STANDARDS

Internal standards are added to each sample, blank and standard just prior to injection. Analyte concentrations are calculated relative to the recovery of a specific internal standard. Internal standard performance criteria ensure that GC/MS sensitivity and response are stable during the analysis of each sample. The area of internal standard peaks may not vary by more than a factor of two. When compared to the preceding calibration check, retention times may not vary by more than 30 seconds.

The laboratory correctly calculated control limits for internal standard areas and retention times. The retention time and response of each internal standard addition satisfied the calculated limits of acceptance.

MATRIX SPIKES / MATRIX SPIKE DUPLICATES / MATRIX SPIKED BLANKS

Matrix spiking refers to the addition of known analyte concentrations to a sample prior to analysis. Analyte recoveries provide an indication of laboratory accuracy. The analysis of a duplicate spiked aliquot provides a measurement of precision.

BSVCSW0821 was selected for matrix spiking. The analyte additions to two portions of this sample demonstrated acceptable levels of measurement accuracy and precision. Acceptable recoveries were also reported from a matrix spiked blank.

DUPLICATES

Two aliquots of the same sample are processed separately through all aspects of sample preparation and analysis. Results produced by the analysis of this pair of samples are compared as a measurement of precision. Poor precision may be indicative of sample non-homogeneity, method defects, or poor laboratory technique.

Field split duplicates were not included in this group of samples.

SAMPLE INFORMATION

Formal reports were provided for each sample. The data package also included total ion chromatograms and raw instrument printouts. Sample chromatograms were properly attenuated. A mass spectrum reference was provided to confirm the identification of each targeted analyte that was detected in program samples.

QUALIFIED DATA
Binghamton Court Street MGP Site

SDG: BSVCSW0821

Sampled: 30Jul01-03Aug01

	CALIBRATE PHENOL	CALIBRATE 4-METHYLPHENOL	CALIBRATE 2-CHLORONAPHTHALEENE	CALIBRATE ACENAPHTHYLENE
BSVCSW0821 (010802J-01)	UJ	UJ	UJ	UJ
BSVCSW0722 (010802J-02)	UJ	UJ	UJ	1900J
BSVCSW0923 (010807M-01)	UJ	UJ	UJ	UJ

APPENDIX G

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
APPROVAL LETTER

New York State Department of Environmental Conservation
Division of Environmental Remediation
Bureau of Construction Services, 12th Floor
625 Broadway, Albany, New York 12233-7013
Phone: (518) 402-9814 • **FAX:** (518) 402-9819
Website: www.dec.state.ny.us

Erin M. Crotty
Commissioner

RECEIVED
AUG 16 2002
LEO DEPT.

AUG 14 2002

FAX

Mr. Bert Finch
Project Manager
New York State Electric and Gas Corporation
Corporate Drive-Kirkwood Industrial Park
P.O. Box 5224
Binghamton, New York 13902-5224

Dear Mr. Finch:

RE: Binghamton Court Street Former MGP Site
Interim Remedial Measures - Final Engineering Report

The New York State Department of Environmental Conservation has reviewed your letter of July 11, 2002 responding to the Department's comments on the Interim Remedial Measures, Final Engineering Report for Activities at the Binghamton Court Street Manufactured Gas Plant site, prepared by the New York State Electric and Gas Corporation, dated January 2002. It appears that some of the issues raised by the Department will not be resolved until submittal of the R&D Report (Comments No. 2, 3, and 4). As such, the R&D Report will become an important submittal when the Department evaluates the final remedy for the Binghamton MGP Site. Please provide the Department with a schedule for submittal of the R&D Report.

Your response to the remaining comments is adequate and the report is approved. Please distribute the final report to the site's distribution list.

The Department appreciates NYSEG continuing effort to conduct a remedial program at the Binghamton Former MGP Site. If you have any questions, please feel free to contact me at (518) 402-9813.

Sincerely,

David A. Crosby

David A. Crosby, P.E.
Senior Environmental Engineer
Central Field Services Section
Bureau of Construction Services
Division of Environmental Remediation

Enclosure

cc: J. Simone - NYSEG
G. Robinson - NYSDOH, Syracuse
M. Rivara - NYSDOH, Troy

Appendix B

Storm Sewer IRM Documentation Report

REPORT

Storm Sewer Interim Remedial Measure Documentation Report

New York State Electric & Gas Corporation
Court Street Former Manufactured Gas Plant Site
Binghamton, New York

May 2005

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

REPORT

Storm Sewer Interim Remedial Measure Documentation Report

New York State Electric & Gas Corporation
Court Street Former Manufactured Gas Plant Site
Binghamton, New York

May 2005

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

Table of Contents

1. Introduction

1.1 General

This *Storm Sewer Interim Remedial Measure Documentation Report* (Documentation Report) documents the 66-inch storm sewer interim remedial measure (IRM) activities conducted at New York State Electric & Gas Corporation's (NYSEG's) Court Street Former Manufactured Gas Plant (MGP) Site (site).

The IRM activities, as detailed herein, included the cleaning and lining of the onsite portion of the 66-inch storm sewer and the stone culvert (located south of the site beneath Court Street) to mitigate infiltration of non-aqueous phase liquid (NAPL) and removal of accumulated debris from the pump house floor. This Documentation Report has been prepared by Blasland, Bouck & Lee, Inc. (BBL) on behalf of NYSEG in accordance with the Order on Consent (Index # D7-001-96-03) and the New York State Department of Environmental Conservation- (NYSDEC-) approved *66-Inch Storm Drain Liner Interim Remedial Measure Work Plan (IRM Work Plan)* (BBL, 2003) and associated addendum letter, dated August 11, 2003.

1.2 Document Report Organization

This Documentation Report is organized into the following sections:

Section	Description
1 – Introduction	Presents report organization, relevant background information, and document repository locations.
2 – IRM Objectives	Presents the objectives of the 66-inch sewer IRM activities.
3 – Description of the IRM Activities	Provides a description of the IRM activities conducted at the site.
4 – Conclusions and Recommendations	Provides conclusions and recommendations.

This Documentation Report is also supported by the following appendices:

- Appendix A – IRM Video Inspections;
- Appendix B – Waste Characterization Analytical Summary Reports;
- Appendix C – Waste Manifests and Certificates of Disposal; and
- Appendix D – NYSDEC Approval Letter.

1.3 Site Setting, Description, and Background

The site is located in an industrial section of Binghamton, New York and occupies approximately 4.3 acres of land identified as 271-291, and 293 Court Street (Figure 1). Formerly, the site housed a MGP that operated from 1888 to about 1939, during which time operations gradually expanded westward, eventually covering the site. By about 1969, all aboveground structures associated with the MGP had been dismantled.

Currently, the eastern third of the property (Parcel 293) is used as a natural gas service center by Columbia Gas Transmission Corporation. The remainder of the site is used as a pipe storage area. Court Street borders the site to the south, parallel to the Susquehanna River, and Brandywine Avenue borders the site to the west. The 295 Court Street property, east of the site, contains a warehouse owned by the 295 Court Street Associates, L.L.C. Immediately north of the site is the Norfolk and Southern Railroad line (formerly CSX), an asphalt plant, and a scrap yard.

An active storm sewer, owned and maintained by the City of Binghamton, conveys runoff from a large portion of the city, crosses the northern border of the site (running approximately north to south), and discharges into the Susquehanna River (Figure 2). Historical drawings indicate that the onsite portion of the sewer was apparently constructed between 1885 and 1924 within the former Brandywine Creek bed. A general description of the storm sewer located at and in the immediate vicinity of the site (as it progresses from upstream to downstream) is presented below. The description of the storm sewer is based on previous storm sewer investigation activities performed by BBL, information provided by the City of Binghamton, visual observations made during the implementation of the IRM activities, and BBL's August 16, 2002 site visit.

<u>66-Inch Storm Sewer Description (from upstream offsite to discharge south of the site)</u>

- Approximately 50 feet north of the site property line, the sewer changes from a 3½- by 7-foot concrete box culvert to a 66-inch diameter concrete pipe. In addition, upstream from manhole MH-2 (which is located near the northern boundary of the site), is a stormwater pump system operated by the City of Binghamton;
- The 66-inch diameter concrete pipe continues from that junction south to manhole MH-2 located near the northern boundary of the site. The pipe then extends downstream of manhole MH-2 through one intermediate manhole (MH-1B) and beneath the location of former gas holder No. 4. The sewer bends slightly to the south before entering manhole MH-1 at the southern end of the site near Court Street. At the upstream pipe inlet into manhole MH-1, the City of Binghamton installed a mechanical sluice gate to cutoff storm water flow so that the pump station located at the downstream end of the storm sewer (south of Court Street) can be serviced, when required;
- Downstream of manhole MH-1, the sewer enters a 72-inch wide stone culvert (herein referred to as the culvert) which extends approximately 50 feet south, under Court Street. The stone culvert includes an arch-shaped ceiling and had a wood plank floor;
- At the downstream end of the stone culvert is a stone chamber. The stone chamber is located beneath Court Street, is approximately 15 feet tall, and includes a manhole cover that has been paved over; and
- At the downstream end of the stone chamber the sewer enters an approximately 6- by 8-foot concrete box culvert that leads to the Tompkins Street Pump Station (the pump station), which in turn discharges to the adjacent Susquehanna River.

1.4 Document Repositories

Documents associated with previous site investigations and with this Documentation Report are available for public review at the following document repositories:

Broome County Central Library
185 Court Street
Binghamton, New York
Attn: Lisa Wise
Phone: (607) 778-6407

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau "C", 11th Floor
625 Broadway
Albany, New York 12233-7010
Attn: Mr. Anthony Karwiel
Phone: (518) 402-9662

2. IRM Objectives

The objectives of the 66-inch storm drain liner IRM activities (IRM activities) included the following:

- To mitigate NAPL infiltration into the portion of the 66-inch storm sewer pipe located onsite;
- To remove accumulated debris from the portion of the storm sewer located downstream of manhole MH-1; and

To remove accumulated debris from the pump house to address the presence of polycyclic aromatic hydrocarbons (PAHs).

3. Description of the IRM Activities

3.1 General

This section presents a description of the IRM activities conducted under the following work tasks:

- Mobilization/Site Preparation;
- Cleaning the Storm Sewer Interior and Pump House Floor;
- Lining the Storm Sewer Pipe;
- Transportation and Offsite Disposal of Waste Material; and
- Site Restoration/Demobilization.

The IRM activities were conducted by NYSEG's remedial contractor, Sevenson Environmental Services, Inc. (Sevenson) with periodic part-time construction observation services provided by Blasland, Bouck & Lee, Inc. (BBL). The IRM activities were initiated on July 17, 2003 and were completed by November 3, 2003.

A description of each work task is presented below. Due to field conditions encountered during the IRM, the scope of certain IRM activities were modified from the work tasks activities identified in the IRM Work Plan. Those modifications are incorporated into the work task descriptions below, where applicable.

3.2 Mobilization/Site Preparation

The mobilization and site preparation activities began on July 17, 2003 and included the mobilization of Sevenson's field personnel and the following equipment:

- Two vacuum trucks;
- One tanker truck (to transport potable water to site);
- One front end loader;
- One bulldozer;
- One excavator;
- One office trailer;
- One field equipment storage trailer;
- Two frac tanks (one for potable water storage and one for sewer and IRM-derived wash water);

- Two roll-offs (provided by NYSEG); and

- Miscellaneous equipment necessary to perform the IRM activities (e.g., pumps, generators, material staging/decontamination materials, hand tools, etc.).

Following equipment and personnel mobilization, Sevenson constructed a decontamination pad, a staging area, and demarcated the IRM work zones as described below.

Decontamination Pad

The decontamination pad was constructed to decontaminate personnel and project-related equipment that came in contact with impacted site media. The decontamination pad measured approximately 15 feet by 40 feet with 8-inch bermed sides. The decontamination pad was constructed of a 60-mil high-density polyethylene (HDPE) liner installed over the prepared subgrade and sloped to a sump for decontamination water collection.

Staging Area

The staging area was constructed to mitigate potential contact between impacted materials/storage containers and surface soil. The staging area was constructed of a 60-mil HDPE liner placed over the prepared subgrade. Material storage containers, consisting of frac tanks and roll-offs, were staged in the staging area during the IRM activities. Staged material was covered with the appropriate roll-off cover or 10-mil polyethylene sheeting when not actively managed.

IRM Work Zones

As part of the site preparation activities, Sevenson established the work zones (Exclusion Zones, Contaminant Reduction Zone, and Support Zones) using orange construction fencing. The Exclusion Zones were established at the manhole locations and included the pipe interior where the IRM activities were conducted. The Contaminant Reduction Zone, or the interface between the Exclusion and Support Zones, encompassed the staging area and decontamination pad. The Support Zone included the remainder of the site where remedial support activities were conducted and where the field office and equipment storage trailers were located.

3.3 Cleaning the Storm Sewer Interior

Following mobilization and site preparation activities, Sevenson cleaned the storm sewer interior between manhole MH-2 and the pump station. The cleaning activities consisted of the following:

- Performing a pre-cleaning visual review of the storm sewer to document the pre-IRM conditions of the sewer. Sevenson did not observe lateral pipes entering the sections of the storm sewer to be lined between manhole MH-2 and the pump station during the pre-cleaning review.

- A bypass system was installed at MH-2 to divert stormwater to manhole MH-1. During the visual review, lateral pipes were observed immediately upstream of manhole MH-2. Discussions with the City of Binghamton revealed that the laterals conveyed stormwater from a large drainage area. In addition, the City of Binghamton indicated that due to the number of pumps and coordination concerns associated with the amount of water from the drainage area, the upstream pumps could not be locked/tagged out (as proposed in the IRM Work Plan). Due to the amount of flow entering the upstream portion of the storm sewer, Sevenson constructed a 48-inch high by 12-inch wide steel reinforced concrete dam at manhole MH-2. A

12-inch Godwin dry running trash pump (with a flow rate to 6,000 gallons per minute) and an additional 10-inch Godwin dry running trash pump (with a flow rate to 3,600 gallons per minute) were used to divert flow to MH-1. The bypass piping entering manhole MH-1 was extended so that the stormwater discharged near the inlet of the pump house.

- A sandbag/portland-cement dam was constructed at manhole MH-1 to mitigate migration of water and solids generated during the storm sewer cleaning activities. The dam was moved downstream as necessary to accommodate the cleaning activities.

- Debris accumulated within the storm sewer located between manhole MH-2 and the pump station (including the pump house floor) was removed using vacuum trucks and hand tools (e.g., shovels, buckets, etc.). Once the vacuum truck was full and the solid material settled, the water was pumped to an onsite frac tank for storage. Solid material was removed from the vacuum truck via hand shovels and transferred to a lined roll-off for storage (prior to disposal). The debris was mixed with Quick-Lime to mitigate free liquids prior to transportation. The vacuum truck was placed in a containment area consisting of polyethylene sheeting and wood timbers prior to the removal of water and solid materials. This process continued until the sewer was void of debris and water.

- Following debris removal, the sewer interior was washed using a pressure washer to remove residual material that remained in the pipe. Washwater was captured at the previously constructed downstream dams and removed via a vacuum truck. Following settling, solid material was transferred to a lined roll-off container and the water was transferred to a frac tank.

- A post-cleaning/pre-lining visual review was conducted inside the storm sewer. The post-cleaning/pre-lining visual review included videotaping the sewer interior. Based on the visual review, additional cleaning of the sewer interior was not necessary. Video of the storm sewer following completion of the cleaning activities is provided as Appendix A.

3.4 Lining the Storm Sewer

Following the cleaning activities, Sevenson prepared the storm sewer pipe for the pipe lining activities. The preparation activities included filling and sealing interior pipe surface voids and joint gaps and removing obstructions (e.g., offset joint material).

Sevenson then installed the PVC pipe liner (produced by Danby Pipe Renovation™) within the storm sewer between manhole MH-2 and the downstream end of the culvert. The PVC liner material was delivered in 1-foot wide coil sections and was uncoiled, and was routed through a manhole for installation. The liner was then installed to line the interior surface of the 66-inch storm sewer pipe. Liner sections were connected using a PVC "joiner" strip at the ends of the 1-foot wide sections and a sealant material. The installation also required the construction of bulkheads at transition and manhole locations.

In addition, during the IRM activities, NYSEG elected to line the culvert. To prepare the culvert for lining, the existing wooden plank flooring material was removed and replaced with new oak planks 2 inches thick by 12 inches wide. The new boards were nailed to the existing wood beams located between MH-1 and the pumphouse culvert base. A post-cleaning/pre-lining visual review was conducted inside the stone culvert. The post-cleaning/pre-lining visual review included videotaping the culvert interior. Video of the stone culvert following completion of the cleaning activities is provided as Attachment A.

For the stone culvert located downstream of MH-1, PVC liner was installed along the culvert floor. The base liner was attached and sealed to PVC tabs (similar to angle irons) installed along the length of the culvert base at the intersection of the new wood plank base and the stone wall. The culvert walls and arch were then lined in 1-foot wide sections (in similar fashion as described above for the storm sewer pipe) and secured to the PVC corner pieces.

For the pipe and culvert sections, the annular space between the PVC liner and the existing drainage structure was injected with grout 1½-inch injection holes drilled in the PVC liner. Video of the storm sewer and stone culvert following completion of the lining activities is provided as Appendix A.

3.5 Transportation and Offsite Disposal of Waste Material

Following completion of the IRM activities, the following waste streams were sampled by NYSEG for waste characterization to accommodate offsite transportation and disposition:

- Debris removed from the storm sewer;
- Liquid removed from the storm sewer and wash water generated during the cleaning activities;
- Materials used to construct the decontamination pad and staging areas;
- Decontamination waste (decontamination liquids, disposable decontamination equipment/materials, and polyethylene sheeting);
- Disposable personal protective equipment (PPE); and
- Other miscellaneous waste materials (including rubbish/wood planks) generated as a result of the IRM activities.

A detailed description of the characterization and disposition of each of these waste streams is presented below.

3.5.1 Debris Removed From the Storm Sewer

Debris removed during the storm sewer cleaning activities (including the stone culvert and pump house floor) was ultimately placed into a lined roll-off in the material staging area for subsequent sampling. Samples of the debris were collected and transmitted to Severn Trent Laboratories, Inc. (Severn Trent) for laboratory analysis using United States Environmental Protection Agency (USEPA) methods presented in SW-846, including TCL VOCs (8260), gasoline range organics (8015B), TCL SVOCs (8270), diesel range organics (8015B), total PCBs (8082), total metals, cyanide and % sulfur. The laboratory analytical summary sheets are presented in Appendix B.

Approximately 31 tons of debris were transported offsite during October 2003 for thermal treatment (thermal disposition) at Environmental Soil Management of New York, LLC in Fort Edwards, NY as conditionally exempt MGP impacted sediments waste. The signed waste manifests and certificates of treatment and recycling are provided in Appendix C.

3.5.2 Liquid Removed from the Storm Sewer and IRM-Derived Wash Water

Water removed from the storm sewer (and culvert) and IRM-derived wash water generated as a result of the cleaning activities was placed into a frac tank located in the staging area for subsequent sampling. Samples of the water were collected and transmitted to Severn Trent for laboratory analysis using USEPA method presented in SW-846, including purgeable aromatics BTEX (602), H2S released (Sect. 7.3), HCN released (Sect. 7.3), and ignitability (1010). The laboratory analytical summary sheets are presented in Appendix B.

Approximately 17,000 gallons of water were transported offsite on July 30, 2003 for disposal at Clean Harbors of Connecticut, Inc. in Bristol, CT as a nonhazardous waste. The signed waste manifests and certificates of disposal are provided in Appendix C.

3.5.3 Decontamination Water, PPE, and Miscellaneous Waste Material

Decontamination water, PPE, and miscellaneous waste materials were staged in the appropriate waste containers during material handling activities. As such, decontamination water was pumped into a frac tank with the storm sewer water and IRM wash water identified above, PPE and miscellaneous waste materials were placed into a lined roll-off and subsequently managed and disposed of as construction and demolition debris (2.42 tons) at Seneca Meadows, Inc. in Waterloo, New York.

3.6 Site Restoration/Demobilization

Following the liner installation activities, Sevenson removed the bypass pump system and associated dams. Following equipment decontamination activities, Sevenson disassembled the decontamination pad and staging areas and restored the site to pre-construction conditions.

4. Conclusions and Recommendations

As presented above, NYSEG has completed the IRM activities associated with lining the interior of the 66-inch storm sewer between manholes MH-1 and MH-2 in accordance with the NYSDEC-approved IRM Work Plan. Although not included in the IRM Work Plan, NYSEG also cleaned and lined the interior of the stone culvert, located downstream of manhole MH-1. As indicated in a November 13, 2002 response letter, at the request of the NYSDEC, NYSEG will submit an IRM Monitoring Plan to the NYSDEC. The monitoring activities will include periodic visual observation of the lined portion of the storm sewer to confirm NAPL is not infiltrating into the sewer through the lining system.

This Documentation Report was approved by the NYSDEC in a letter dated April 29, 2005, and is provided as Attachment D. Except for the IRM Monitoring program, no further action is required in connection with the 66-inch storm sewer and culvert interior.

Figures

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

REFERENCE: Base map source: USGS 7.5 Min. Topo. Quad., Binghamton East, NY., Binghamtom West, NY., Castle Creek, NY., Chenango Forks, NY. (1968, Photorevised 1976).

2,000 ft 0 2,000 ft

GRAPHIC SCALE

QUADRANGLE LOCATION

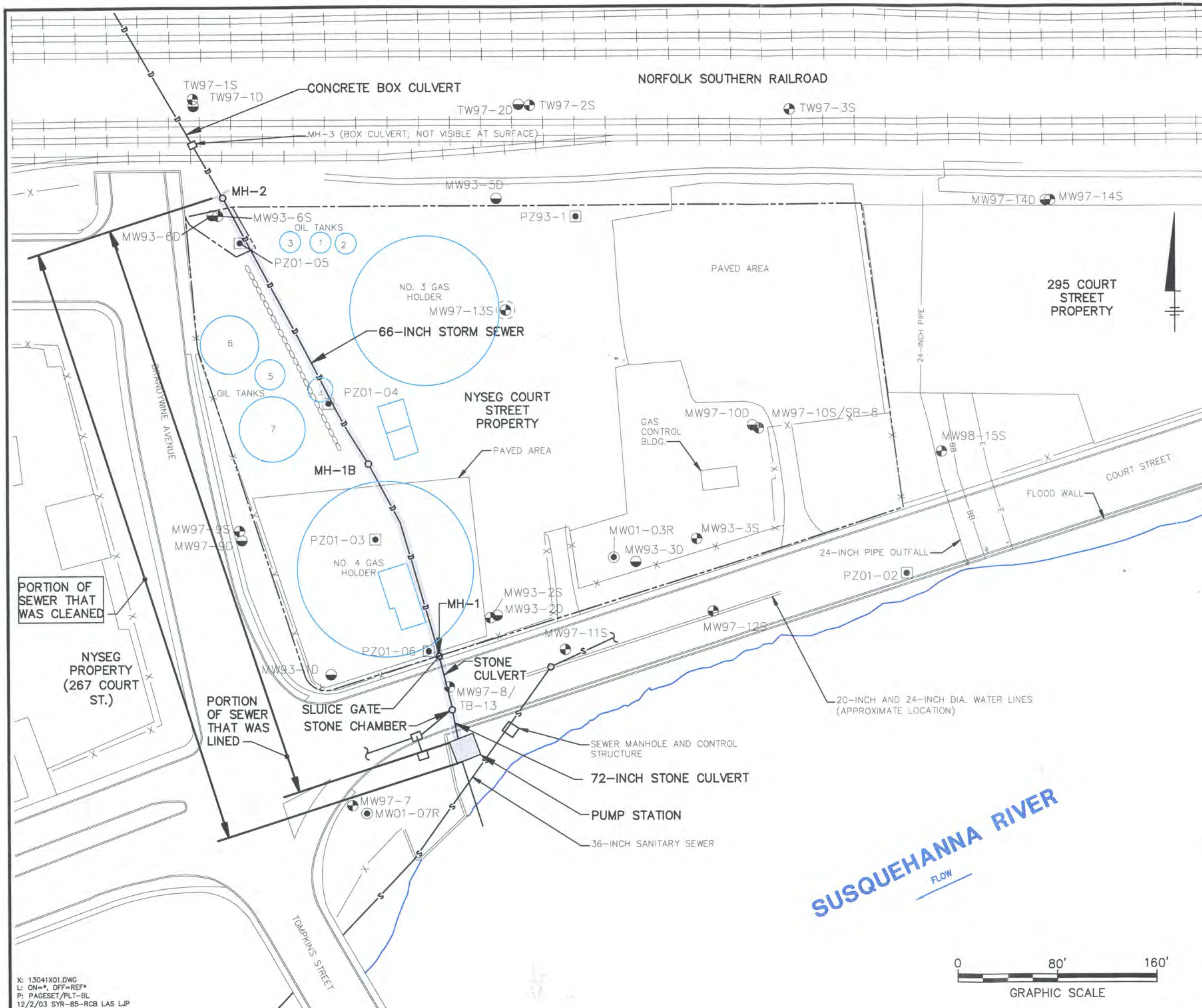
NYSEG COURT STREET SITE
BINGHAMTON, NEW YORK
STORM SEWER IRM DOCUMENTATION REPORT

SITE LOCATION MAP

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

FIGURE
1

09/02/04 SYR-85-DJH
13041009/13041n01.CDR



X: 13041X01.DWG
L: ON=*, OFF=REF*
P: PAGESET/PLT-BL
12/2/03 SYR-85-RCB LAS LJP
13041008/13041G01.DWG

LEGEND:

- RAILROAD TRACK
- FENCE
- SITE PROPERTY LINES (APPROXIMATE)
- PORTION OF STORM SEWER SUBJECT TO THE IRM
- STORM SEWER LINE (APPROXIMATE)
- SANITARY SEWER LINE (APPROXIMATE)
- HISTORICAL FEATURE
- BURIED CONCRETE WALL
- MONITORING WELL (SHALLOW)
- MONITORING WELL (DEEP)
- MONITORING WELL (BEDROCK)
- PIEZOMETER
- DECOMMISSIONED MONITORING WELL
- CATCH BASIN

NOTES:

1. BASE MAP PROVIDED BY NYSEG (JUNE 12, 1997).
2. ALL INVESTIGATION LOCATIONS SHOWN SURVEYED BY HAWK ENGINEERING, P.C. BINGHAMTON, N.Y.
3. STORM SEWER LOCATION DIGITIZED FROM CITY OF BINGHAMTON MAP, SHEET 303, ENTITLED: PRELIMINARY REPORT, COMPREHENSIVE STORM DRAINAGE, EXISTING FACILITIES. PREPARED BY VERNON O. SHUMAKER, CONSULTING ENGINEER, VESTAL, NEW YORK, DATE NOT PROVIDED.
4. APPROXIMATE LOCATION OF THE TWO UNMARKED CATCH BASINS AND ASSOCIATED PIPING LOCATED NORTHEAST AND EAST OF THE PUMP STATION BASED ON VISUAL OBSERVATIONS MADE BY BBL ON AUGUST 16, 2002.
5. SELECT HISTORICAL FEATURES NOT SHOWN FOR CLARITY.

NYSEG COURT STREET SITE
BINGHAMTON, NEW YORK
STORM SEWER IRM DOCUMENTATION REPORT

SITE PLAN

BBL®
BLASLAND, BOUCK & LEE, INC.
engineers & scientists

FIGURE 2

Appendix A

IRM Video Inspections

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

Appendix B

Waste Characterization Analytical Summary Reports

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

BINGHAMTON COURT ST. STORM DRAIN LINER

FRAC TANK SAMPLE

7/25/03

SEVERN TRENT STL

BINGHAMTON
COURT STREET
FRAC TANK

ANALYTICAL REPORT

Job#: A03-7167

STL Project#: NY3A9052EP
Site Name: NYGEG
Task: NYSEG Waste Water

Walt Savichky
NYSE&G
P.O. Box 5224
Binghamton, NY 13902-5224

STL Buffalo

Ronald M. Mazur
Project Manager

07/29/2003

Severn Trent Laboratories, Inc.
STL Buffalo • 10 Hazelwood Drive, Suite 106, Amherst, NY 14228
Tel 716 691 2600 Fax 716 691 7991 • www.stl-inc.com

A part of Severn Trent plc

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A3716701	FRAC TANK	07/25/2003	15:00	07/26/2003	09:00

METHODS SUMMARY

Job#: A03-7167

STL Project#: NY3A9052EP
Site Name: NYGEG

PARAMETER	ANALYTICAL METHOD
METHOD 602 - PURGEABLE AROMATICS - BTEX	CFR136 602
H2S Released From Waste	SW8463 SECT7.3
HCN Released From Waste	SW8463 SECT7.3
Ignitability	SW8463 1010

References:

CFR136 Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, and Appendix A-C; 40 CFR Part 136, USEPA Office of Water.

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A03-7167

STL Project#: NY3A9052EP
Site Name: NYGEG

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A03-7167
Sample Cooler(s) were received at the following temperature(s); 5.8 °C
All samples were received in good condition.

GC Volatile Data

No deviations from protocol were encountered during the analytical procedures.

Wet Chemistry Data

The U.S. EPA has determined the applicability of the Reactive Cyanide and Sulfide tests to be limited in part due to the poor recoveries obtainable with there procedures. The Aprill 1998 memorandum entitled 'Withdrawal of Cyanide and Sulfide Reactivity Guidance' details the justification for this determination. Therefore, in conjunction with these test results, the U.S. EPA recommends the data user apply process or waste knowledge to determine if their waste exhibits the characteristic of reactivity.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected at or above the reporting limit.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

C This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B This flag is used when the analyte is found in the associated blank, as well as in the sample.

E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D This flag identifies all compounds identified in an analysis at the secondary dilution factor.

N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.

P This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".

A This flag indicates that a TIC is a suspected aldol-condensation product.

1 Indicates coelution.

* Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected at or above the reporting limit.

J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.

N Indicates spike sample recovery is not within the quality control limits.

K Indicates the post digestion spike recovery is not within the quality control limits.

S Indicates value determined by the Method of Standard Addition.

M Indicates duplicate injection results exceeded quality control limits.

W Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.

E Indicates a value estimated or not reported due to the presence of interferences.

H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.

* Indicates analysis is not within the quality control limits.

+ Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Sample Data Package

New York State Electric & Gas
NYGEG
NYSEG Waste Water

Sample ID: FRAC TANK
Lab Sample ID: A3716701
Date Collected: 07/25/2003
Time Collected: 15:00

Date Received: 07/26/2003
Project No: NY3A9052EP
Client No: L11252
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
AQUEOUS-CFR136 602 - BTEX'S							
Benzene	0.46		0.20	UG/L	602	07/28/2003 15:47	KC
Ethylbenzene	8.2		0.20	UG/L	602	07/28/2003 15:47	KC
m-Xylene	2.4	1	0.40	UG/L	602	07/28/2003 15:47	KC
o-Xylene	5.3		0.20	UG/L	602	07/28/2003 15:47	KC
p-Xylene	ND	1	0.40	UG/L	602	07/28/2003 15:47	KC
Toluene	ND		0.20	UG/L	602	07/28/2003 15:47	KC
Wet Chemistry Analysis							
H2S Released From Waste	ND		50.0	MG/L	SECT7.3	07/28/2003 17:39	JMS
HCN Released From Waste	ND		50.0	MG/L	SECT7.3	07/28/2003 17:39	JMS
Ignitability	>200		68.0	°F	1010	07/28/2003 20:00	KS

Chronology and QC Summary Package

Client ID / Job No / Lab ID / Sample Date		VBLK62 A03-7167 A3716702							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Benzene	UG/L	ND	0.20	NA		NA		NA	
Ethylbenzene	UG/L	ND	0.20	NA		NA		NA	
Toluene	UG/L	ND	0.20	NA		NA		NA	
m-Xylene	UG/L	ND	0.40	NA		NA		NA	
o-Xylene	UG/L	ND	0.20	NA		NA		NA	
p-Xylene	UG/L	ND	0.40	NA		NA		NA	
SURROGATE(S)									
a,a,a-Trifluorotoluene	%	104	66-131	NA		NA		NA	

9\18

NA = Not Applicable ND = Not Detected

Date: 07/29/2003
Time: 14:23:47

NYGEG
NYSEG Waste Water
WET CHEMISTRY ANALYSIS

Rept: AN1247

Client ID Job No Sample Date	Lab ID	Method Blank A03-7167	A3B0832602						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
H2S Released From Waste	MG/L	ND	50.0	NA		NA		NA	
HCN Released From Waste	MG/L	ND	50.0	NA		NA		NA	

NA = Not Applicable ND = Not Detected

10\18

Client Sample ID: VBLK62 MSB MSBD
Lab Sample ID: A3716702 A3716703 A3716704

Analyte	Units of Measure	Concentration Spike Blank	Concentration Spike Blank Dup	Spike Amount SB	Spike Amount SBD	% Recovery SB	% Recovery SBD	% Recovery Avg	% RPD	QC LIMITS RPD	QC LIMITS REC.
METHOD 602 - PURGEABLE AROMATICS - BTEX											
Benzene	UG/L	3.48	3.54	4.00	4.00	87	89	88	2	30.0	39-150
Toluene	UG/L	3.40	3.48	4.00	4.00	85	87	86	2	30.0	46-148
Ethylbenzene	UG/L	3.63	3.73	4.00	4.00	91	93	92	2	30.0	32-160
m-Xylene	UG/L	7.30	7.50	8.00	8.00	91	94	93	3	30.0	32-160
o-Xylene	UG/L	3.64	3.72	4.00	4.00	91	93	92	2	30.0	32-160

11\18

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank LCS
Lab Sample ID: A3B0832602 A3B0832601

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS					
METHOD SECTION 7.3 - REACTIVITY (CYANI	MG/L	213.0	1000	21	10-100
METHOD SECTION 7.3 - REACTIVITY (SULFI	MG/L	190.0	570.0	33	10-100

12\18

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

METHOD 602 - PURGEABLE AROMATICS - BTEX

Client Sample ID / Job No & Lab Sample ID	FRAC TANK A03-7167 A3716701				
Sample Date	07/25/2003 15:00				
Received Date	07/26/2003 09:00				
Extraction Date					
Analysis Date	07/28/2003 15:47				
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	0.005 LITERS				
% Dry					

13\18

METHOD 602 - PURGEABLE AROMATICS - BTEX

Client Sample ID Job No & Lab Sample ID	VBLK62 A03-7167 A3716702				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	07/28/2003 09:51				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	0.005 LITERS				
% Dry					

14\18

NA = Not Applicable

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A3716701	FRAC TANK	RECNY	HCN Released From Waste	SECT7.3	1.0		07/25/03 15:00	07/26 09:00	NA		07/28	JMS	Y	WATER
		RECNY	H2S Released From Waste	SECT7.3	1.0		07/25/03 15:00	07/26 09:00	NA		07/28	JMS	Y	WATER
		RECNY	Ignitability	1010	1.0		07/25/03 15:00	07/26 09:00	NA		07/28	KS	Y	WATER

15\18

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	TH	Analysis Date	ANL INI	AH	Matrix
A3B0832602	Method Blank	RECNY	HCN Released From Waste	SECT7.3	1.0		-	-	NA		07/28	JMS	Y	WATER
		RECNY	H2S Released From Waste	SECT7.3	1.0		-	-	NA		07/28	JMS	Y	WATER

16\18

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Chain of Custody

SEVERN TRENT SERVICES

STL Newburgh

CHAIN OF CUSTODY

315 Fullerton Avenue
Newburgh, NY 12550
TEL (845) 562-0890
FAX (845) 562-0841

CUSTOMER NAME NYSEG

ADDRESS P.O. Box 5224

CITY, STATE, ZIP Binghamton NY 13902

NAME OF CONTACT John Ruspantini PHONE NO. 607-762-8787

PROJECT LOCATION Binghamton Court St.

PROJECT NUMBER / PO NO.

REPORT TYPE

STANDARD ☐ ISRA ☐
NJ REG ☐
NYASP A ☐ B ☐ CLP ☐
OTHER

TURNAROUND

☐ NORMAL
☒ QUICK 48 hr
☐ VERBAL

REPORT # (Lab Use Only)

SAMPLE TEMP. C
SAMPLE REC'D ON ICE Y N
pH CHECK Y N
REVIEWED BY

Matrix
DW = DRINKING WATER S = SOIL O = OIL
WW = WASTE WATER SL = SLUDGE GW = GROUND WATER

NY PUBLIC WATER SUPPLIES

SOURCE ID
ELRP TYPE
FEDERAL ID

NOTE: SAMPLE TEMPERATURE UPON RECEIPT MUST BE 4° ± 2°C.

STL #	SAMPLING DATE	SAMPLING TIME AM PM	COMP	GRAB	MATRIX	CLIENT I.D.	Total Number of Containers	40ml Glass HCL	Liter Amber Sulfuric Acid	Liter Amber Organic Washed	Liter Plastic Nitric Acid	Liter Plastic Sodium Hydroxide	Liter Plastic	Liter Plastic Sulfuric Acid	250ml Plastic	125ml Plastic Sterile	250ml Amber	2 oz. Qorpak	16 oz / glass	ANALYSIS REQUESTED
	7/25/03	1500		X	WW	Frac Tank	3	2											1	BTEX, Flashpoint, Reactivity

SAMPLES SUBMITTED FOR ANALYSIS WILL BE SUBJECTED TO THE STL TERMS AND CONDITIONS OF SALE (SHORT FORM) UNLESS ALTERNATE TERMS ARE AGREED IN WRITING.

5.8°C

RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
Thomas M. Sankiewicz	AES	7/25/03	1600	[signature]	STL	7/26/03	0900
SAMPLED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME
RELINQUISHED BY	COMPANY	DATE	TIME	RECEIVED BY	COMPANY	DATE	TIME

18|18

COMMENTS

RECEIVED
AUG 04 2003
LEO DEPT.

EVS TRENT SERVICES

STL Newburgh

CHAIN OF CUSTODY

315 Fullerton Avenue
Newburgh, NY 12550
TEL (845) 562-0890
FAX (845) 562-0841

CUSTOMER NAME NYSEG

ADDRESS P.O. Box 5224

CITY, STATE, ZIP Binghamton NY 13902

NAME OF CONTACT John Ruspantini PHONE NO. 607-762-8787

PROJECT LOCATION Binghamton Court St.

PROJECT NUMBER / PO NO.

REPORT TYPE

STANDARD ☐ ISRA ☐
NJ REG ☐
NYASP A☐ B☐ CLP☐
OTHER ______

TURNAROUND

☐ NORMAL ______
☒ QUICK 48 hr
☐ VERBAL ______

REPORT # (Lab Use Only)

SAMPLE TEMP ______ C
SAMPLE REC'D ON ICE Y ______ N ______
pH CHECK Y ______ N ______
REVIEWED BY

NY PUBLIC WATER SUPPLIES

SOURCE ID ___ ___ ___
ELRP TYPE ___ ___ ___
FEDERAL ID ___ ___ ___ ___ ___ ___ ___

Matrix
DW = DRINKING WATER S = SOIL O = OIL
WW = WASTE WATER SL = SLUDGE GW = GROUND WATER

NOTE: SAMPLE TEMPERATURE UPON RECEIPT MUST BE 4° ± 2°C.

STL #	SAMPLING DATE	TIME AM PM	COMP	GRAB	MATRIX	CLIENT I.D.	Total Number of Containers	40ml Glass HCL	Liter Amber Sulfuric Acid	Liter Amber Organic Washed	Liter Plastic Nitric Acid	Liter Plastic Sodium Hydroxide	Liter Plastic	Liter Plastic Sulfuric Acid	250ml Plastic	125ml Plastic Sterile	250ml Amber	2 oz. Qorpak	16 oz/glass	ANALYSIS REQUESTED
	7/25/03	1500		X	WW	FracTank	3	2											1	BTEX, Flashpoint, Reactivity

SAMPLES SUBMITTED FOR ANALYSIS WILL BE SUBJECTED TO THE STL TERMS AND CONDITIONS OF SALE (SHORT FORM) UNLESS ALTERNATE TERMS ARE AGREED IN WRITING.

	COMPANY	DATE	TIME		COMPANY	DATE	TIME
RELINQUISHED BY Thomas M. Sankiewicz	AES	7/25/03	1600	RECEIVED BY			
SAMPLED BY				RECEIVED BY			
RELINQUISHED BY				RECEIVED BY			

COMMENTS ______

SEVERN TRENT STL

AUG 04 2003

OK
WJP
8-8-03

New York State Electric & Gas
NYGEG
Kirkwood Industrial Park
PO Box 5224
Binghamton, NY 13902-5224
Attn: Mr. Walt Savichky

Page: 1

Invoice No: 48025032
Invoice Date: 07/30/2003

P.O. No: 80-8800
Project No: NY3A9052EP

Customer No: 95741
Internal Ref. No: A1A25032/L11252

Sample I.D.	Description	Total
FRAC TANK	HCN RELEASED FROM WASTE - W RL= 50 MG/L	30.00
	H2S RELEASED FROM WASTE - W - RL= 50 MG/L	30.00
	FLASHPOINT - W - RL=68 F	37.50
	AQUEOUS-CFR136 602 - BTEX'S	72.00

NYSEG Waste Water
STL Job No(s): A03-7167
Sample Date(s): 07/25/2003

Terms: Net 30 days
~~AN0558~~

Total Due This Invoice: $169.50

10 Hazelwood Drive • Suite 106 • Amherst, NY 14228-2298 • Tel: 716 691 2600 • Fax: 716 691 7991 • FED ID 23-2919996
Remit to: W-4305 P.O. Box 7777 • Philadelphia, PA 19175-4305

STL-8118 (10/02)

BINGHAMTON COURT STREET STORM DRAIN LINER

ROLL OFF SAMPLE

7/29/03

SEVERN TRENT STL

ANALYTICAL REPORT

Job#: A03-7257

STL Project#: NY3A9052EP
Site Name: NYGEG
Task: NYSEG Soils

Walt Savichky
NYSE&G
P.O. Box 5224
Binghamton, NY 13902-5224

STL Buffalo

Ronald M. Mazur
Project Manager

08/04/2003

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A3725701	ROLL OFF CONTENTS	07/29/2003	11:00	07/30/2003	09:45

METHODS SUMMARY

Job#: A03-7257

STL Project#: NY3A9052EP
Site Name: NYGEG

PARAMETER	ANALYTICAL METHOD
METHOD 8260 - TCL VOLATILE ORGANICS	SW8463 8260
METHOD 8015B - Gasoline Range Organics	SW8463 8015 B
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS	SW8463 8270
DIESEL RANGE ORGANICS - METHOD 8015B	SW8463 8015B
METHOD 8082 - POLYCHLORINATED BIPHENYLS (TOTAL)	SW8463 8082
Arsenic - Total	SW8463 6010
Barium - Total	SW8463 6010
Cadmium - Total	SW8463 6010
Chromium - Total	SW8463 6010
Lead - Total	SW8463 6010
Mercury - Total	SW8463 7471
Selenium - Total	SW8463 6010
Silver - Total	SW8463 6010
Cyanide - Total	SW8463 9012A
Percent Sulfur	ASTM D-129

References:

ASTM "Annual Book of ASTM Standards", American Society for Testing and Materials, Philadelphia, PA.

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A03-7257

STL Project#: NY3A9052EP
Site Name: NYGEG

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A03-7257

Sample Cooler(s) were received at the following temperature(s); 10.2 °C
Sample ROLL OFF CONTENTS was received at a temperature of >10° C. These samples were analyzed as per instructions from the client. Based on EPA data validation guidelines, all detected concentrations and detection limits should be considered estimated values.

GC/MS Volatile Data

No deviations from protocol were encountered during the analytical procedures.

GC Volatile Data

Sample ROLL OFF CONTENTS was analyzed using medium level techniques due to high concentrations of target analytes and non-target analytes.

GC/MS Semivolatile Data

The recovery of surrogate compound 2-Fluorobiphenyl was above the laboratory derived quality control limits in the Method Blank A3B843403. Since there were no detections in the Method Blank and results would be considered biased high, no corrective action was taken.

The recovery of spiking compound Acenaphthene was above laboratory derived quality control limits in the Matrix Spike Blank A3B0843402. However, the Matrix Spike Blank Duplicate A3B0843402 was compliant for all compounds. No corrective action was required.

GC Extractable Data

Sample ROLL OFF CONTENTS analyzed for Diesel Range Organics required dilution prior to analysis due to the high concentration of analytes in the Diesel Range. The surrogate was diluted out of the sample extract.

Metals Data

No deviations from protocol were encountered during the analytical procedures.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Client Sample ID	Lab Sample ID	Parameter (Inorganic)/Method (Organic)	Dilution	Code
ROLL OFF CONTENTS	A3725701	8015 B	50.00	008
ROLL OFF CONTENTS	A3725701	8015B	20.00	008
ROLL OFF CONTENTS	A3725701	8260	10.00	008
ROLL OFF CONTENTS	A3725701	8270	10.00	012
ROLL OFF CONTENTS	A3725701	Mercury - Total	5.00	008

Dilution Code Definition:

002 - sample matrix effects
003 - excessive foaming
004 - high levels of non-target compounds
005 - sample matrix resulted in method non-compliance for an Internal Standard
006 - sample matrix resulted in method non-compliance for Surrogate
007 - nature of the TCLP matrix
008 - high concentration of target analyte(s)
009 - sample turbidity
010 - sample color
011 - insufficient volume for lower dilution
012 - sample viscosity
013 - other

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected at or above the reporting limit.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

C This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B This flag is used when the analyte is found in the associated blank, as well as in the sample.

E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D This flag identifies all compounds identified in an analysis at the secondary dilution factor.

N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.

P This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".

A This flag indicates that a TIC is a suspected aldol-condensation product.

1 Indicates coelution.

* Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected at or above the reporting limit.

J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.

N Indicates spike sample recovery is not within the quality control limits.

K Indicates the post digestion spike recovery is not within the quality control limits.

S Indicates value determined by the Method of Standard Addition.

M Indicates duplicate injection results exceeded quality control limits.

W Post digestion spike for Furnace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.

E Indicates a value estimated or not reported due to the presence of interferences.

H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.

* Indicates analysis is not within the quality control limits.

+ Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Sample Data Package

Sample ID: ROLL OFF CONTENTS
Lab Sample ID: A3725701
Date Collected: 07/29/2003
Time Collected: 11:00

Date Received: 07/30/2003
Project No: NY3A9052EP
Client No: L11252
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
SOIL-SW8463 8260 - TCL VOLATILES							
1,1,1-Trichloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,1,2,2-Tetrachloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,1,2-Trichloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,1-Dichloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,1-Dichloroethene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,2-Dichloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
1,2-Dichloroethene (Total)	ND		39000	UG/KG	8260	07/31/2003 01:59	CDC
1,2-Dichloropropane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
2-Butanone	ND		97000	UG/KG	8260	07/31/2003 01:59	CDC
2-Hexanone	ND		97000	UG/KG	8260	07/31/2003 01:59	CDC
4-Methyl-2-pentanone	ND		97000	UG/KG	8260	07/31/2003 01:59	CDC
Acetone	ND		97000	UG/KG	8260	07/31/2003 01:59	CDC
Benzene	73000		19000	UG/KG	8260	07/31/2003 01:59	CDC
Bromodichloromethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Bromoform	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Bromomethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Carbon Disulfide	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Carbon Tetrachloride	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Chlorobenzene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Chloroethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Chloroform	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Chloromethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
cis-1,3-Dichloropropene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Dibromochloromethane	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Ethylbenzene	550000		19000	UG/KG	8260	07/31/2003 01:59	CDC
Methylene chloride	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Styrene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Tetrachloroethene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Toluene	8700	J	19000	UG/KG	8260	07/31/2003 01:59	CDC
Total Xylenes	280000		58000	UG/KG	8260	07/31/2003 01:59	CDC
trans-1,3-Dichloropropene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Trichloroethene	ND		19000	UG/KG	8260	07/31/2003 01:59	CDC
Vinyl acetate	ND		97000	UG/KG	8260	07/31/2003 01:59	CDC
Vinyl chloride	ND		39000	UG/KG	8260	07/31/2003 01:59	CDC
SOIL-8015B - GASOLINE RANGE ORGANICS							
Gasoline Range Organics	1200		380	MG/KG	8015 B	07/31/2003 15:21	KC
SOIL-SW8463 8270 - TCL SVOA ORGANICS							
1,2,4-Trichlorobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
1,2-Dichlorobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
1,3-Dichlorobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
1,4-Dichlorobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,2'-Oxybis(1-Chloropropane)	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,4,5-Trichlorophenol	ND		220000	UG/KG	8270	07/31/2003 14:30	MRF
2,4,6-Trichlorophenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,4-Dichlorophenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,4-Dimethylphenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,4-Dinitrophenol	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF

Sample ID: ROLL OFF CONTENTS
Lab Sample ID: A3725701
Date Collected: 07/29/2003
Time Collected: 11:00

Date Received: 07/30/2003
Project No: NY3A9052EP
Client No: L11252
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
SOIL-SW8463 8270 - TCL SVOA ORGANICS							
2,4-Dinitrotoluene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2,6-Dinitrotoluene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2-Chloronaphthalene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2-Chlorophenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2-Methylnaphthalene	82000	J	91000	UG/KG	8270	07/31/2003 14:30	MRF
2-Methylphenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
2-Nitroaniline	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
2-Nitrophenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
3,3'-Dichlorobenzidine	ND		180000	UG/KG	8270	07/31/2003 14:30	MRF
3-Nitroaniline	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
4,6-Dinitro-2-methylphenol	ND		4500000	UG/KG	8270	07/31/2003 14:30	MRF
4-Bromophenyl phenyl ether	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
4-Chloro-3-methylphenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
4-Chloroaniline	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
4-Chlorophenyl phenyl ether	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
4-Methylphenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
4-Nitroaniline	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
4-Nitrophenol	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
Acenaphthene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Acenaphthylene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Anthracene	73000	J	91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzo(a)anthracene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzo(a)pyrene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzo(b)fluoranthene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzo(ghi)perylene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzo(k)fluoranthene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Benzoic acid	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
Benzyl alcohol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Bis(2-chloroethoxy) methane	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Bis(2-chloroethyl) ether	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Bis(2-ethylhexyl) phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Butyl benzyl phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Chrysene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Di-n-butyl phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Di-n-octyl phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Dibenzo(a,h)anthracene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Dibenzofuran	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Diethyl phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Dimethyl phthalate	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Fluoranthene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Fluorene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Hexachlorobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Hexachlorobutadiene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Hexachlorocyclopentadiene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Hexachloroethane	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Indeno(1,2,3-cd)pyrene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Isophorone	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
N-Nitroso-Di-n-propylamine	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
N-nitrosodiphenylamine	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF

Sample ID: ROLL OFF CONTENTS
Lab Sample ID: A3725701
Date Collected: 07/29/2003
Time Collected: 11:00

Date Received: 07/30/2003
Project No: NY3A9052EP
Client No: L11252
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
SOIL-SW8463 8270 - TCL SVOA ORGANICS							
Naphthalene	91000		91000	UG/KG	8270	07/31/2003 14:30	MRF
Nitrobenzene	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Pentachlorophenol	ND		440000	UG/KG	8270	07/31/2003 14:30	MRF
Phenanthrene	160000		91000	UG/KG	8270	07/31/2003 14:30	MRF
Phenol	ND		91000	UG/KG	8270	07/31/2003 14:30	MRF
Pyrene	54000	J	91000	UG/KG	8270	07/31/2003 14:30	MRF
SOIL - DIESEL RANGE ORGANICS - METHOD 8015B							
Diesel Range Organics	250000		96000	MG/KG	8015B	07/31/2003 18:35	DW
SOIL-SW8463 8082 - TOTAL PCBS							
Total Polychlorinated Biphenyls (8082)	ND		2700	MG/KG	8082	07/31/2003 09:10	DW
Metals Analysis							
Arsenic - Total	15.3		2.1	MG/KG	6010	07/31/2003 21:30	TRB
Barium - Total	10.4		0.52	MG/KG	6010	07/31/2003 21:30	TRB
Cadmium - Total	0.69		0.21	MG/KG	6010	07/31/2003 21:30	TRB
Chromium - Total	1.7		0.52	MG/KG	6010	07/31/2003 21:30	TRB
Lead - Total	341		1.0	MG/KG	6010	07/31/2003 21:30	TRB
Mercury - Total	1.0		0.099	MG/KG	7471	07/30/2003 15:10	AJY
Selenium - Total	ND		4.2	MG/KG	6010	07/31/2003 21:30	TRB
Silver - Total	ND		0.52	MG/KG	6010	07/31/2003 21:30	TRB
Wet Chemistry Analysis							
Cyanide - Total	ND		1.0	UG/G	9012A	07/31/2003 17:01	JMS
Percent Sulfur	0.24		0	%	D-129	07/31/2003 09:00	MJ

Chronology and QC Summary Package

Client ID / Job No / Lab ID / Sample Date		VBLK11 A03-7257 A3725702							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/KG	ND	3100	NA		NA		NA	
Benzene	UG/KG	ND	620	NA		NA		NA	
Bromodichloromethane	UG/KG	ND	620	NA		NA		NA	
Bromoform	UG/KG	ND	620	NA		NA		NA	
Bromomethane	UG/KG	ND	620	NA		NA		NA	
2-Butanone	UG/KG	ND	3100	NA		NA		NA	
Carbon Disulfide	UG/KG	ND	620	NA		NA		NA	
Carbon Tetrachloride	UG/KG	ND	620	NA		NA		NA	
Chlorobenzene	UG/KG	ND	620	NA		NA		NA	
Chloroethane	UG/KG	ND	620	NA		NA		NA	
Chloroform	UG/KG	ND	620	NA		NA		NA	
Chloromethane	UG/KG	ND	620	NA		NA		NA	
Dibromochloromethane	UG/KG	ND	620	NA		NA		NA	
1,1-Dichloroethane	UG/KG	ND	620	NA		NA		NA	
1,2-Dichloroethane	UG/KG	ND	620	NA		NA		NA	
1,1-Dichloroethene	UG/KG	ND	620	NA		NA		NA	
1,2-Dichloroethene (Total)	UG/KG	ND	1200	NA		NA		NA	
1,2-Dichloropropane	UG/KG	ND	620	NA		NA		NA	
cis-1,3-Dichloropropene	UG/KG	ND	620	NA		NA		NA	
trans-1,3-Dichloropropene	UG/KG	ND	620	NA		NA		NA	
Ethylbenzene	UG/KG	ND	620	NA		NA		NA	
2-Hexanone	UG/KG	ND	3100	NA		NA		NA	
Methylene chloride	UG/KG	ND	620	NA		NA		NA	
4-Methyl-2-pentanone	UG/KG	ND	3100	NA		NA		NA	
Styrene	UG/KG	ND	620	NA		NA		NA	
1,1,2,2-Tetrachloroethane	UG/KG	ND	620	NA		NA		NA	
Tetrachloroethene	UG/KG	ND	620	NA		NA		NA	
Toluene	UG/KG	ND	620	NA		NA		NA	
1,1,1-Trichloroethane	UG/KG	ND	620	NA		NA		NA	
1,1,2-Trichloroethane	UG/KG	ND	620	NA		NA		NA	
Trichloroethene	UG/KG	ND	620	NA		NA		NA	
Vinyl acetate	UG/KG	ND	3100	NA		NA		NA	
Vinyl chloride	UG/KG	ND	1200	NA		NA		NA	
Total Xylenes	UG/KG	ND	1900	NA		NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	93	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	94	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	90	50-200	NA		NA		NA	
Toluene-D8	%	98	71-125	NA		NA		NA	
p-Bromofluorobenzene	%	96	68-124	NA		NA		NA	
1,2-Dichloroethane-D4	%	97	61-136	NA		NA		NA	

13/42

NA = Not Applicable ND = Not Detected

Date: 08/04/2003
Time: 13:16:00

NYGEG
NYSEG Soils
METHOD 8015B - GASOLINE RANGE ORGANICS

Rept: AN1247

Client ID / Job No / Lab ID / Sample Date		VBLK128 A03-7257 A3725704							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Gasoline Range Organics	MG/KG	ND	2.5	NA		NA		NA	
SURROGATE(S)									
a,a,a-Trifluorotoluene	%	96	71-138	NA		NA		NA	

14/42

NA = Not Applicable ND = Not Detected

Client ID Job No Lab ID Sample Date		A03-7257	A3B0843403						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/KG	ND	9900	NA		NA		NA	
Acenaphthylene	UG/KG	ND	9900	NA		NA		NA	
Anthracene	UG/KG	ND	9900	NA		NA		NA	
Benzo(a)anthracene	UG/KG	ND	9900	NA		NA		NA	
Benzo(b)fluoranthene	UG/KG	ND	9900	NA		NA		NA	
Benzo(k)fluoranthene	UG/KG	ND	9900	NA		NA		NA	
Benzo(ghi)perylene	UG/KG	ND	9900	NA		NA		NA	
Benzo(a)pyrene	UG/KG	ND	9900	NA		NA		NA	
Benzoic acid	UG/KG	ND	48000	NA		NA		NA	
Benzyl alcohol	UG/KG	ND	9900	NA		NA		NA	
Bis(2-chloroethoxy) methane	UG/KG	ND	9900	NA		NA		NA	
Bis(2-chloroethyl) ether	UG/KG	ND	9900	NA		NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/KG	ND	9900	NA		NA		NA	
Bis(2-ethylhexyl) phthalate	UG/KG	ND	9900	NA		NA		NA	
4-Bromophenyl phenyl ether	UG/KG	ND	9900	NA		NA		NA	
Butyl benzyl phthalate	UG/KG	ND	9900	NA		NA		NA	
4-Chloroaniline	UG/KG	ND	9900	NA		NA		NA	
4-Chloro-3-methylphenol	UG/KG	ND	9900	NA		NA		NA	
2-Chloronaphthalene	UG/KG	ND	9900	NA		NA		NA	
2-Chlorophenol	UG/KG	ND	9900	NA		NA		NA	
4-Chlorophenyl phenyl ether	UG/KG	ND	9900	NA		NA		NA	
Chrysene	UG/KG	ND	9900	NA		NA		NA	
Dibenzo(a,h)anthracene	UG/KG	ND	9900	NA		NA		NA	
Dibenzofuran	UG/KG	ND	9900	NA		NA		NA	
Di-n-butyl phthalate	UG/KG	ND	9900	NA		NA		NA	
1,2-Dichlorobenzene	UG/KG	ND	9900	NA		NA		NA	
1,3-Dichlorobenzene	UG/KG	ND	9900	NA		NA		NA	
1,4-Dichlorobenzene	UG/KG	ND	9900	NA		NA		NA	
3,3'-Dichlorobenzidine	UG/KG	ND	20000	NA		NA		NA	
2,4-Dichlorophenol	UG/KG	ND	9900	NA		NA		NA	
Diethyl phthalate	UG/KG	ND	9900	NA		NA		NA	
2,4-Dimethylphenol	UG/KG	ND	9900	NA		NA		NA	
Dimethyl phthalate	UG/KG	ND	9900	NA		NA		NA	
4,6-Dinitro-2-methylphenol	UG/KG	ND	500000	NA		NA		NA	
2,4-Dinitrophenol	UG/KG	ND	48000	NA		NA		NA	
2,4-Dinitrotoluene	UG/KG	ND	9900	NA		NA		NA	
2,6-Dinitrotoluene	UG/KG	ND	9900	NA		NA		NA	
Di-n-octyl phthalate	UG/KG	ND	9900	NA		NA		NA	
Fluoranthene	UG/KG	ND	9900	NA		NA		NA	
Fluorene	UG/KG	ND	9900	NA		NA		NA	
Hexachlorobenzene	UG/KG	ND	9900	NA		NA		NA	
Hexachlorobutadiene	UG/KG	ND	9900	NA		NA		NA	
Hexachlorocyclopentadiene	UG/KG	ND	9900	NA		NA		NA	

15/42

NA = Not Applicable ND = Not Detected

Client ID / Job No / Sample Date	Lab ID	A03-7257	A3B0843403						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexachloroethane	UG/KG	ND	9900	NA		NA		NA	
Indeno(1,2,3-cd)pyrene	UG/KG	ND	9900	NA		NA		NA	
Isophorone	UG/KG	ND	9900	NA		NA		NA	
2-Methylnaphthalene	UG/KG	ND	9900	NA		NA		NA	
2-Methylphenol	UG/KG	ND	9900	NA		NA		NA	
4-Methylphenol	UG/KG	ND	9900	NA		NA		NA	
Naphthalene	UG/KG	ND	9900	NA		NA		NA	
2-Nitroaniline	UG/KG	ND	48000	NA		NA		NA	
3-Nitroaniline	UG/KG	ND	48000	NA		NA		NA	
4-Nitroaniline	UG/KG	ND	48000	NA		NA		NA	
Nitrobenzene	UG/KG	ND	9900	NA		NA		NA	
2-Nitrophenol	UG/KG	ND	9900	NA		NA		NA	
4-Nitrophenol	UG/KG	ND	48000	NA		NA		NA	
N-nitrosodiphenylamine	UG/KG	ND	9900	NA		NA		NA	
N-Nitroso-Di-n-propylamine	UG/KG	ND	9900	NA		NA		NA	
Pentachlorophenol	UG/KG	ND	48000	NA		NA		NA	
Phenanthrene	UG/KG	ND	9900	NA		NA		NA	
Phenol	UG/KG	ND	9900	NA		NA		NA	
Pyrene	UG/KG	ND	9900	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/KG	ND	9900	NA		NA		NA	
2,4,5-Trichlorophenol	UG/KG	ND	24000	NA		NA		NA	
2,4,6-Trichlorophenol	UG/KG	ND	9900	NA		NA		NA	
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	103	50-200	NA		NA		NA	
Naphthalene-D8	%	110	50-200	NA		NA		NA	
Acenaphthene-D10	%	110	50-200	NA		NA		NA	
Phenanthrene-D10	%	109	50-200	NA		NA		NA	
Chrysene-D12	%	98	50-200	NA		NA		NA	
Perylene-D12	%	91	50-200	NA		NA		NA	
Nitrobenzene-D5	%	113	34-120	NA		NA		NA	
2-Fluorobiphenyl	%	132 *	43-125	NA		NA		NA	
p-Terphenyl-d14	%	138	38-141	NA		NA		NA	
Phenol-D5	%	104	34-120	NA		NA		NA	
2-Fluorophenol	%	114	25-125	NA		NA		NA	
2,4,6-Tribromophenol	%	132	36-139	NA		NA		NA	

NA = Not Applicable   ND = Not Detected

Client ID Job No / Lab ID Sample Date		Method Blank A03-7257 A3B0847003							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Diesel Range Organics	MG/KG	ND	4800	NA		NA		NA	
SURROGATE(S)									
o-Terphenyl	%	102	46-154	NA		NA		NA	

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NYGEG
NYSEG Soils
METHOD 8082 - POLYCHLORINATED BIPHENYLS (TOTAL)

Client ID / Job No / Sample Date	Lab ID	Method Blank A03-7257	A3B0843003						
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Total Polychlorinated Biphenyl	MG/KG	ND	3000	NA		NA		NA	
==SURROGATE(S)==									
Tetrachloro-m-xylene	%	114	32-148	NA		NA		NA	
Decachlorobiphenyl	%	114	36-153	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID Job No Lab ID Sample Date		Method Blank A03-7257 A3B0842302		Method Blank A03-7257 A3B0845802					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Mercury - Total	MG/KG	ND	0.020	NA		NA		NA	
Silver - Total	MG/KG	NA		ND	0.50	NA		NA	
Selenium - Total	MG/KG	NA		ND	4.0	NA		NA	
Lead - Total	MG/KG	NA		ND	1.0	NA		NA	
Chromium - Total	MG/KG	NA		ND	0.50	NA		NA	
Cadmium - Total	MG/KG	NA		ND	0.20	NA		NA	
Arsenic - Total	MG/KG	NA		ND	2.0	NA		NA	
Barium - Total	MG/KG	NA		ND	0.50	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID Job No Lab ID Sample Date		Method Blank A03-7257 A3B0848804							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Cyanide - Total	UG/G	ND	1.0	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client Sample ID: VBLK11 MSB11
Lab Sample ID: A3725702 A3725703

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
METHOD 8260 - TCL VOLATILE ORGANICS					
1,1-Dichloroethene	UG/KG	5571	6250	89	65-146
Trichloroethene	UG/KG	5801	6250	93	74-127
Benzene	UG/KG	6048	6250	97	74-128
Toluene	UG/KG	5861	6250	94	74-123
Chlorobenzene	UG/KG	5902	6250	94	76-124

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: VBLK128 LCS LCSD
Lab Sample ID: A3725704 A3725705 A3725706

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			%	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg	RPD	RPD	REC.
METHOD 8015B - GASOLINE RANGE ORGANICS											
Gasoline Range Organics	MG/KG	10.2	10.3	10.0	10.0	103	103	103	0	30.0	50-150

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID:
Lab Sample ID: A3B0843403

Matrix Spike Blank A3B0843401

Matrix Spike Blk Dup A3B0843402

Analyte	Units of Measure	Concentration Spike Blank	Concentration Spike Blank Dup	Spike Amount SB	Spike Amount SBD	% Recovery SB	% Recovery SBD	% Recovery Avg	% RPD	QC LIMITS RPD	QC LIMITS REC.
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS											
Phenol	UG/KG	96850	90138	100000	100000	97	90	94	7	34.0	38-120
2-Chlorophenol	UG/KG	115248	109412	100000	100000	115	109	112	5	33.0	40-120
1,4-Dichlorobenzene	UG/KG	109548	103334	100000	100000	110	103	107	6	28.0	35-120
N-Nitroso-Di-n-propylamine	UG/KG	118242	109841	100000	100000	118	110	114	7	25.0	44-120
1,2,4-Trichlorobenzene	UG/KG	114805	108577	100000	100000	115	108	112	6	30.0	38-120
4-Chloro-3-methylphenol	UG/KG	114644	109598	100000	100000	115	110	113	4	24.0	54-121
Acenaphthene	UG/KG	122295	118672	100000	100000	122 *	119	121	2	25.0	55-120
4-Nitrophenol	UG/KG	95723	91660	100000	100000	96	92	94	4	38.0	35-134
2,4-Dinitrotoluene	UG/KG	123923	122931	100000	100000	124	123	124	0.	26.0	49-127
Pentachlorophenol	UG/KG	115562	108457	100000	100000	116	108	112	7	32.0	35-126
Pyrene	UG/KG	132999	134905	100000	100000	133	135	134	1	25.0	58-137

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* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank
Lab Sample ID: A3B0843003

Matrix Spike Blank
A3B0843001

Matrix Spike Blk Dup
A3B0843002

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
METHOD 8082 - POLYCHLORINATED BIPHENYLS											
Total Polychlorinated Biphenyls (8082)	MG/KG	10.0	9.73	10.0	10.0	101	97	99	4	30.0	52-153

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank
Lab Sample ID: A3B0847003

Matrix Spike Blank
A3B0847001

Matrix Spike Blk Dup
A3B0847002

Analyte	Units of Measure	Concentration Spike Blank	Concentration Spike Blank Dup	Spike Amount SB	Spike Amount SBD	% Recovery SB	% Recovery SBD	% Recovery Avg	% RPD	QC LIMITS RPD	QC LIMITS REC.
DIESEL RANGE ORGANICS - METHOD 8015B											
Diesel Range Organics	MG/KG	14945	15506	15000	15000	100	103	102	3	30.0	30-145

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* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank LCS
Lab Sample ID: A3B0842302 A3B0842301

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
T-METALS RCRA					
TOTAL MERCURY	MG/KG	3.50	4.38	80	80-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank LCS CLP Soils
Lab Sample ID: A3B0845802 A3B0845801

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
T-METALS RCRA					
TOTAL ARSENIC	MG/KG	179.3	192.0	93	80-120
TOTAL BARIUM	MG/KG	398.7	417.0	96	80-120
TOTAL CADMIUM	MG/KG	120.7	125.0	97	80-120
TOTAL CHROMIUM	MG/KG	124.0	133.0	93	80-120
TOTAL LEAD	MG/KG	152.6	160.0	95	80-120
TOTAL SELENIUM	MG/KG	87.48	97.00	90	80-120
TOTAL SILVER	MG/KG	118.1	115.0	103	80-120

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* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank LCS
Lab Sample ID: A3B0848804 A3B0848803

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
WET CHEMISTRY ANALYSIS METHOD 9012 - TOTAL CYANIDE	UG/G	313.9	176.0	178 *	16-131

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	ROLL OFF CONTENTS A03-7257 A3725701				
Sample Date	07/29/2003 11:00				
Received Date	07/30/2003 09:45				
Extraction Date					
Analysis Date	07/31/2003 01:59				
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	SOTHER				
Dilution Factor	10.0				
Sample wt/vol	4.04 GRAMS				
% Dry	31.74				

NA = Not Applicable

METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID / Job No & Lab Sample ID	VBLK11 A03-7257 A3725702				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	07/30/2003 22:02				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	SOIL MED				
Dilution Factor	1.0				
Sample wt/vol	4.0 GRAMS				
% Dry	100.00				

NA = Not Applicable

METHOD 8015B - GASOLINE RANGE ORGANICS

Client Sample ID Job No & Lab Sample ID	ROLL OFF CONTENTS A03-7257 A3725701				
Sample Date	07/29/2003 11:00				
Received Date	07/30/2003 09:45				
Extraction Date					
Analysis Date	07/31/2003 15:21				
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	SOTHER				
Dilution Factor	50.0				
Sample wt/vol	5.13 GRAMS				
% Dry	31.74				

NA = Not Applicable

METHOD 8015B - GASOLINE RANGE ORGANICS

Client Sample ID	VBLK128				
Job No & Lab Sample ID	A03-7257 A3725704				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	07/31/2003 11:24				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	SOIL MED				
Dilution Factor	1.0				
Sample wt/vol	5.0 GRAMS				
% Dry	100.00				

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NA = Not Applicable

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	ROLL OFF CONTENTS A03-7257 A3725701				
Sample Date	07/29/2003 11:00				
Received Date	07/30/2003 09:45				
Extraction Date	07/30/2003 14:00				
Analysis Date	07/31/2003 14:30				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	SOTHER				
Dilution Factor	10.0				
Sample wt/vol	1.09 GRAMS				
% Dry	100.00				

NA = Not Applicable

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	A03-7257 A3B0843403				
Sample Date					
Received Date					
Extraction Date	07/30/2003 14:00				
Analysis Date	07/31/2003 13:46				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	OIL				
Dilution Factor	1.0				
Sample wt/vol	1.0 GRAMS				
% Dry	100.00				

NA = Not Applicable

DIESEL RANGE ORGANICS - METHOD 8015B

Client Sample ID / Job No & Lab Sample ID	ROLL OFF CONTENTS A03-7257 A3725701				
Sample Date	07/29/2003 11:00				
Received Date	07/30/2003 09:45				
Extraction Date	07/31/2003 07:00				
Analysis Date	07/31/2003 18:35				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	SOTHER				
Dilution Factor	20.0				
Sample wt/vol	0.1 GRAMS				
% Dry	100.00				

METHOD 8082 - POLYCHLORINATED BIPHENYLS (TOTAL)

Client Sample ID / Job No & Lab Sample ID	ROLL OFF CONTENTS A03-7257 A3725701				
Sample Date	07/29/2003 11:00				
Received Date	07/30/2003 09:45				
Extraction Date	07/30/2003 21:00				
Analysis Date	07/31/2003 09:10				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	SOTHER				
Dilution Factor	1.0				
Sample wt/vol	0.55 GRAMS				
% Dry	100.00				

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NA = Not Applicable

DIESEL RANGE ORGANICS - METHOD 8015B

Client Sample ID Job No & Lab Sample ID	Method Blank A03-7257 A3B0843003	Method Blank A03-7257 A3B0847003			
Sample Date					
Received Date					
Extraction Date		07/31/2003 07:00			
Analysis Date		07/31/2003 20:22			
Extraction HT Met?	NA	-			
Analytical HT Met?		-			
Sample Matrix		OIL			
Dilution Factor		1.0			
Sample wt/vol		0.1 GRAMS			
% Dry		100.00			

METHOD 8082 - POLYCHLORINATED BIPHENYLS (TOTAL)

Client Sample ID Job No & Lab Sample ID	Method Blank A03-7257 A3B0843003	Method Blank A03-7257 A3B0847003			
Sample Date					
Received Date					
Extraction Date	07/30/2003 21:00				
Analysis Date	07/31/2003 10:00				
Extraction HT Met?	-	NA			
Analytical HT Met?	-				
Sample Matrix	SOIL LOW				
Dilution Factor	1.0				
Sample wt/vol	0.5 GRAMS				
% Dry	100.00				

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NA = Not Applicable

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A3725701	ROLL OFF CONTENTS	RECNY	Arsenic - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Barium - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Cadmium - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Chromium - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Lead - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Mercury - Total	7471	5.0	100.00	0.6068 g	07/29/2003 11:00	07/30 09:45	07/30	AJY	Y	SOTHER
		RECNY	Selenium - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER
		RECNY	Silver - Total	6010	1.0	100.00	0.48 g	07/29/2003 11:00	07/30 09:45	07/31	TRB	Y	SOTHER

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AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol	g/L	Sample Date	Receive Date	Analysis Date	ANL INI	AH	Matrix
A3B0842302	Method Blank	RECNY	Mercury - Total	7471	1.0	100.00	0.6	g	-	-	07/30	AJY	Y	SOIL
A3B0845802	Method Blank	RECNY	Arsenic - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Barium - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Cadmium - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Chromium - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Lead - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Selenium - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL
		RECNY	Silver - Total	6010	1.0	100.00	0.5	g	-	-	07/31	TRB	Y	SOIL

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AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A3725701	ROLL OFF CONTENTS	RECNY	Cyanide - Total	9012A	1.0	31.74		07/29/2003 11:00	07/30 09:45	07/31	JMS	Y	SOTHER
		RECNY	Percent Sulfur	D-129	1.0	31.74		07/29/2003 11:00	07/30 09:45	07/31	MJ	Y	SOTHER

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AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Lab ID	Sample ID	Lab	Analyte	Method	DF	% Dry	Sample wt/vol g/L	Sample Date	Receive Date	Analysis Date	ANL INI	A H	Matrix
A3B0848804	Method Blank	RECNY	Cyanide - Total	9012A	1.0	100.00		-	-	07/31	JMS	Y	SOIL

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AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Chain of Custody

Chain of Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

(R)

Client	Project Manager	Date	Chain of Custody Number
NYSEG		7/29/03	010205
Address: P.O. Box 5224	Telephone Number (Area Code)/Fax Number: 607-762-7412	Lab Number	Page 1 of 1
City: Binghamton; State: NY; Zip Code: 13902	Site Contact: Walt Sandilky; Lab Contact:		
Project Name and Location (State):	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Analysis (Attach list if more space is needed): Total CN-; 8270-S-VOC; 8260-TVOC; TPH 8100 PCB; % Sulfur; Total RCRA Metals

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Total CN-	8270-S-VOC	8260-TVOC	TPH 8100 PCB	% Sulfur	Total RCRA Metals	Special Instructions/ Conditions of Receipt
Roll off contents	7/29/03	1100			X			4												

Possible Hazard Identification: Coal Tar
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required: ☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. Thomas M. Gienkiewicz	7/29/03	1200	1. [illegible] STL	07/30/03	0945
2.			2.		
3.			3.		

Comments: Sample is combination of Coal Tar and pipeline sediment 10.2°C

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

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BINGHAMTON
COURT STREET
STORM DRAIN
LINER

ROLL 0FF – TCLP
LEAD

8/8/03

SEVERN TRENT STL

ANALYTICAL REPORT

Job#: A03-7584

STL Project#: NY3A9052EP
Site Name: NYGEG
Task: NYSEG TCLP Lead

Walt Savichky
NYSE&G
P.O. Box 5224
Binghamton, NY 13902-5224

STL Buffalo

Ronald M. Mazur
Project Manager

08/21/2003

Severn Trent Laboratories, Inc.
STL Buffalo • 10 Hazelwood Drive, Suite 106, Amherst, NY 14228
Tel 716 691 2600 Fax 716 691 7991 • www.stl-inc.com

A part of Severn Trent plc

STL Buffalo
Current Certifications

STATE	Program	Cert # / Lab ID
A2LA (ISO 17025)	SDWA, CWA, RCRA	0732-01
Arizona	SDWA, CWA, RCRA	AZ0525
Arkansas	SDWA, CWA, RCRA, SOIL	03-054-D/88-0686
California	NELAP SDWA, CWA, RCRA	01169CA
Canada	GENERAL	SCC 1007-15/10B
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP RCRA	E87672
Georgia	SDWA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
Kansas	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	CWA, RCRA	036-999-337
New Hampshire	NELAP SDWA, CWA	233701
New Jersey	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA	10026
North Carolina	CWA	411
North Dakota	SDWA, CWA, RCRA	R-176
Oklahoma	CWA, RCRA	9421
Oregon	NELAP,SDWA, CWA, RCRA	NY200001
Pennsylvania	NELAP, SDWA, CWA, Env. Lab Reg.	68-281
South Carolina	RCRA	91013
Tennessee	SDWA	2970
USDA	FOREIGN SOIL PERMIT	S-4650
Virginia	SDWA	278
Washington	CWA	C254
West Virginia	CWA	252
Wisconsin	CWA	998310390
Wyoming UST	UST	NA

SAMPLE SUMMARY

		SAMPLED		RECEIVED	
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE	TIME	DATE	TIME
A3758401	ROLL OFF COMPOSITE	08/08/2003	13:00	08/09/2003	10:15

METHODS SUMMARY

Job#: A03-7584

STL Project#: NY3A9052EP
Site Name: NYGEG

PARAMETER	ANALYTICAL METHOD
Lead - Total	SW8463 6010
Toxicity Characteristic Leaching Procedure	SW8463 1311

References:

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

Sample ID: ROLL OFF COMPOSITE
Lab Sample ID: A3758401
Date Collected: 08/08/2003
Time Collected: 13:00

Date Received: 08/09/2003
Project No: NY3A9052EP
Client No: L11252
Site No:

Parameter	Result	Flag	Detection Limit	Units	Method	Date/Time Analyzed	Analyst
TCLP Metals Analysis							
Lead - Total	ND		5.0	MG/L	6010	08/15/2003 01:35	BKL

NON-CONFORMANCE SUMMARY

Job#: A03-7584

STL Project#: NY3A9052EP
Site Name: NYGEG

General Comments

The enclosed data have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A03-7584
Sample Cooler(s) were received at the following temperature(s); 2.0 °C
This project needs an extraction test for TCLP metals.

Metals Data

The recovery of sample ROLL OFF COMPOSITE Matrix Spike and Matrix Spike Duplicate exhibited results below the quality control limits for Lead. The sample result is more than four times greater than the spike added. The relative percent difference The LFB (1234) is acceptable.

Wet Chemistry Data

No deviations from protocol were encountered during the analytical procedures.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

DATA COMMENT PAGE

ORGANIC DATA QUALIFIERS

ND or U Indicates compound was analyzed for, but not detected at or above the reporting limit.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.

C This flag applies to pesticide results where the identification has been confirmed by GC/MS.

B This flag is used when the analyte is found in the associated blank, as well as in the sample.

E This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.

D This flag identifies all compounds identified in an analysis at the secondary dilution factor.

N Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.

P This flag is used for a pesticide/Aroclor target analyte when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the data page and flagged with a "P".

A This flag indicates that a TIC is a suspected aldol-condensation product.

1 Indicates coelution.

* Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U Indicates element was analyzed for, but not detected at or above the reporting limit.

J or B Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.

N Indicates spike sample recovery is not within the quality control limits.

K Indicates the post digestion spike recovery is not within the quality control limits.

S Indicates value determined by the Method of Standard Addition.

M Indicates duplicate injection results exceeded quality control limits.

W Post digestion spike for Fumace AA analysis is out of quality control limits (85-115%) while sample absorbance is less than 50% of spike absorbance.

E Indicates a value estimated or not reported due to the presence of interferences.

H Indicates analytical holding time exceedance. The value obtained should be considered an estimate.

* Indicates analysis is not within the quality control limits.

+ Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Sample Data Package

Chronology and QC Summary Package

[illegible] 08/[illegible]03
Time: 18:41:39

NYGEG
NYSEG TCLP Lead
TCLP METALS

Rept: AN1247

Client ID / Job No / Sample Date / Lab ID		Extractor Blank A03-7584 A3B0900202		Method Blank A03-7584 A3B0900203					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Lead - Total	MG/L	ND	5.0	ND	5.0	NA		NA	

NA = Not Applicable   ND = Not Detected

10\16

SAMPLE DATE 08/08/2003

Client Sample ID: ROLL OFF COMPOSITE ROLL OFF COMPOSITE ROLL OFF COMPOSITE
Lab Sample ID: A3758401 A3758401MS A3758401SD

Analyte	Units of Measure	Concentration			Spike Amount		% Recovery			%	QC LIMITS	
		Sample	Matrix Spike	Spike Duplicate	MS	MSD	MS	MSD	Avg	RPD	RPD	REC.
TCLP METALS ANALYSIS												
TCLP TOTAL LEAD	MG/L	2.35	2.37	2.40	0.200	0.200	9 *	25 *	17	94 *	20.0	80-120

11\16

* Indicates Result is outside QC Limits
NC = Not Calculated   ND = Not Detected

Client Sample ID: Method Blank LCS
Lab Sample ID: A3B0900203 A3B0900201

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
TCLP METALS ANALYSIS					
TCLP TOTAL LEAD	MG/L	0.195	0.200	98	80-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	T H	Analysis Date	ANL INI	A H	Matrix
A3758401	ROLL OFF COMPOSITE	RECNY	Lead - Total	6010	1.0	0.05 L	08/08/03 13:00	08/09 10:15	08/13	Y	08/15 01:35	BKL	Y	SOIL

13\16

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Lab ID	Sample ID	Lab	Analyte	Method	DF	Sample wt/vol g/L	Sample Date	Receive Date	TCLP Date	TH	Analysis Date	ANL INI	AH	Matrix
A3B0900202	Extractor Blank	RECNY	Lead - Total	6010	1.0	0.05 L	-	-	08/13	Y	08/15 01:26	BKL	Y	WATER
A3B0900203	Method Blank	RECNY	Lead - Total	6010	1.0	0.05 L	-	-	08/13	Y	08/15 01:21	BKL	Y	WATER

14\16

AH = Analysis Holding Time Met
TH = TCLP Holding Time Met
NA = Not Applicable

ANL INI = Analyst Initials
DF = Dilution Factor

Chain of Custody

Chain of Custody Record

STL-4124 (0700)

SEVERN TRENT SERVICES

Severn Trent Laboratories, Inc.

Client: NYSEG	Project Manager	Date	Chain of Custody Number: 010207
Address: P.O. Box 5224	Telephone Number (Area Code)/Fax Number: 607-762-7412 Fax 762-8451	Lab Number	Page 1 of 1
City: Binghamton; State: NY; Zip Code: 13902	Site Contact: W. Savicky; Lab Contact	Analysis (Attach list if more space is needed)	
Project Name and Location (State): Binghamton Court St.	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.: Walt Savicky			Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		TCLP Lead	Special Instructions/ Conditions of Receipt
Roll Off Composite	8/8/03	1300				X		X								

Matrix: Air, Aqueous, Sed., Soil. Containers & Preservatives: Unpres., H_2SO_4, HNO_3, HCl, NaOH, ZnAc/NaOH.

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months (A fee may be assessed if samples are retained longer than 3 months)

Turn Around Time Required
☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Thomas M. Sienkiewicz	8/8/03	1300	1. Received By: [signature] 52	08/09/03	1015
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

2.0°

DISTRIBUTION: WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Appendix C

Waste Manifests and Certificates of Disposal

BLASLAND, BOUCK & LEE, INC.
engineers & scientists

NYSEG
(NEW YORK STATE ELECTRIC & GAS CORPORATION)
Licensing & Environmental Operations
Corporate Drive, Kirkwood Industrial Park
P. O. Box 5224, Binghamton, NY, 13902

CONDITIONALLY EXEMPT SOLID WASTE MANIFEST

NYSEG Manifest No. BING-03-01

TRANSPORTER:

Page Transportation
P O Box 1290
Weedsport, NY 13166
NYSDEC Permit No. 7A-296

Truck Number: 3905

Date: 10-8-03 Time In: 7.10 Time Out: 3.20

CONSIGNEE:

ESMI of New York
304 Towpath Road
Fort Edward, New York 12828

SHIPPER:

NYSEG (New York State Electric & Gas Corp.)
Corporate Drive, Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY, 13902

SITE LOCATION:

NYSEG Binghamton Court Street MGP Site
279-291 Court Street
Binghamton, NY 13903

EPA ID No. NY0000073189

MATERIAL DESCRIPTION:

CONDITIONALLY EXEMPT MGP REMEDIATION WASTE
(PER NYSDEC TAGM 4061)

Weight: Est. 20 tons

SHIPPER:
SIGNATURE: Walt S. PRINT NAME: WALT SAVICHKY

DRIVER:
SIGNATURE: William T. Janke PRINT NAME: William T. Janke

CONSIGNEE:
SIGNATURE: PRINT NAME:

NYSEG

(NEW YORK STATE ELECTRIC & GAS CORPORATION)
Licensing & Environmental Operations
Corporate Drive, Kirkwood Industrial Park
P. O. Box 5224, Binghamton, NY, 13902

CONDITIONALLY EXEMPT SOLID WASTE MANIFEST

NYSEG Manifest No. BING-03-02

TRANSPORTER:

Page Transportation
P O Box 1290
Weedsport, NY 13166
NYSDEC Permit No. 7A-296

Truck Number: 3905

Date: 10-9-03 Time In: 7:00 Time Out: 8:00

CONSIGNEE:

ESMI of New York
304 Towpath Road
Fort Edward, New York 12828

SHIPPER:

NYSEG (New York State Electric & Gas Corp.)
Corporate Drive, Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY, 13902

SITE LOCATION:

NYSEG Binghamton Court Street MGP Site
279-291 Court Street
Binghamton, NY 13903

EPA ID No. NY0000073189

MATERIAL DESCRIPTION:

CONDITIONALLY EXEMPT MGP REMEDIATION WASTE
(PER NYSDEC TAGM 4061)

Weight: Est. 20 tons

SHIPPER:
SIGNATURE: Walt Sa PRINT NAME: WALT SAVICHKY

DRIVER:
SIGNATURE: William T. Janke PRINT NAME: William T. Janke

CONSIGNEE:
SIGNATURE: ______ PRINT NAME: ______

NYSEG

(NEW YORK STATE ELECTRIC & GAS CORPORATION)
Licensing & Environmental Operations
Corporate Drive, Kirkwood Industrial Park
P. O. Box 5224, Binghamton, NY, 13902

CONDITIONALLY EXEMPT SOLID WASTE MANIFEST

NYSEG Manifest No. BING-03-03

TRANSPORTER:

Page Transportation
P O Box 1290
Weedsport, NY 13166
NYSDEC Permit No. 7A-296

Truck Number: 3905

Date: 10-10-03 Time In: 7:00 Time Out: 8:00

CONSIGNEE:

ESMI of New York
304 Towpath Road
Fort Edward, New York 12828

SHIPPER:

NYSEG (New York State Electric & Gas Corp.)
Corporate Drive, Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY, 13902

SITE LOCATION:

NYSEG Binghamton Court Street MGP Site
279-291 Court Street
Binghamton, NY 13903

EPA ID No. NY0000073189

MATERIAL DESCRIPTION:

CONDITIONALLY EXEMPT MGP REMEDIATION WASTE (PER NYSDEC TAGM 4061)

Weight: Est. 20 tons

SHIPPER:
SIGNATURE: Walt S. PRINT NAME: WALT SAVICHKA

DRIVER:
SIGNATURE: William T. Janke PRINT NAME: william T. Janke

CONSIGNEE:
SIGNATURE: PRINT NAME:

Certificate of Treatment & Recycling

ESMI of New York hereby acknowledges the ***Treatment & Recycling***

of 31.28 tons of Coal Tar Contaminated Soils from

Binghamton Court Street MGP

Binghamton, NY

by

Thermal Desorption

Certificate No. 021004-6447

Issued To: New York State Electric & Gas

By:

Peter C. Hansen, Compliance Manager
Environmental Soil Management of New York, LLC.

New York State DEC Permit No. 5-5330-00038/00019

NYSEG
(NEW YORK STATE ELECTRIC & GAS CORPORATION)
Licensing & Environmental Operations
Corporate Drive, Kirkwood Industrial Park
P. O. Box 5224, Binghamton, NY, 13902

NON-HAZARDOUS SOLID WASTE MANIFEST

NYSEG Manifest No. ELM-03-04

BING

TRANSPORTER:
Page Transportation
P O Box 1290
Weedsport, NY 13166
NYSDEC Permit No. 7A-296

Truck Number: 3906

Date: 11/3/03 Time In: 4:00 Time Out: 4:30

CONSIGNEE:
Seneca Meadows, Inc.
1786 Salcman Road
Waterloo, New York 13165

SHIPPER:
NYSEG (New York State Electric & Gas Corp.)
Corporate Drive, Kirkwood Industrial Park
P.O. Box 5224
Binghamton, NY, 13902

SITE LOCATION:
NYSEG Binghamton Court Street
Former Manufactured Gas Plant Site
Madison Avenue
Elmira, NY 14901

EPA ID No. NY0000073789

MATERIAL DESCRIPTION:

CONSTRUCTION & DEMOLITION DEBRIS

Weight: Est. ________ tons

SHIPPER:
SIGNATURE: Walt Sa PRINT NAME: WALT SAVICHKY

DRIVER:
SIGNATURE: [signature] PRINT NAME: RONALD W DUSEN

CONSIGNEE:
SIGNATURE: ________________ PRINT NAME: ________________

SHIPPER

SHIPPER NYSEG

ORIGIN Binghamton NY

LOADING

TIME IN ____ TIME OUT ____ DATE 11-3-3

BY ____ PLEASE SIGN FULL NAME – NO INITIALS

DISPATCH NUMBER: K0278

SHIPPER NUMBER:

BEFORE LOADING – THE FOLLOWING MUST BE COMPLETED:
TRAILER HAS BEEN SWEPT CLEAN, IS FREE FROM FOREIGN MATERIAL AND TARP IS IN ACCEPTABLE CONDITION.

DRIVER SIGNATURE ____ LOADER SIGNATURE ____

SHIPPER WEIGHT - LBS.

G	50,860
T	46,020
N	4840 2.42 TN

COMMODITY Construction & Demolition Debris

CONSIGNEE

CONSIGNEE Seneca Meadows

DESTINATION Waterloo NY

UNLOADING

TIME IN ____ TIME OUT ____ DATE ____

CONSIGNEE NUMBER:

THE PAGE COMPANIES
Trombley Road, P.O. Box 920
Weedsport, New York 13166
(315) 834-6681 • 800-233-2126

RECEIVED ABOVE MATERIAL IN GOOD ORDER

CONSIGNEE NAME: ____

BY ____ PLEASE SIGN FULL NAME – NO INITIALS

TRUCK NO.	DRIVER NAME
3906	DUSEN

CONSIGNEE WEIGHT - LBS.

G	
T	
N	

CONSIGNEE COPY DELIVERY RECEIPT

---

cket No:
1344

Seneca Meadows, Inc
1786 Salcman Road
Waterloo, NY 13165

Date: 11/04/2003
Time In: 08:38:12
Time Out: 09:34:16

tomer:
n28 NYSEG ATT BURT FINCH
P.O. BOX 5224
CORPORATE DRIVE
KIRKWOOD INDUSTRIAL PARK
BINGHAMTON,NY 13902

Order No: CD-BRO
Cust Ref#:

C&D BROOME CTY
SWCD1 CONSTRUCT DEBRI

k Id: 3906

Gross Wt: 50,860 lbs
Tare Wt: 46,020 lbs
Net Wt: 4,840 lbs
2.42 tns

h Master:
In: CARRI 450047
Out: CARRI 450047

Paid: No
Check No:

ver:

rks:

OK

EPHM-2 REV 5/97

503

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127 D2655695

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

FOR STATE USE ONLY

COPY 3: FACILITY TO GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA ID No. NYD000073188	Manifest Document No. 57795	2. Page 1 of	Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address: New York State Electric & Gas, Attn: Debbie Dunlap, PO Box 5224 Corporate Drive, Binghamton, NY 13902

4. Generator's Phone (607) 762-7747

A. State Manifest Document Number: CT F 1054293

B. G.S.I. (Gen. Site Address): 279-281 Court Street, Binghamton, NY 13902

5. Transporter 1 Company Name: Franks Vacuum Truck Service

6. US EPA ID Number: NYD982792814

7. Transporter 2 Company Name:

8. US EPA ID Number:

C. S.T.I. (Trans. Lic. Plate #) AD 76882

D. Tran. Phone (716) 284-2132

9. Designated Facility Name and Site Address: Clean Harbors Of Conn Inc, 51 Broderick Road, Bristol, CT 06010

10. US EPA ID Number: CTD000604488

E. S.T.I. (Trans. Lic. Plate #)

F. Tran. Phone ( )

G. State Facility's ID (Not Required)

H. Facility's Phone (860) 583-8917

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON D.O.T. REGULATED NA NONE NONE	001	TT	1544	G	EPA NONE STATE CR01
b.					EPA STATE
c.					EPA STATE
d.					EPA STATE

J. Additional Descriptions for Materials Listed Above
a. Ha.cfh01 — NOT GROUNDWATER: NON HAZ
b.
c.
d.

K. Handling Codes for Wastes Listed Above
Interim / Final / Interim / Final
a. S02 T03
b.
c.
d.

15. Special Handling Instructions and Additional Information
Ha:ch1102/ab

24 HOUR EMERGENCY #(800) 645-8265

Point of Departure:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Month	Day	Year
GARY H. ROSE AGENT FOR NYSEG	[signature] Agent for NYSEG	07	30	03

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year
James W. Hoffman	James W Hoffman	07	30	03

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Month	Day	Year
Michael J Garrity	[signature]	07	31	03

CT F 1054293

EPHM-2 REV. 5/97

519

STATE OF CONNECTICUT

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Hazardous Waste MANIFEST PROGRAM

79 Elm St., Hartford, CT 06106-5127

FOR STATE USE ONLY

Please type (or print) *(Form designed for use on elite (12-pitch) typewriter.)*

REPORT SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (860) 424-3338

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: NYD000073159 — Manifest Document No.: 37294
2. Page 1 of

Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address: New York State Electric & Gas, Attn: Debbie Dunlap, PO Box 5224 Corporated Drive, Binghamton, NY 13902
4. Generator's Phone (607 762-7747
5. Transporter 1 Company Name: Franks Vacuum Truck Service
6. US EPA ID Number: NYD982792814
7. Transporter 2 Company Name:
8. US EPA ID Number:
9. Designated Facility Name and Site Address: Clean Harbors Of Conn Inc, 51 Broderick Road, Bristol, CT, 06010
10. US EPA ID Number: CTD000604488

A. State Manifest Document Number: CT F 1054294

B. G.S.E. (Gen. Site Address): 279-291 Court Street, Binghamton, NY 13902

C. S.T.I. (Trans. Lic. Plate #): 6176484 NY

D. Tran. Phone ( ) 315 384-2132

E. S.T.I. (Trans. Lic. Plate #):

F. Tran. Phone: ( )

G. State Facility's ID (Not Required)

H. Facility's Phone (860) 583-8917

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON D.O.T. REGULATED N/A NONE NONE	001	TT	05275	G	EPA NONE / STATE CR04
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials Listed Above
a. 1 (SL) MGP GROUNDWATER - NONHAZ
b.
c.
d.

K. Handling Codes for Wastes Listed Above — Interim / Final / Interim / Final
a. S05 T03
b.
c.
d.

15. Special Handling Instructions and Additional Information
Line (1) 1027ab

24 HOUR EMERGENCY # (800) 645-8265

NY 91-777

Point of Departure:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Gary H. Rose (Agent for NYSEG) — Signature: [signature] (Agent for NYSEG) — Month Day Year: 07 30 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: PETER BRIGGS — Signature: [signature] — Month Day Year: 07 30 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Michael A. Barrieri — Signature: [signature] — Month Day Year: 07 30 03

COPY 3: FACILITY TO GENERATOR

CT F 1054294

EPHM-2 REV. 5/97

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127

D2635977

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.) FOR STATE USE ONLY

FOR SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (860) 424-3338

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NY...
Manifest Document No. 54296
2. Page 1 of

Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address: New York State Electric & Gas, Attn: Debbie Dunlap, PO Box 5224 Corporated Drive, Binghamton, NY 13902

A. State Manifest Document Number: CT F 1054296

B. G.S.I. (Gen. Site Address): 279-291 Court Street, Binghamton, NY 13902

4. Generator's Phone (607) 762-7747

5. Transporter 1 Company Name: Clean Harbors Env Services Inc
6. US EPA ID Number: MAD039322250

C. S.T.I. (Trans. Lic. Plate #) 619476 ME
D. Tran. Phone (781) 849-1800

7. Transporter 2 Company Name
8. US EPA ID Number

E. S.T.I. (Trans. Lic. Plate #)
F. Tran. Phone ( )

9. Designated Facility Name and Site Address: Clean Harbors Of Conn Inc, 51 Broderick Road, Bristol CT 06010
10. US EPA ID Number: CTD000604488

G. State Facility's ID (Not Required)
H. Facility's Phone (860) 583-8917

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON DOT REGULATED NA NONE NONE	001	TT	05000	G	EPA NONE STATE CR04
b.					EPA STATE
c.					EPA STATE
d.					EPA STATE

J. Additional Descriptions for Materials Listed Above
a. NOT REGULATED GROUNDWATER NONHAZ
b.
c.
d.

K. Handling Codes for Wastes Listed Above: Interim / Final / Interim / Final
a. S01 T03
b.
c.
d.

15. Special Handling Instructions and Additional Information
[illegible] 24 HOUR EMERGENCY #(800) 645-8265

WO# D2635977 Point of Departure:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: GARY H. ROSE (AGENT FOR NYSEG) Signature: [signature] AGENT FOR NYSEG Month Day Year 07 30 03

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: JOSE M. FARTURA Signature: [signature] Month Day Year 07 30 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Erik M Albrecht Signature: [signature] Month Day Year 07 30 03

IN CASE OF EMERGENCY OR SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802.

CT F 1054296

COPY 3: FACILITY TO GENERATOR

EPHM-2 REV. 5/97 #340 FRONT AND REAR TANKS

STATE OF CONNECTICUT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Hazardous Waste MANIFEST PROGRAM
79 Elm St., Hartford, CT 06106-5127

Please type (or print) (Form designed for use on elite (12-pitch) typewriter.)

FOR STATE USE ONLY

FOR SPILLS WITHIN CONNECTICUT, CONTACT CT DEP - OIL AND CHEMICAL SPILL RESPONSE AT (860) 424-3338

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. NYD... Manifest Document No. 54297
2. Page 1 of
Information in the shaded areas is not required by Federal law, but may be required by State law.

3. Generator's Name and Mailing Address: New York State Electric & Gas, Attn: Debbie Dunlap, PO Box 5224 Corporated Drive, Binghamton, NY 13902
4. Generator's Phone (607) 762-7747

A. State Manifest Document Number: CT F 1054297
B. G.S.I. (Gen. Site Address): 279-291 Court Street, Binghamton, NY 13902

5. Transporter 1 Company Name: Clean Harbors Env Services Inc
6. US EPA ID Number: MAD039322250
7. Transporter 2 Company Name:
8. US EPA ID Number:

C. S.T.I. (Trans. Lic. Plate #) 674130/ME
D. Tran. Phone (781) 849-1800
E. S.T.I. (Trans. Lic. Plate #)
F. Tran. Phone ( )

9. Designated Facility Name and Site Address: Clean Harbors Of Conn Inc, 51 Broderick Road, Bristol, CT 06010
10. US EPA ID Number: CTD000604488

G. State Facility's ID (Not Required)
H. Facility's Phone (860) 583-8917

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NON D.O.T. REGULATED, N/A, NONE, NONE	001	TT	4984	G	EPA NONE / STATE CR04
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

RECEIVED AUG 13 2003 LEO DEPT.

64

J. Additional Descriptions for Materials Listed Above
a. MGP GROUNDWATER, NON-HAZ
b.
c.
d.

K. Handling Codes for Wastes Listed Above
Interim / Final / Interim / Final
a. S02 T03
b.
c.
d.

15. Special Handling Instructions and Additional Information
Lic. 0H1027ab
24 HOUR EMERGENCY # (800) 645-8265
WO# d2635969
~~UDT~~

Point of Departure:

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, and all applicable State laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: GARY H. ROSE (AGENT FOR NYSEG) | Signature: [signature] AGENT FOR NYSEG | Month Day Year 07 30 03

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Jeffrey Carpenter | Signature: Jeffrey Carpenter | Month Day Year 07 30 03

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: | Signature: | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Erik M Albrecht | Signature: [signature] | Month Day Year 07 30 03

CT F 1054297

EPA Form 8700-22 (Rev. 9/91) Form Approved OMB No. 2050-0039

Appendix D

NYSDEC Approval Letter

BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway, Albany, New York 12233-7014
Phone: (518) 402-9662 • **FAX:** (518) 402-9679
Website: www.dec.state.ny.us

Denise M. Sheehan
Acting
Commissioner

April 29, 2005

LETTER FAXED

Mr. Bert Finch
Remediation Project Manager
New York State Electric & Gas Corporation
Corporate Drive, Kirkwood Industrial Park,
P.O. Box 5224
Binghamton, New York 13902

Re: Engineer's Certification / Draft Documentation Report Approval
for 66" Storm Drain Liner Interim Remedial Measure
Binghamton - Court Street, Former MGP

Dear Mr. Finch:

The New York State Department of Environmental Conservation (DEC) and the New York State Department of Health (DOH) reviewed the aforementioned Draft Documentation Report and certification. The draft document is acceptable. The certification satisfies DEC requirements.

As discussed, NYSEG will submit the final report with the approved certification.

If you have any questions please call me at (518) 402-9662.

Sincerely,

Anthony Karwiel

Anthony Karwiel
Project Manager
Remedial Bureau "C"

cc: J. Simone,P.E., NYSEG
K. White, BBL

ecc: J. Guastella, NYSDOH
G. Laccetti, NYSDOH
M.J. Peachey, NYSDEC, Region 7
R. Denz / R. Brink, BCDOH

Appendix C

NAPL Barrier Wall IRM Engineering Certification Report

ARCADIS
Infrastructure, environment, facilities

ARCADIS
6723 Towpath Road
P.O. Box 66
Syracuse
New York 13214-0066
Tel 315.446.9120
Fax 315.449.0017
www.arcadis-us.com

ENVIRONMENTAL

Mr. Anthony Karwiel
Project Manager
New York State Department of Environmental Conservation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, New York 12233-7014

Subject:
Engineering Certification Report for the NAPL Passive Barrier Wall – Interim Remedial Measure Binghamton Court Street, Former MGP Site #7-04-031

Date:
June 27, 2008

Contact:
Margaret Carrillo-Sheridan
Phone:
315.671.9167

Email:
m.carrillo-sheridan@arcadis-us.com

Our ref:
0130.13082 #5

Dear Mr. Karwiel:

On behalf of the New York State Electric & Gas Corporation (NYSEG), please find enclosed three copies of the revised *Engineering Certification Report* for the above-referenced site. The *Engineering Certification Report* has been revised based on the New York State Department of Environmental Conservation's (NYSDEC's) comments presented in your comment letter dated April 23, 2008, and our follow up telephone, e-mail and in-person discussions in May and June 2008. In addition, presented below are our responses to the NYSDEC's comments. For ease of review, we have included the NYSDEC's comment followed by our response.

Comment #1:

Certification Statement must be revised to state the following:

"I _________ certify that I am currently a registered professional engineer, and I certify that the Remedial IRM Work Plan was implemented and that all construction activities were completed in substantial conformance with the Department-approved Remedial IRM Work Plan."

Response 1:

The certification statement has been revised to read:

"I Margaret Carrillo-Sheridan, certify that I am currently a registered professional engineer in the State of New York, and I certify that the *NAPL Barrier Wall Interim*

Remedial Measure Work Plan (Remedial IRM Work Plan) was implemented and that all construction activities were completed in substantial conformance with the New York State Department of Environmental Conservation-approved Remedial IRM Work Plan."

Comment #2:

Certification statement must have original signature.

Response 2:

Noted.

Comment #3:

A complete description of any institutional and/or engineering controls employed at the site, including mechanisms that will be used to continually implement, maintain, monitor, and enforce such controls is required.

Response:

Because this remedy was an IRM, institutional/engineering controls were not implemented during this phase. Institutional/engineering controls will be included based on the final remedy (to be determined during the Feasibility Study).

Comment #4:

A detailed description of the source and quality of imported fill (i.e., "imported topsoil, asphalt millings") pursuant to DER 10 Section 5.4(d) is required.

Response:

The following fill materials were imported to the site:

- *Pea Gravel – Approximately 4,400 tons of pea gravel were imported to the site from Barney and Dickinson, Inc., of Vestal, New York.*

- *Saw Clay – Approximately 625 tons of saw clay (also referred to as Saw Mud and Pond Clay) was imported to the site from B.S. Quarries of Montrose, PA.*

The saw clay was used to backfill the pre-trench excavation on the Binghamton Materials Handling (BMH) property. The saw clay also aided in filling voids within debris exposed during pre-trenching activities.

- *Asphalt Millings – Asphalt millings were provided by Bothar Construction Company. The NYSDOT reviewed and approved of the use of these materials as a sub-base during the repair of Court Street on November 7, 2006. These NYSDOT-approved materials were also used as sub-base restoration of the BMH parking lot.*

- *Topsoil – A total of three truckloads of topsoil were imported to the site by Ricelli Enterprises on October 18, 2006. The topsoil was from a virgin source located in Phelps, NY and was used to supplement the topsoil reused on the site. The attached letter from Ricelli provides additional information regarding the topsoil source.*

Section 2.8 of the Remedial IRM Work Plan has been revised to include this information. Note, the pea gravel, saw clay, and topsoil were virgin quarried materials, and analytical data for these materials was not obtained. The asphalt millings also were not analyzed as this recycled material was approved for use as sub-base by the NYSDOT. Note, the NYSDEC-approved NAPL Barrier Wall Interim Remedial Measure Work Plan (BBL, 2006) did not specify analytical testing for fill materials.

Comment #5:

Please eliminate the statement: “To the best of our knowledge, information and belief, these Record Drawings substantially represent the project as constructed” on Appendix A – Record Drawing 1.

Response:

Record Drawing 1 has been revised.

Comment #6:

The areal and vertical (depth) extent of the covered/capped area, including identification of buildings and/or paving which are considered part of the site cover/cap as well as a description of the material and depths of the demarcation layer, if appropriate, are required.

Response:

A site cover/cap was not installed as part of this IRM.

Comment #7:

The following information is to be submitted with the final engineering report, in an electronic format acceptable to the Department. This information is not to be included as an attachment or appendix to the report, but as a separate data submittal in an electronic format approved by the Department:

1. Fully executed manifests documenting offsite transport and disposal of all material deemed hazardous or solid wastes.

2. All analytical data for pre- and post-excavation samples, soil backfill analyses, treated water effluent analyses, and waste disposal characterizations, including all laboratory data sheets and the required laboratory data deliverables pursuant to DER10 Sections 2.2, 2.3, and Appendix 2B.

3. Photographs.

Response:

This information was previously included as appendices to the Engineering Certification Report in CD format. A CD presenting this information is also included in the revised report.

Comment #8:

The report discusses (page 34, last paragraph) NAPL amounts of more than 6 inches for DNAPL and more than 2 inches for LNAPL before recovery activities will start. Allowing this quantity of NAPL to accumulate before triggering recovery activities seems inappropriate. Is this a function of the ability/capacity of the recovery equipment?

Response:

The 6-inch recovery depth was selected based on the minimum depth that the DNAPL recovery sumps were installed (into the till). The 2-inch LNAPL recovery depth was selected as a reasonable starting point to evaluate potential automated LNAPL recovery methods. When (and if) NAPL begins to accumulate in the recovery wells, the method for manual or automated NAPL recovery will be evaluated, including actual NAPL depths to trigger recovery operations.

Comment #9:

When (what date) was the accumulating sediment first noticed?

Response:

During the initial January 18, 2007 monitoring event.

Comment #10:

The wells listed as having accumulated sediment include: RW22, RW6, RW5, RW2, RW8, and RW13; all of which are situated either adjacent to or downgradient (by way of till undulation) of jet grouted areas and/or grout plug areas. Is the accumulating sediment associated with the nearby grouted areas?

Response:

The source of the sediment is unknown. However, several unaffected DNAPL recovery wells are located adjacent to jet grouted areas. The affected DNAPL wells (RW-2, RW-5, RW-6, and RW-22) are all in the vicinity of the area that experienced a slurry loss, and the sedimentation may be associated with the amount of rework this section of the barrier required during construction.

Comment #11:

Is there potential for this situation diminishing the possibility of the passive barrier wall to collect NAPL system-wide?

Response:

There has been no discernible increase in the amount of sediment in these wells since the sedimentation was first measured in January 2007. Also, the other recovery wells do not exhibit sedimentation (particularly in the eastern portion of the barrier) indicating this is not a system-wide problem.

In addition, the Record Drawing has been revised to include the surveyed locations and elevations for Recovery Wells RW-21 and RW-22. In addition, Table 4 in the *Engineering Certification Report* has been revised to reflect the most recent survey information.

On June 5, 2008, select LNAPL and DNAPL Recovery wells were redeveloped to remove the accumulated sediment. As we discussed as the site on June 5, 2008, NYSEG proposes to conduct two additional monthly monitoring events to assess the re-occurrence of sediment in the recovery wells and for the presence of NAPL. If NAPL is not observed during the additional monthly monitoring events, the frequency of monitoring will be decreased to quarterly. A monitoring report, presenting results of the first 16 months of monitoring will be submitted to NYSDEC in last quarter of 2008.

Please contact me or Tracy Blazicek at 607.762.8839 if you have any questions.

Sincerely,

ARCADIS

Margaret A. Carrillo-Sheridan

Margaret A. Carrillo-Sheridan, P.E.
Vice President

Copies:
Tracy Blazicek, New York State Electric & Gas Corporation
Joseph Molina, P.E., ARCADIS
Keith White, CPG, ARCADIS

ARCADIS BBL
Infrastructure, environment, facilities

Imagine the result

New York State Electric & Gas Corporation

NAPL Barrier Wall Interim Remedial Measure Engineering Certification Report

March 2007

Revised June 2008

ARCADIS BBL

CERTIFICATION STATEMENT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

NAPL BARRIER WALL INTERIM REMEDIAL MEASURE
ENGINEERING CERTIFICATION REPORT

I, Margaret A. Carrillo-Sheridan, P.E., certify that I am currently a registered Professional Engineer registered in the State of New York, and I certify that the *NAPL Barrier Wall Interim Remedial Measure Work Plan* (Remedial IRM Work Plan) was implemented and that all construction activities were completed in substantial conformance with the New York State Department of Environmental Conservation-approved Remedial IRM Work Plan.

27-June-2008

Margaret A. Carrillo-Sheridan, P.E.
New York State P.E. No. 082251

Date

ARCADIS of New York, Inc.
6723 Towpath Road, P.O. Box 66
Syracuse, New York 13214-006
(315) 446-2190

Table of Contents

Tables

Appendices

1. Introduction

1.1 General

This *Non-Aqueous Phase Liquid (NAPL) Barrier Wall Interim Remedial Measure (IRM) Engineering Certification Report* (Engineering Certification Report) describes the activities that were performed to construct a NAPL barrier wall at the former manufactured gas plant (MGP) site (the site) located in Binghamton, New York. This Engineering Certification Report was prepared by ARCADIS of New York, Inc. (ARCADIS BBL, formerly known as Blasland, Bouck & Lee, Inc.), on behalf of New York State Electric & Gas Corporation (NYSEG). The activities described herein were conducted in general conformance with the *NAPL Barrier Wall Interim Remedial Measure Work Plan* (NAPL Barrier Wall IRM Work Plan, ARCADIS BBL, July 2006), approved by the New York State Department of Environmental Conservation (NYSDEC) on July 13, 2006.

The NAPL barrier wall was constructed in compliance with the Order on Consent (Index #D7-001-96-03) between NYSEG and the NYSDEC. The purpose of the NAPL barrier wall IRM is to prevent the offsite migration of NAPL by intercepting and collecting mobile, in any, dense non-aqueous phase liquid (DNAPL) and light non-aqueous phase liquid (LNAPL).

The majority of the NAPL barrier wall consists of a gravel-filled trench keyed into till, as well as four sections of a jet-grouted wall also keyed into till and integrated into the gravel filled wall on either end of each jet-grouted wall. The major components associated with the NAPL barrier wall construction consist of the following:

- <u>Jet-Grouted Low-Permeability Walls</u>: Due to the presence of a retaining wall, a former holder and underground 66-inch diameter storm sewer, two large underground natural gas pipes, and significant underground debris, there are four locations along the barrier wall alignment where installation of the gravel trench was not feasible. Therefore, at each of these locations, the barrier wall was jet grouted from the ground surface and keyed into the underlying till a minimum of 6 inches. The jet grouted walls serve as low permeability walls that will cause NAPL to migrate around the wall into the gravel-filled trench.

- <u>Gravel-Filled Collection Trench</u>: The gravel-filled portion of the NAPL barrier wall was constructed using biopolymer slurry, which was used to maintain the trench sidewall stability during trench excavation, installation of the NAPL collection systems, and placement of gravel backfill. The depth of the trench was between 43 and 58 feet below ground surface (bgs), and the trench was keyed into the underlying till a minimum of 6 inches.

- DNAPL Collection System: The gravel-filled portion of the NAPL barrier wall has a DNAPL collection system installed, which consists of 6-inch diameter high-density polyethylene (HDPE) slotted lateral collection pipe installed along the top of the till surface and 8-inch diameter 304 stainless steel vertical DNAPL recovery wells containing a 1 to 2 foot deep sump that extends below the lateral collection piping.

- LNAPL Collection System: The gravel-filled portion of the NAPL barrier wall also has a LNAPL collection system installed, which consists of 60-mil HDPE geomembrane installed vertically on the downgradient side of the trench to serve as a barrier for the potential offsite migration of mobile LNAPL, and 8-inch diameter 304 stainless steel vertical LNAPL recovery wells that were installed down to the bottom of the HDPE geomembrane.

1.2 Engineering Certification Report Organization

To present the required information associated with the NAPL barrier wall construction, this Engineering Certification Report is organized into the following sections:

Section	Purpose
Section 1 – Introduction	Provides relevant site background information, the basis of design for the NAPL barrier wall, and a description of the project team
Section 2 – Construction of NAPL Barrier Wall	Describes the activities associated with installation of the NAPL barrier wall, as well as documentation indicating that the acceptance criteria for the project were achieved
Section 3 – Offsite Transportation and Disposal	Describes the materials transported offsite for disposal
Section 4 – Post-Construction Monitoring Activities	Describes the anticipated post-construction monitoring activities to be implemented at the site

Section	Purpose
Section 5 – References	Identifies references cited in this Engineering Certification Report

This report is also supported by figures, drawings, tables and appendices as listed in the Table of Contents.

1.3 Site History

The site manufactured gas from approximately 1888 to about 1939, during which time operations gradually expanded westward from the eastern portion of the site and eventually covered the entire site. Various structures were located within the site, including four gas holders, seven oil tanks, a tar-separating well, machine shop, and a governor house. By about 1969, all aboveground structures associated with the MGP had been dismantled.

In 1836, the site appeared undeveloped and contained a canal identified as "Side Cut to Chenango Canal," referred to hereafter as the "Brandywine Canal." The Brandywine Canal was aligned roughly north-south and passed through the western portion of the site before passing beneath Court Street and joining the Susquehanna River (Tower, 1836). Historical information suggests that the path of a tributary to the Susquehanna, Brandywine Creek, followed the approximate route of the Brandywine Canal. At some point, Brandywine Creek was diverted into a culvert that still crosses the site as a 66-inch diameter storm sewer. The Final Remedial Investigation (RI) Report (BBL, 2002) indicates that the Brandywine Canal was abandoned between 1876 and 1885.

1.4 Location and Physical Setting

The site is located in an industrial section of Binghamton, in Broome County, New York, and is identified as 271-291 and 293 Court Street, which is now owned by NYSEG. The 293 Court Street property was used as a natural gas service center by Columbia Gas Transmission Corporation (Columbia Gas). The remaining portion of the site is now a gravel lot and is used as an equipment storage and parking area for NYSEG.

To the south, the site borders Court Street, which runs parallel to the Susquehanna River. East of the site is the 295 Court Street property, which contains a warehouse owned by the 295 Court Street Associates, L.L.C. (referred to hereafter as the Binghamton Materials Handling warehouse, or simply the “BMH warehouse”). Immediately north of the site is a major Norfolk and Southern Railroad line and yard (formerly CSX), an asphalt works plant, and a scrap yard.

1.5 Site Geology and Hydrogeology

The site occupies a small parcel of land (approximately 4.3 acres) by the north bank of the Susquehanna River, approximately 1.4 miles upstream of its junction with the Chenango River. Based on subsurface conditions encountered during site investigations, the general stratigraphy can be described as a fill unit underlain by post-glacial alluvial silt and clay, outwash sand and gravel, and dense basal till on top of shale bedrock. These units show a sequence of events specific to the site’s geologic history, which include:

- Shale bedrock deposited as silt and clay in the Devonian Period

- Dense basal till deposited by the Pleistocene glacier(s)

- Outwash sand and gravel deposited by meltwater rivers as the Pleistocene glacier(s) receded

- Post-glacial alluvial silt and clay, probably deposited in an abandoned river channel, left as the Susquehanna and Chenango Rivers meandered across the valley

- Fill and an assortment of man-made structures, originating in the site’s industrial history

Currently, nearly all precipitation that falls on the site infiltrates to become groundwater. On the streets and properties adjacent to the site, much of the runoff enters storm drains that discharge directly to the Susquehanna River via the 66-inch diameter storm sewer. The Susquehanna River (where it passes the site and through the City of Binghamton) forms a drainage basin, extending to the north and east. At a gauging station upstream of the site (thus excluding the Chenango River’s contribution) the average flow of the Susquehanna River is approximately 3,500 cubic feet per second (USGS, 2001). The outwash sand-and-gravel unit filling much of the Susquehanna

River valley (as it runs east to west across central New York) forms the Clinton Street Ballpark Sole Source Aquifer, which is a United States Environmental Protection Agency (USEPA) designation (USEPA, 2002).

1.6 Summary of Relevant Environmental Conditions at the Site

Based on the findings of previous investigations, NAPL has been observed in subsurface soils onsite, primarily coal-tar DNAPL. NAPL is present in both unsaturated and saturated soils beneath the site.

To address the potentially mobile NAPL, an IRM (i.e., NAPL Barrier Wall) for the site was designed and presented in the NAPL Barrier Wall IRM Work Plan (BBL, 2006). Additional details related to the NAPL barrier wall design are provided below.

1.7 Basis of NAPL Barrier Wall Design

<u>Gravel-Filled Trench</u>

The gravel-filled trench was designed to collect both LNAPL and DNAPL, as discussed in the NAPL Barrier Wall IRM Work Plan. The conceptual design of the DNAPL portion of the NAPL barrier wall was based on the gravimetric properties of DNAPL, as well as the hydraulic properties of the gravel-filled trench. As groundwater enters the gravel-filled trench, the groundwater velocity decreases due to the increased hydraulic conductivity of the trench (as compared with the surrounding native materials). DNAPL entering the trench with the groundwater settles by gravity to the trench bottom, where it is collected and removed. Horizontal drain pipes were installed along the bottom of the trench and sloped to sumps. The DNAPL settles into the drain pipes and collects in the sumps.

The gravel-filled trench was also designed to have a low permeability HDPE geomembrane installed at the downgradient face of the barrier wall to facilitate the collection of LNAPL. LNAPL collection wells were placed along the HDPE geomembrane, and LNAPL (if present) will collect on the upgradient side of the HDPE geomembrane. The depth of the HDPE geomembrane was set between 16 and 20 feet below grade based on the mean low and high groundwater table elevations.

The trench width and gravel backfill were evaluated as part of the multiphasic flow model presented to the NYSDEC in the “NAPL Barrier Conceptual Design Letter Report” (BBL, 2005). The depth of the trench and the location of the DNAPL collection wells and sumps were based the depth of the till layer. The locations of the DNAPL collection wells and sumps were selected based on locations of the low points within the till layer along the barrier wall alignment.

<u>Jet-Grouted Sections</u>

As previously discussed, portions of the NAPL barrier wall were constructed with jet-grouted sections due to underground obstructions, which prohibited installation of the gravel trench. The jet-grouting consisted of injecting ultra high-pressure fluids into the soil at high velocities (approximately 800 to 1,000 feet per second). In general the jet-grouting process breaks down the soil structure and mixes soil particles in-situ with a binder to create a homogeneous mass, which in time solidifies and forms a low permeability barrier.

1.8 Project Team

NYSEG retained ARCADIS BBL's remedial management and construction affiliate, ARCADIS BBLES (formerly known as BBL Environmental Services, Inc.), as the general contractor for the NAPL barrier wall construction. ARCADIS BBLES contractually served as the general contractor to NYSEG, and ARCADIS BBLES retained Geo-Solutions, Inc. (Geo-Solutions), Royal Environmental (Royal), Parratt-Wolff, Inc. (Parratt-Wolff), Boart Longyear Company (Boart Longyear), and Lash Contracting, Inc. (Lash) as the remedial subcontractors for the project. The roles and responsibilities for ARCADIS BBLES and its subcontractors include the following:

- ARCADIS BBLES provided overall project management and provided an onsite representative for the duration of the project. ARCADIS BBLES was responsible for overall schedule, air monitoring, documenting the completed construction activities and obtaining the appropriate documentation indicating that the acceptance criteria for the project were achieved, scheduling and coordinating the offsite transportation and disposal of materials, procuring and scheduling the delivery of 8-inch diameter 304 stainless steel pipe (i.e., DNAPL and LNAPL collection wells) and pea gravel, performing waste characterization sampling and coordinating with the offsite laboratory for analysis, air monitoring during excavation, and coordinating with the adjacent property owner (i.e., 295 Court Street) and public entities that were associated with the project (NYSEG, NYSDEC, City of Binghamton, New York State Department of Transportation [NYSDOT], Verizon).

- Geo-Solutions was the primary installer of the jet-grouted and gravel-filled portions of the NAPL barrier wall. This included furnishing the appropriate construction equipment, labor, and materials (i.e., 6-inch diameter slotted lateral collection pipe, 60-mil HDPE geomembrane) to construct the NAPL barrier wall in accordance with the NAPL Barrier Wall IRM Work Plan.

- Royal Environmental provided overall site support activities during the construction of the NAPL barrier wall, which included setting up site facilities, providing site security, constructing a temporary soil staging area and decontamination pad, installing a temporary access road, site clearing, removing a section of the concrete retaining wall (aboveground portion only), installing temporary erosion control measures, installing temporary lane or sidewalk closures, performing pre-trenching excavation activities and capping underground utilities, transporting jet-grout spoils and excavated materials to the temporary staging area and covering the stockpiled materials with polyethylene, loading transport vehicles for offsite transportation and disposal, assisting with the placement of the pea gravel backfill, decontaminating construction equipment, and restoring surfaces.

- Parratt-Wolff decommissioned the nine groundwater monitoring wells that were located within or adjacent to the NAPL barrier wall alignment (and installed several NAPL recovery wells following barrier wall construction).

- Boart Longyear provided sonic drilling services to predrill between approximate Stations 200+05 and 200+43 to a depth of approximately 20 feet bgs to remove underground debris and facilitate jet grouting and excavation activities.

- Lash performed various repair work inside the existing 66-inch diameter storm sewer.

In addition to the above-referenced remedial subcontractors, ARCADIS BBLES also retained the following companies to provide support services:

- Life Sciences Laboratory (Life Sciences) to provide analytical services for waste characterization samples collected during the project.

- Riccelli Enterprises, Inc. (Riccelli) to provide transportation of nonhazardous materials generated during the project to Seneca Meadows for landfill disposal.

- IESI Seneca Meadows Landfill (Seneca Meadows) to provide landfill disposal of nonhazardous materials generated during the project.

- Casie Protank to provide offsite transportation and recycling for metal materials generated during the project.

- Clean Harbors Environmental Services, Inc. (Clean Harbors) to provide offsite transportation and disposal of wastewater generated during the project.

2. Construction of NAPL Barrier Wall

2.1 General

This section presents a detailed description of the IRM activities performed in connection with the installation of the NAPL barrier wall at the site. ARCADIS BBLES and its remedial subcontractors installed the NAPL barrier wall between July 10, 2006 and November 22, 2006. The Record Drawing prepared by ARCADIS BBL to document the NAPL barrier wall installation is provided in Appendix A. Weekly Construction Reports and photographs of the NAPL barrier wall installation are provided in Appendices B and C, respectively. The NAPL barrier wall installation activities, as well as the design modifications due to unforeseen conditions that were encountered during construction, are documented in the appropriate subsections below.

2.2 Pre-Mobilization Activities

Prior to mobilizing to the site, the following activities were performed to prepare for the NAPL barrier wall construction:

- Obtaining a street work permit for sidewalk and/or street closures from the City of Binghamton Engineering Department. This permit and a copy of the Maintenance and Protection of Traffic Plan (Appendix G to the NAPL Barrier Wall IRM Work Plan) were submitted to the City of Binghamton Engineering Department for approval of the proposed sidewalk/street closures. In addition, a permit was submitted to the NYSDOT for approval of the proposed sidewalk/street closures.

- Obtaining a hydrant permit from the City of Binghamton to allow the use of municipal water during the NAPL barrier wall construction. Approximately 1 million gallons of municipal water were used during the NAPL barrier wall construction.

- ARCADIS BBLES retained Parratt Wolff to decommission nine groundwater monitoring wells that were within or adjacent to the NAPL barrier wall alignment. Parratt-Wolff decommissioned a total of 9 wells (MW97-9S, NCW-1, MW93-1D, MW93-2S, MW93-2D, MW93-3S, MW93-3D, NMW-3, and NMW-5) by filling the casings from the bottom up (using a tremie pipe) with a bentonite-cement grout mixture (96% neat Portland Type II cement and 4% powdered bentonite, by weight). After grouting the wells, the protective casings and aboveground portions of the well casings were removed.

- Dig Safely New York was contacted to mark out underground utilities in areas where excavation activities were scheduled to be performed during the NAPL barrier wall IRM. The underground utilities that were anticipated to be within the NAPL barrier wall alignment included water, natural gas, electric, storm sewers, and sanitary sewers. ARCADIS BBLES worked closely with NYSEG and the City of Binghamton during the construction project to verify and locate underground utility lines and to temporarily shut down natural gas, electrical, and water services, as well as to determine if various underground utility lines were abandoned.

2.3 Mobilization and Site Preparation

Mobilization and site preparation activities commenced at the site during the week of July 10, 2006 and consisted of the following:

- Coordinating with NYSEG, City of Binghamton, and Verizon to address natural gas (underground), electric (both underground and aboveground), water (underground), cable (aboveground), and telephone (both underground and aboveground) utility lines to facilitate the NAPL barrier wall construction activities.

- Documenting existing site conditions including identifying aboveground and underground utilities, equipment, and structures, as necessary to implement the IRM activities.

- Mobilizing manpower, equipment, services, and materials to the site, as necessary to implement the IRM.

- Constructing support areas including, but not limited to, waste material staging areas; onsite storage areas; and equipment, material, and personnel decontamination area.

- Installing temporary erosion controls along the west and south sides of the site, which consisted of silt fence and hay bales.

- In accordance with the Health and Safety Plan (HASP, Appendix C in the NAPL Barrier Wall IRM Work Plan), site-specific training was accomplished by each site worker reading the HASP or through a site briefing on the contents of the HASP. In addition, daily safety meetings were held to cover the work to be accomplished for that day, the protective clothing and procedures required to minimize site hazards, and emergency procedures. As discussed in Section 2.7 below, ARCADIS BBLES implemented air monitoring activities in accordance with the HASP and the Community Air Monitoring Plan (CAMP, Appendix A of the NAPL Barrier Wall IRM Work Plan).

- Mobilizing a 20,000-gallon frac tank to containerize water removed from abandoned natural gas lines. As per NYSEG's procedures, abandoned natural gas lines that were encountered were evaluated by a NYSEG representative, and if water was present in the gas line, it was pumped from the pipe to the frac tank. Abandoned natural gas lines that interfered with the NAPL barrier wall alignment were removed from the trench and both ends of the pipe remaining underground were filled with commercial-grade foam.

2.4 Pretrench Excavation

Pretrenching excavation activities were performed prior to initiating the jet grout and trench excavation activities to locate or remove underground utilities or obstructions along the alignment of the NAPL barrier wall. The pretrenching excavation activities were performed using either a rubber tire backhoe or trackhoe and was excavated to a depth of approximately 6 feet below ground surface (bgs). During the performance of pretrenching, the following obstructions were observed:

- At approximate Station 205+00, an underground steel structure was exposed within the trench alignment. Based on the location of this underground structure and the inability to change the alignment of the NAPL barrier wall in this area, the structure was removed and placed in the onsite waste material staging area. As discussed further in Section 3, this structure was later transported to Casie Protank for recycling.

- Between approximate Stations 204+75 and 204+35, an underground cast iron structure was exposed within the trench alignment at approximate Station 204+60. Based on the location of this underground structure and because there were no visual or olfactory indications of NAPL, BBLES decided to leave this structure in place and shift the NAPL barrier wall alignment approximately 1.5 feet in this area to avoid the obstruction. As discussed further in Section 2.6.1, this structure was subsequently removed during the excavation of the gravel-filled trench because a 30-inch diameter steel pipe was connected to this structure at a depth of approximately 10 feet bgs. The steel pipe was located perpendicular to the trench alignment and had to be removed to install the gravel trench.

- Several underground pipelines were exposed, removed from the trench alignment, and plugged with foam. A summary of the underground pipelines that were exposed, removed, and plugged is provided below:

  - 30-inch diameter refined natural gas line was exposed at approximate Station 204+10
  - 4-inch diameter nitrified clay pipe at approximate Station 203+75
  - 1-inch diameter natural gas line at Station 203+55
  - 30-inch diameter natural gas line at Station 202+90
  - 20-inch diameter natural gas line at Station 202+88
  - 1 ½-inch diameter polypropylene polyvinyl chloride (PVC) pipe at Station 202+96
  - 1 ½-inch diameter PVC pipe at Station 202+95
  - 20-inch diameter steel active natural gas main at Station 202+30
  - 8-inch diameter steel abandoned natural gas main at Station 202+222
  - Two 1 ½-inch diameter steel abandoned natural gas mains at Station 202+19
  - 16-inch diameter steel pipe encased in approximately ½-inch thick concrete from Station 207+62 to 207+45
  - 30-inch diameter retired natural gas main and a 10-inch diameter pipe at Station 204+10
  - 20-inch diameter pipe at Station 202+86
  - 30-inch diameter pipe at Station 202+95
  - 8-inch diameter pipe at Station 200+96

- Two 2-inch diameter abandoned natural gas lines at Station 201+19
- 6-inch diameter steel pipe on the Binghamton Materials Handling property
- 30-inch diameter pipe at Station 204+29
- 30-inch diameter retired natural gas main at Station 200+25
- Two 8-inch diameter natural gas lines (one retired and one active) at Station 201+50
- One 8-inch diameter clay tile pipe at Station 201+53
- 4-inch clay tile pipe at Station 200+36

Liquids that were drained from former natural gas lines that were removed and plugged within the alignment of the NAPL barrier wall were placed in an onsite frac tank for subsequent characterization, offsite transportation and disposal by NYSEG. Additional details related to the offsite transportation and disposal of these liquids are included in Section 3.

- During the pretrenching excavation between approximate Stations 201+00 and 200+00 (within the Binghamton Materials Handling property), a large amount of construction material debris and four buried concrete foundation walls were encountered at approximate Stations 200+00, 200+07, 200+21, and 200+43. These walls were up to 4-feet-thick and varied in depth. The concrete wall at approximate Station 200+43 extended from approximately 7 feet bgs to 17 feet bgs, and the concrete wall at approximate Station 200+21 extended from approximately 1 foot bgs to at least 14 feet bgs. The fill material around these concrete foundation walls comprised primarily of masonry materials (bricks and large sections of reinforced concrete) and structural steel. There was very little soil and the fill materials had little to no cohesiveness; therefore, imported cohesive soil (saw clay) was used to backfill these pretrenched areas to facilitate excavation of the gravel-filled trench.

  To install the gravel-filled trench in this area, the existing concrete foundation walls required removal from the trench alignment. Due to the integrity of the concrete foundation walls and the lack of cohesion in the surrounding fill materials, the NYSDEC agreed that removal of the four concrete foundation walls and installation of the gravel-filled trench as originally proposed would not be feasible. As a result, the design of the NAPL barrier wall was modified as follows:

- A sonic drill was used to predrill between approximate Stations 200+05 and 200+43 to a depth of approximately 20 feet bgs to facilitate jet grouting and excavation activities. In addition, a sonic drill was used to drill up to 20 boreholes through the existing concrete foundation at approximate Station 200+43 to facilitate removal. This is discussed further in Section 2.4.1

- The NAPL barrier wall ended at approximate Station 200+05

- The NAPL barrier wall between approximate Stations 200+05 and 200+27 was jet grouted to form a low permeable barrier, as discussed further in Section 2.5

- The existing concrete foundation wall at approximate Station 200+43 was removed

These design modifications to the NAPL barrier wall were documented and submitted to the NYSDEC in a letter dated August 15, 2006 (Appendix D).

Following pretrenching, the excavation was backfilled and the surface was graded sufficiently to provide a smooth and level work surface for the jet grout and trench excavation activities. Significant regrading was performed along the NAPL barrier wall alignment adjacent to Brandywine Avenue, which required the placement of additional fill material to provide a level surface for the trench excavation activities. In addition, two above-grade portions of the existing concrete retaining wall along Brandywine Avenue were removed to facilitate construction of the NAPL barrier wall and access for construction equipment.

2.4.1 Sonic Drilling Between Stations 200+05 and 200+43

Between August 9 and August 15, 2006, Boart Longyear mobilized to the site and utilized a sonic drill rig to predrill between approximate Stations 200+05 and 200+43 to facilitate jet grouting and excavation activities as previously discussed. Within the alignment of the jet grout wall (between approximate Stations 200+05 and 200+27), drill holes were advanced along the jet grout wall alignment. In addition, to facilitate the removal of existing concrete foundation wall at approximate Station 200+43, approximately 20 drill holes were advanced through the concrete foundation wall.

2.5 Jet Grout Wall

The jet grout wall installation activities were performed between July 19 and August 25, 2006. The sequencing of the jet grout wall installation activities commenced between approximate Stations 204+75 and 205+29 (in the area of the former holder and 66-inch diameter storm sewer), and then progressed to between approximate Stations 205+91 and 206+29 (in the area where the NAPL barrier wall alignment deflects adjacent to Brandywine Avenue), Stations 201+98 and 202+37 (in the area of active underground natural gas mains), and Stations 200+05 and 200+27 (in the area within the Binghamton Materials Handling property, which was not included in the original NAPL barrier wall design).

The jet grout walls were installed along the NAPL barrier wall alignment in areas where trench excavation was not feasible due to underground obstructions. The grout walls were installed using a track-mounted rotary drill rig, a grout batch plant, and jet-grout pump. Once the holes were drilled to the appropriate depth (at least 6 inches into the top of the underlying till layer), the jet-grouted columns were formed by rotating and lifting the drill string while a high pressure stream of grout was forced out of the side nozzles using pressures of at least 3,000 pounds per square inch (psi). The jet-grouted sections were formed by installing two rows of overlapping jet grout columns.

During the performance of the jet grout wall installation activities, grout spoil material (i.e., excess grout) was collected within a trench along the alignment of the NAPL barrier wall. The grout spoil material was allowed to solidify within the trench and was then removed from the trench at the beginning of each day, and was stockpiled in the waste material staging area for subsequent offsite transportation and disposal.

During the jet grout wall installation, quality control testing was performed on the jet grout mixture and included the following:

- Fresh grout slurry was tested onsite for unit weight and viscosity Marsh Funnel twice per shift in accordance with ASTM D-4380 and API RP 13B-1, respectively.

- Insitu soilcrete (created during the jet grouting application) samples were collected using an insitu sampler, before the soilcrete began to cure, at frequency of one sample per 1,000 vertical feet of jet grout column. The soilcrete samples were collected, handled, packaged, and tested for unconfined compressive strength (UCS) (in accordance with ASTM D1633) and permeability (in accordance with ASTM D5084). The unconfined compressive strength and permeability testing results are included in Appendix E. The testing results indicate that the permeability of the jet grout wall ranged from 7 x 10^{-7} to 2.4 x 10^{-8} cm/sec, which was approximately two orders of magnitude lower than the design objective of 1 x 10^{-6} cm/sec. The UCS ranged from 272 pounds per square-inch (PSI) to 842 PSI. Although UCS was not a specified performance criteria, the associated results are consistent with UCS of controlled low-strength material (e.g., flowable fill). For comparison, cohesive soils, such as clay, typically have compressive strengths in the vicinity of 20 PSI.

During the jet grout wall installation adjacent to the existing 66-inch diameter storm sewer (approximate Stations 204+85), BBLES and their subcontractors suspected that the drill rig had struck the storm sewer. As a result, ARCADIS BBLES performed an inspection inside the 66-inch diameter storm sewer on August 24, 2006 to assess the suspected area where the drill rig struck the storm sewer. Based on this inspection, BBLES observed that the drill rig struck the 66-inch diameter storm sewer at three isolated locations. The interior of the 66-inch diameter storm sewer was lined with a polyvinyl chloride (PVC) liner system consisting of the Danby Pipe Renovation System (Danby). Because the drilling operation affected the integrity of the Danby PVC liner system, appropriate repairs were required. A summary of the repair work that was performed for the existing 66-inch diameter storm sewer is included in Section 2.8.1.

2.6 Gravel-Filled Trench

Upon the completion of the jet grout wall installation activities, the gravel-filled trench sections of the NAPL barrier wall were constructed between August 28 and October 20, 2006. The sequencing of the gravel-filled trench construction activities commenced between approximate Stations 205+29 and 205+91 (between the jet grout walls installed near the former holder area and adjacent to Brandywine Avenue, and then progressed to between approximate Stations 206+29 and 207+62 (along Brandywine Avenue), Stations 200+27 and 201+30 (in the area within Binghamton Materials Handling property), Stations 204+75 and 202+37 (between the jet grout walls installed near the former holder area and adjacent to the existing gas control building), and Stations 201+30 and 201+98 (in the area within the Binghamton Materials Handling property and east of the jet grout wall installed near the existing natural gas control building).

The gravel-filled trench sections of the NAPL barrier wall were constructed to facilitate the collection and removal of mobile or potentially mobile NAPL along the trench alignment. The trench excavation was performed using biopolymer slurry to allow for the placement of DNAPL and LNAPL collection systems and pea gravel. Upon the placement of pea gravel within the trench, the biopolymer slurry was degraded to promote the free flow of groundwater through the trench. Additional details related to the construction of the gravel-filled trench are provided below.

2.6.1 Trench Excavation

The trench was excavated using an extended-reach excavator and was keyed a minimum of 6 inches into the top of the till unit located approximately 40 to 60 feet bgs, and the average width of the trench was approximately 30 inches. The anticipated depth of the trench was based on Design Drawing No. 2 in the NAPL Barrier Wall IRM Work Plan, and the actual top of till elevation was measured and documented during the trench excavation activities. Once the top of till elevation was measured and documented, additional till material was excavated to attain a minimum key of 6 inches into the top of the till unit to confirm the proper placement of the DNAPL collection system. Documentation related to the bottom elevation of the excavated trench and confirmation of a minimum key of 6 inches into the top of the till unit is included in Appendix A (Record Drawings) and Table 1.

During the trench excavation, the trench stability was maintained using biopolymer slurry, which was mixed onsite through the use of a venturi mixing device and holding tanks. As the excavation progressed, the biopolymer slurry was pumped from the onsite holding tanks to the trench, and the level of the biopolymer slurry was maintained at least 3 feet above the groundwater table elevation and no more than 2 feet bgs. During the use of biopolymer slurry, quality control testing was performed on the biopolymer slurry and included the following:

- pH testing (minimum pH of 9) and viscosity testing (minimum viscosity of 60 seconds Marsh Funnel Viscosity) was performed on the plant-mixed biopolymer slurry at a minimum of two times daily

- pH testing (minimum pH of 8) and viscosity testing (minimum viscosity of 50 seconds Marsh Funnel Viscosity) was performed on the active biopolymer slurry (i.e., insitu prior to degradation) at a minimum of two times daily

Materials excavated from the trench were drained with the excavator bucket (to remove excess biopolymer slurry/groundwater to the extent feasible) and placed in a waste material staging area either directly from the excavator bucket or by using a dump truck to transport the material from the excavation to the staging area. The excavated materials in the waste material staging area were dewatered via gravity drainage, and the collected water was placed in an onsite storage tank for subsequent offsite transportation and disposal. In addition to gravity dewatering, some excavated materials required the addition of cement to properly solidify the material for offsite transportation and disposal.

Once the excavated materials were placed in a waste material staging area, waste characterization soil samples were collected at a frequency of approximately one sample for every 500 tons and were analyzed by Life Sciences to confirm that the excavated materials were a nonhazardous waste and acceptable for land disposal at Seneca Meadows Landfill. Additional details related to the collection and analysis of waste characterization soil samples, the offsite transportation and disposal of excavated materials, and the offsite transportation and disposal of wastewater are included in Section 3.

During the trench excavation activities adjacent to Brandywine Avenue, the adjacent sidewalk and a portion of the roadway were closed off to vehicular and pedestrian traffic to facilitate construction of the NAPL barrier wall. In addition, temporary orange construction fencing and portable chain link fence sections were installed adjacent to the excavated trench for security purposes.

During the performance of the trench excavation activities, several unforeseen conditions were encountered and are summarized below.

- During the trench excavation between approximate Stations 204+75 and 204+35, an underground 30-inch diameter steel pipe was found at a depth of approximately 10 feet bgs. Due to the depth of this pipe, this pipe was not revealed during the pretrenching excavation activities and had to be removed because the pipe was located perpendicular to the trench alignment. To access and remove a section of this pipe, the biopolymer slurry in the trench had to be removed via pumping and placed in a frac tank. A trench box was then installed in the trench to protect workers from a potential trench collapse. During the removal of a section of this pipe, the pipe was determined to be connected to the existing cast iron structure that was exposed during the pretrenching activities. The 30-inch diameter pipe contained NAPL material that was pumped into a 1,500-gallon polyethylene tank for subsequent offsite transportation and disposal. As a result, a section of the 30-inch diameter steel pipe was removed and the ends of the pipe remaining in the ground were plugged with foam, the existing cast iron structure was removed and placed within the waste material staging area for subsequent offsite transportation and disposal, and the excavated area was backfilled with an imported cohesive soil to facilitate future trench excavation activities and use of biopolymer slurry.

During the placement of backfill in this area, the trench contained water and the site received a significant amount of rain, which resulted in the backfilled area becoming completely saturated. The extended-reach excavator was repositioned in this area to resume excavation activities; however, because of the saturated ground surface conditions, the excavator began to sink and the area was unable to adequately support the weight of the excavator. Wood crane mats were mobilized and used in an attempt to support the excavator; however, even with the crane mats, the conditions continued to result in an unstable work platform for the excavator. Finally, two truckloads of powdered cement and a pallet of Portland cement were used and mixed within the trench to stabilize the saturated soil, and following stabilization of the saturated soil with cement, this area was able to support the weight of the excavator and excavation activities resumed.

- During the trench excavation between approximate Stations 200+27 and 201+30, BBLES and its subcontractor, GeoSolutions, observed that the biopolymer slurry level dropped significantly (approximately 8 to 10 feet bgs) within a short time period (approximately 10 to 20 minutes). The trench was visually reviewed to determine the reason for the slurry loss, but the cause could not be determined. After the significant drop in the biopolymer slurry level, cracks began to develop in the Court Street asphalt pavement approximately 25 feet away from the excavated trench. As a result of this condition, the trench was immediately backfilled with pea gravel to prevent a potential catastrophic event. This effort required working around the clock to backfill the trench as quickly as feasible to prevent additional damage, as well as closing a portion of Court Street to prevent vehicular traffic from traveling over the cracked area. Once the trench was backfilled with pea gravel, the area was stabilized and no further movement of the asphalt pavement was observed.

  Additional efforts were made to determine the cause of the biopolymer slurry loss; however, these efforts were unsuccessful and the cause of this biopolymer slurry loss could not be determined. These efforts included re-excavating areas along the trench to locate potential voids or pipelines, as well as observing areas along the north bank of the Susquehanna River adjacent to the site. Based on these efforts, there were no observations of voids or pipelines within the trench, and there were no observations that the biopolymer slurry drained to the river.

- As a result of quickly backfilling the trench with pea gravel, various components of the DNAPL and LNAPL collection systems were not installed (this included an LNAPL collection well at approximate Station 200+30, the HDPE geomembrane between approximate Stations 200+28 and 201+20, and the 6-inch diameter HDPE slotted lateral collection pipe along the top of the till surface), and the remaining trench excavation activities between approximate Stations 201+30 to 201+98 could not be completed. In order to complete the excavation activities between approximately Stations 201+30 and 201+98, a grout plug was installed for the entire depth of the trench between approximate Stations 201+20 and 201+30 to create a vertical wall that would retain the area backfilled with pea gravel and allow the remaining area to be excavated (thus preventing the pea gravel from sloughing into the excavated area).

- Additional efforts were initiated to re-excavate the trench under slurry between approximate Stations 200+28 and 201+20 and install the LNAPL collection system components in this area; however, this effort was unsuccessful because the trench was unable to hold the biopolymer slurry and the trench walls were collapsing at an excavation depth of 10 feet bgs. Based on this condition, installing the HDPE geomembrane, LNAPL collection well, and 6-inch diameter HDPE slotted lateral collection pipe within an open excavation was not feasible and there was a risk of creating further damage to the adjacent Court Street asphalt pavement. As a result, the 6-inch diameter HDPE slotted lateral collection pipe was not installed in this area and flat steel sheeting with an Adeka sealant for the interlocking joints was installed in this area in lieu of the HDPE geomembrane (discussed further in Section 2.6.3.1). In addition, a new DNAPL and LNAPL collection well were installed using a drill rig at approximate Station 201+20 (at the east side of the grout plug) as this was a low point for the underlying till unit, and a new LNAPL collection well was installed using a drill rig at approximate Station 200+30 (discussed further in Sections 2.6.2.1 and 2.6.3.2).

  Based on discussions with the NYSDOT, the NYSDOT requested that the cracked asphalt pavement (Court Street) be repaired within an area approximately 130 feet long by 16 feet wide. As a result, a portion of Court Street was closed to vehicular traffic until the asphalt repair work was completed, and an additional street closure permit was submitted to the NYSDOT. Additional details related to reparation of the cracked asphalt pavement along Court Street are included in Section 2.8.2.

2.6.2 Installation of DNAPL Collection System

The DNAPL collection system consists of lateral collection piping and vertical collection wells. The lateral collection piping consists of 6-inch diameter, 90-slot (0.090-inch slot size) HDPE piping, and was placed along the top of the till surface (that was keyed a minimum of 6 inches into the surrounding till). The vertical collection wells consist of 8-inch diameter, 304 stainless steel well screen (90-slot) and solid riser pipe. The concept of the DNAPL collection system is to convey DNAPL through the pea gravel and lateral collection piping (along the top of till) into the DNAPL collection wells.

The installation of the DNAPL collection system was constructed once the trench was excavated (under biopolymer slurry) a minimum of 6 inches into the top of till layer to create a positive slope. At the DNAPL collection well locations, the trench was excavated at least one foot deeper below the lateral collection piping elevation to form a sump. A critical factor during the trench excavation activities was to maintain a positive slope along the top of till into the DNAPL collection well sumps. The lateral collection piping was assembled (butt fusion welded) on the ground surface and was lowered into the trench using concrete weights as ballasts to counteract the buoyancy forces of the piping. The DNAPL collection wells were assembled (thread connections) on the ground surface and were lowered into the trench within the excavated sump. The DNAPL collection wells contained a 10-foot-long well screen at the bottom of the well, and the remainder of the well consisted of solid riser sections.

As indicated in Section 2.6.1, documentation related to the bottom elevation of the excavated trench and confirmation of a minimum key of 6 inches into the top of the till unit are included in Appendix A (Record Drawing) and Table 1. Documentation related to the location and elevation of the lateral collection piping and DNAPL collection wells is included in Appendix A (Record Drawing) and Tables 1 and 4.

2.6.2.1 Installation of DNAPL Collection Well Using a Drill Rig

As described in Section 2.6.1, an additional DNAPL collection well was installed using a drill rig at approximate Station 201+20 to facilitate the collection of DNAPL. Because this well could not be installed during the initial trench excavation activities, this well was installed on January 18, 2007 using a conventional drill rig. Consistent with the other DNAPL collection wells that were installed during the trench excavation activities, the bottom of the well was keyed a minimum of one foot into the top of the till layer and a 10-foot-long well screen and solid riser sections were installed. Documentation related to the location and elevation of this DNAPL collection well is included in Appendix A (Record Drawing) and Tables 1 and 4.

2.6.3 Installation of LNAPL Collection System

The LNAPL collection system consists of 60-mil HDPE geomembrane and vertical collection wells. The LNAPL collection wells consist of 8-inch diameter, 304 stainless steel well screen (90-slot) and solid riser pipe, and were installed adjacent to each of the DNAPL collection wells. The concept of the LNAPL collection system is to use the HDPE geomembrane as a barrier for the potential offsite migration of mobile NAPL, and to use the LNAPL collection wells to facilitate monitoring and recovery of LNAPL.

The installation of the LNAPL collection system was constructed once the trench was excavated (under biopolymer slurry) and a portion of the trench was backfilled with pea gravel. Both the bottom of the HDPE geomembrane and LNAPL recovery wells extended approximately 2 feet below the annual low groundwater table elevation or at approximate elevation 872 above mean sea level (AMSL) (NGVD 29). The HDPE geomembrane was installed vertically on the downgradient side of the trench. The HDPE geomembrane was temporarily staked at the ground surface on the downgradient side of the trench and was lowered into the biopolymer slurry using weights attached to the bottom of the geomembrane to prevent the geomembrane from floating in the biopolymer slurry. The HDPE geomembrane panels were overlapped a minimum of 4 feet to create a continuous LNAPL barrier on the downgradient side of the NAPL barrier wall. Once the HDPE geomembrane was installed, backfilling resumed within the trench using pea gravel up to approximately 3 feet bgs. At this point, the temporary stakes were removed and the HDPE geomembrane was placed over the width of the trench (covering the pea gravel) for the subsequent placement of the remaining backfill and surface restoration.

The LNAPL collection wells were assembled (thread connections) on the ground surface and were lowered into the trench and positioned on top of the pea gravel at the appropriate elevation (approximate elevation 872 AMSL). The LNAPL collection wells contained a 10-foot-long well screen at the bottom of the well, and the remainder of the well consisted of a solid riser section.

Documentation related to the location and elevation of the HDPE geomembrane and LNAPL collection wells is included in Appendix A (Record Drawing) and Tables 1 and 4.

2.6.3.1 Installation of Steel Sheeting and Adeka Sealant

As discussed in Section 2.6.1, the HDPE geomembrane could not be installed in an open excavation between approximate Stations 200+28 and 201+20; therefore, flat steel sheeting with an Adeka sealant for the interlocking joints was installed in this backfilled area. The sheeting installation activities were performed between November 4 and 6, 2006, and were installed using a vibratory hammer. Prior to installing the steel sheeting, Adeka sealant was applied along the interlocking joints to create a water-tight seal following steel sheeting installation. Consistent with the HDPE geomembrane, the bottom of the steel sheeting extended approximately 2 feet below the annual low groundwater table elevation, at approximate elevation 872 AMSL, and the top of the steel sheeting was approximately 3 feet bgs.

Specification information related to the steel sheeting and Adeka sealant is included in Appendix I. Documentation related to the location and elevation of the steel sheeting is included in Appendix A (Record Drawing) and Table 1.

2.6.3.2 Installation of LNAPL Collection Wells Using a Drill Rig

As a result of installing a grout plug between approximate Stations 201+20 and 201+30 (as discussed in Section 2.6.1) and the difficultly encountered during prior attempts to install an LNAPL well in the open excavation in this area, two additional LNAPL collection wells were installed at approximate Stations 200+32 and 201+18. Because these wells could not be installed during the initial trench excavation activities, these wells were installed on January 16 and 17, 2007 using a conventional drill rig. Consistent with the other LNAPL collection wells that were installed during the trench excavation activities, the bottom of the well was installed at an approximate elevation of 872 AMSL, and a 10-foot-long well screen and solid riser section were installed. Documentation related to the location and elevation of these LNAPL collection wells are included in Appendix A (Record Drawing) and Tables 1 and 4.

2.6.4 Backfill Excavated Trench

Upon the installation of the DNAPL collection system, the excavated trench was backfilled with pea gravel up to approximate elevation 872 AMSL. Once the pea gravel was placed to approximate elevation 872 AMSL, the LNAPL collection system was installed, followed by the placement of additional pea gravel up to approximately 3 feet bgs. At this point, the HDPE geomembrane was placed over the top of the pea gravel, and additional backfill was placed up to approximately 12 inches bgs in areas receiving asphalt or stone surface restoration and approximately 6 inches bgs in areas receiving topsoil and grass seed (additional information related to surface restoration is included in Section 2.8).

As summarized in Table 2, approximately 4,500 tons of pea gravel were used to backfill the trench for the NAPL barrier wall construction.

2.6.5 Degradation of Biopolymer Slurry

During and following the placement of pea gravel within the trench, the biopolymer slurry was degraded to promote the free flow of groundwater through the trench. The degradation process consisted of installing a series of temporary well points at various locations within the trench and pumping the biopolymer slurry from the temporary well points on the surface of the trench. This process of recirculating the biopolymer slurry was continued until a maximum Marsh Funnel viscosity of 30 seconds was attained and the pH of the biopolymer was approximate 7 S.U. Upon completion of the biopolymer slurry degradation process, the temporary well points were removed from the trench.

2.7 Air Monitoring

During the performance of pretrenching excavation, jet grout wall installation, trench excavation, and loading of impacted materials for offsite transportation and disposal, air monitoring was performed in accordance with the CAMP and HASP (Appendices A and C, respectively, in the NAPL Barrier Wall IRM Work Plan). The air monitoring activities were performed to evaluate airborne constituent levels for the purpose of confirming that work procedures and personnel protective equipment (PPE) were adequate, and that the work activities were not resulting in exceedances of the site perimeter action levels. The site perimeter action levels were established to protect downwind communities.

The air monitoring activities consisted of the following:

- Air monitoring within active work areas for airborne particulates and organic vapor to determine appropriate PPE requirements and/or appropriate control measures.

- Air monitoring at the site perimeter for airborne particulates and organic vapor to determine appropriate corrective actions to reduce or abate the emissions, if actions levels, as presented in the CAMP were exceeded.

Based on the results of the air monitoring, airborne constituent concentrations did not exceed the action levels presented in the CAMP and HASP. A summary of the air monitoring results are included in Appendix J.

2.8 Site Restoration

Upon the completion of jet grouting and backfilling the gravel-filled trench, the site surface was restored, and various underground/overhead utility lines were reactivated. The site surface restoration activities consisted of the following:

- The horizontal alignment of the NAPL barrier wall, as well as the horizontal location of the DNAPL and LNAPL collection wells, were surveyed by NYSEG's surveying group and were recorded on the Record Drawing (Appendix A).

- The 8-inch diameter stainless steel riser sections for the DNAPL and LNAPL collection wells installed during the trench excavation activities were cut to approximately 6 to 12 inches bgs, and a locking enclosure was installed over the wells. The top of the enclosures was flush to the ground surface, and an expandable 8-inch diameter rubber J-plug was installed over the top of each DNAPL and LNAPL collection well. The DNAPL and LNAPL collection wells installed using the drill rig were installed as flushmount wells, and each well was finished with a concrete seal and an expandable 8-inch diameter rubber J-plug was installed over the top of each well.

- Grass areas were backfilled with approximately 4 to 6 inches of imported topsoil, followed by the application of grass seed and covering the grass seed with a layer of straw. The grass areas that were restored included the area adjacent to Brandywine Avenue, the area between the two driveways for the site, and the area in front of the former Columbia Gas office building. Note that the concrete sidewalk was replaced with an asphalt sidewalk and the surface water drainage culvert was not replaced in kind, as discussed and agreed upon with the City of Binghamton.

- Excess soil that was not visibly impacted with MGP related materials and was not used for the site restoration activities was placed along the northern edge of the site for future reuse at the site, and was seeded and covered with straw. The reuse of soil was consistent with the Waste Management Plan presented as Appendix F to the NYSDEC-approved NAPL Barrier Wall IRM Work Plan.

- Asphalt areas were backfilled with approximately 6 to 12 inches of asphalt millings, followed by the placement of approximately 6 inches of asphalt to match the original ground elevations. The only asphalt area that was restored (with the exception of the section of asphalt pavement in Court Street, which is discussed in Section 2.8.2) was the parking lot area within the Binghamton Materials Handling property. Prior to subbase and asphalt placement, the asphalt restoration limits were reviewed and agreed upon with the property owner, and the limits of asphalt restoration were saw cut to remove the existing asphalt within this area. Upon the completion of the asphalt restoration, a bitumastic sealant was placed within cracked sections of the asphalt adjacent to the existing building.

- Stone areas were backfilled with approximately 6 to 12 inches of stone and asphalt millings. The stone and asphalt millings were graded and compacted to provide a smooth surface and to match the original ground elevations.

- Existing underground/overhead utility lines were reinstalled and reactivated by NYSEG. These utility lines included the underground 8-inch diameter natural gas main located east of the eastern driveway, overhead electric to the former Columbia Gas office building, and overhead electric to the existing natural gas control building.

- New chain-link fencing was installed along the south and west sides of the site to restore fencing that was removed from the NAPL barrier wall construction activities. In addition, gates were installed at the two driveway areas. Approximately 650 linear feet of new chain link fencing and one new chain link gate was installed during this restoration effort.

The following fill materials were imported to the site and used as part of the above-described site restoration activities:

- <u>Pea Gravel</u> – Approximately 4,400 tons of pea gravel were imported to the site from Barney and Dickinson, Inc. of Vestal, New York.

- <u>Saw Clay</u> – Approximately 625 tons of saw clay (also referred to as Saw Mud and Pond Clay) was imported to the site from B.S. Quarries of Montrose, PA. The saw clay was used to back fill the pre-trench excavation on the Binghamton Materials Handling (BMH) property. The saw clay also aided in filling voids within debris exposed during pre-trenching activities.

- Asphalt Millings – Asphalt millings were provided by Bothar Construction Company. The NYSDOT reviewed and approved of the use of these materials as a sub-base during the repair of Court Street on November 7, 2006. These NYSDOT-approved materials were also used as sub-base restoration of the BMH parking lot.

- Topsoil – Topsoil removed and stockpiled during the site preparation activities was reused during site restoration. In addition, a total of three truckloads of topsoil were imported to the site by Ricelli Enterprises on October 18, 2006. The topsoil was from a NYSDEC-permitted source (Permit #8-3240-00033) located in Phelps, New York and was used to supplement the topsoil reused on the site.

The pea gravel, saw clay, and topsoil were virgin quarried materials and analytical data for these materials was not obtained.

2.8.1 Repair Work to Existing 66-Inch Diameter Storm Sewer

As discussed in Section 2.5, the drill rig used to install the jet grout wall struck the top section of the 66-inch diameter storm sewer in three locations. ARCADIS BBLES subsequently performed an inspection inside the 66-inch diameter storm sewer and observed a total of three locations that were affected by the drilling operation. At one location, the drill completely protruded through the Danby PVC lining system, and at the two other locations, the drill struck and deflected the Danby lining system. In addition, based on inspections that were performed by ARCADIS BBL inside the 66-inch diameter storm sewer on July 25 and August 24, 2006 (these inspections were performed as a separate monitoring effort associated with the 66-inch diameter storm sewer and were not related to the NAPL barrier wall construction), a total of seven seams of the Danby PVC lining system were visually observed to contain potential oil staining. These observations were documented in a monitoring log, which is included in Appendix F. Based on these observations, NYSEG directed ARCADIS BBLES to investigate and repair the seams containing potential oil staining to determine the integrity of the Danby PVC lining system.

As a result, ARCADIS BBLES retained Lash to repair the three locations of the Danby PVC lining system that were affected by the jet grout drilling operation, as well as to repair the seven seams of the Danby PVC lining system that were observed to contain potential oil staining. Lash worked directly with a Danby representative to develop a procedure for repairing the various sections of the Danby PVC lining system (Appendix

G), which primarily consisted of removing sections of the Danby PVC lining system and covering with a 3M DP-605 Scotch-Weld.

The repair work for the Danby PVC lining system was performed by Lash between November 6 and November 10, 2006. The first three days were spent dewatering the existing Tompkins Street Stormwater Pump Station in order to access the inside of the 66-inch inch diameter storm sewer. In addition, an inflatable plug was placed inside the 66-inch diameter pipe at the existing manhole located at the northwest corner of the site, and a bypass pump was used to divert water from the pipe away from the repair work.

Repairs to the three areas of the Danby PVC lining system that were damaged due to the jet grout drill rig were completed on November 9, 2006, and repairs to the seams of the Danby PVC lining system that contained potential oil staining were completed on November 9 and November 10, 2006. During the repair work on November 9, 2006, eight additional seams were observed to require repair work; therefore, a total of 15 locations were repaired due to the presence of potential oil staining. A summary of the repair activities are included in Appendix H, and a more detailed report of the repair activities will be prepared by NYSEG separately from this Engineering Certification Report. Note that during the inspection and repair activities, the areas with potential oil staining did not exhibit noticeable odors or generate VOC readings on the air monitoring equipment. A follow-up evaluation of potential oil seeps, including removal of portions of the Danby PVC lining and visual review of the grout placed behind the liner did not confirm or otherwise indicate that oil or MGP residual materials had penetrated the lined 66-inch storm sewer. Based on this evaluation, the staining within the 66-inch storm sewer is not due to failure of the lining system and is likely related to storm flows within the lined sewer. The *Storm Sewer Repair Report* (to be prepared separately) will provide additional detail regarding the observed staining and likely causes.

2.8.2 Repair Work for Court Street Asphalt Pavement

As discussed in Section 2.6.1, the cracks that developed in the Court Street asphalt pavement required repairs in accordance with NYSDOT guidelines and requirements. This effort was coordinated closely with the NYSDOT to maintain the safety of vehicular traffic and to satisfy NYSDOT requirements. Based on the NYSDOT's direction, the following asphalt pavement repair requirements were established:

- Close off a section of Court Street in the area of the cracked pavement until the asphalt repair work was completed. ARCADIS BBLES submitted a lane closure permit to the NYSDOT to identify the appropriate lane closure components which was approved by the NYSDOT.

- Approximately 2,000 square feet (approximately 130 feet by 16 feet) of asphalt pavement required repair work.

- The asphalt pavement repair work required the removal of the underlying concrete (approximately 9 to 11 inches thick) and underlying asphalt (approximately 6 to 9 inches), compaction of the existing underlying granular subbase material, placement and compaction of additional NYSDOT-approved granular subbase material, and placement and compaction of asphalt base (5 inches thick) and asphalt binder (3 inches thick).

The asphalt pavement repair activities were performed between November 6 and 9, 2006, and consisted of the following:

- The existing asphalt was removed using a milling machine that conveyed the asphalt into a dump truck, and the milled material was hauled offsite.

- The existing concrete was removed using an excavator and was hauled offsite in a dump truck.

- Once the underlying granular subbase material was exposed, a NYSDOT representative was on site to observe the material and to inspect compaction of this material. The resulting compaction efforts were approved by the NYSDOT representative.

- Imported NYSDOT-approved granular subbase material was placed, graded, and compacted up to the appropriate grade/elevation. However, this granular subbase material was rejected by the NYSDOT representative due to excessive moisture. Therefore, in lieu of using granular subbase material, the NYSDOT approved the use of asphalt millings for the subbase layer. The imported asphalt millings were placed, graded, and compacted to the appropriate grade/elevation, and the resulting grading/compaction efforts were approved by the NYSDOT representative.

- Approximately 6 inches of NYSDOT-approved asphalt base was placed with a paving machine and compacted with a steel drum roller. Also, approximately 3 inches of asphalt binder was placed with a paving machine and compacted with a steel drum roller. The resulting asphalt thickness was approximately 9 inches, and the resulting asphalt placement and compaction efforts were approved by the NYSDOT representative.

Upon the completion of the asphalt pavement repair activities on Court Street, the lane closure components were removed from Court Street and the roadway was reopened to vehicular traffic. The asphalt pavement repair activities were monitored by the NYSDOT, and the NYSDOT verbally provided final approval of the completed work to Mr. Joseph Molina, P.E., of ARCADIS BBLES.

2.9 Demobilization

Concurrent with restoration activities, site demobilization activities commenced for the project. The demobilization activities included:

- Cleaning the onsite frac and polyethlyene tanks and subsequent demobilization. Prior to demobilizing the frac tanks, wipe samples were collected and analyzed by Life Sciences for polychlorinated biphenyls (PCBs). Once the frac tanks were cleaned and the PCB wipe sample results were non-detect, the tanks were demobilized from the site. The wipe sample analytical results are included in Appendix N. Polyethylene tanks remain on-site.

- Fine grading of the site.

- Removal of temporary fencing.

- Demobilization of equipment, labor, and materials.

3. Offsite Transportation and Disposal

During the construction of the NAPL barrier wall, various waste materials were generated and required offsite transportation and disposal. These waste materials included the following:

- Excavated soil

- Collected wastewater
- Metal structures
- Miscellaneous materials

A summary of the activities performed to manage and transport these materials for offsite disposal/recycling is provided below.

3.1 Waste Characterization Soil Sampling and Analysis

During the construction of the NAPL barrier wall, excavated materials were temporarily stockpiled in a waste material staging area for dewatering, waste characterization sampling, and subsequent offsite transportation and disposal. Once the excavated materials were placed in a waste material staging area, a composite soil sample was collected at an approximate frequency of one sample for every 500 tons of material, and the composite sample was submitted to Life Sciences for waste characterization analyses. The waste characterization analyses were performed to determine the Resource Conservation and Recovery Act (RCRA) hazardous characteristics and other parameters and consisted of the following:

- Toxicity by using the Toxicity Characteristic Leaching Procedure (TCLP) for VOCs, SVOCs, and metals (using USEPA Methods 8260 for VOCs; 8270 for SVOCs; 6010 for arsenic, barium, cadmium, chromium, lead, selenium, and silver; and 7471 for mercury).
- Ignitability using American Society for Testing and Materials (ASTM) Method E-502-84.
- PCBs using USEPA Method 8082.
- Reactive cyanide using USEPA Method 9012.
- Reactive sulfide using USEPA Method 9030A.
- Water extractable pH using USEPA Method 9045.
- Paint filter test using USEPA Method 9095.

A total of 12 waste characterization samples were collected and analyzed by Life Sciences, which satisfies the sampling frequency of one sample for every 500 tons of material (approximately 5,894 tons of material were excavated and transported offsite to Seneca Meadows for land disposal). Based on the waste characterization samples collected and analyzed, there were no analytical results that exceeded the RCRA hazardous characteristic limits; therefore, the excavated materials were managed and disposed as a nonhazardous waste. The analytical results for the waste characterization samples are included in Appendix L, and were submitted to Seneca Meadows throughout the NAPL barrier wall construction, which is discussed further in Section 3.3.

3.2 Wastewater Characterization Sampling and Analysis

During construction of the NAPL barrier wall, wastewater was generated during the removal, draining, and capping of inactive, underground natural gas lines, as well as from the dewatering of stockpiled materials within the waste material staging areas. One water sample was collected from an onsite frac tank and was submitted to Life Sciences for waste characterization analyses, which included PCBs (USEPA Method 608), ignitability (USEPA Method 1010), and benzene (USEPA Method 624). Although the analytical results did not exceed the RCRA hazardous characteristic limits, as a conservative measure, NYSEG elected to manage and dispose of the wastewater as a coal tar water hazardous waste (approximately 13,307 gallons). The analytical results for the waste characterization sample are included in Appendix M, and were submitted to Clean Harbors, which is discussed further in Section 3.4. The analytical results for confirmation wipe samples for frac tanks are included in Appendix K.

3.3 Offsite Transportation and Disposal of Soil Materials to Seneca Meadows

A waste profile was prepared and submitted to Seneca Meadows to obtain approval from this facility for the offsite landfill disposal of soil materials generated during the NAPL barrier wall construction. In addition, during the City of Binghamton's repairs to the water main along Court Street, in front of the site in October 2006, a discrete amount of soil (less than approximately 5 tons) was generated. The excavated soil appeared to have potential oil or MGP-related impacts and as a conservative measure, the excavated soil materials were placed in the soil stockpile that was subsequently characterized and disposed off-site.

As indicated in Section 3.1, waste characterization soil samples were collected from the stockpiled materials within the waste material staging areas and analyzed by Life

Sciences, and the analytical data were submitted to Seneca Meadows. Based on the waste profile and the waste characterization analytical results, Seneca Meadows approved this waste stream as a nonhazardous waste for landfill disposal. A copy of the waste profile and approval letter from Seneca Meadows are included in Appendix N.

Once the stockpiled materials within the waste material staging areas were dewatered (either by gravity dewatering or solidification using powdered cement), the materials were loaded into transport vehicles, a canvas tarp was placed over the top of each transport vehicle's bed, a nonhazardous solid waste manifest was prepared for each truck and was signed by the truck driver and a NYSEG representative, and each transport vehicle transported the material to Seneca Meadows for landfill disposal. Each truckload of material transported to Seneca Meadows was weighed prior to landfill disposal. A copy of the nonhazardous solid waste manifest and weigh ticket for each truckload of material transported to Seneca Meadows are included in Appendix O. As summarized in Table 3, approximately 5,894 tons on nonhazardous materials were disposed at Seneca Meadows during the NAPL barrier wall construction activities.

3.4 Offsite Transportation and Disposal of Wastewater to Clean Harbors

A waste profile was prepared and submitted to Clean Harbors to obtain approval from this facility for the offsite treatment of wastewater generated during the NAPL barrier wall construction. As indicated in Section 3.2, a wastewater characterization sample was collected and analyzed by Life Sciences, and the analytical data was submitted to Clean Harbors. Based on the waste profile and the waste characterization analytical results, Clean Harbors approved this waste stream for treatment at their facility.

Wastewater was temporarily stored in a combination of frac tanks (up to two) or polyethylene tanks (up to four) at the site, and a total of three tanker trucks were used to transport this wastewater from the site to Clean Harbor's facility for treatment. A hazardous waste manifest was prepared for each truck and was signed by the truck driver and a NYSEG representative prior to exiting the site. A copy of the hazardous waste manifest and volume ticket for each truckload of wastewater transported to Clean Harbors is included in Appendix P. Approximately 13,307 gallons of wastewater was transported to Clean Harbors for treatment.

3.5 Offsite Transportation and Recycling of Metal Materials

A waste profile was prepared and submitted to Casie Protank to obtain approval from this facility for the offsite recycling of the two large metal structures that were removed during the excavation of the gravel-filled trench. Based on the waste profile, Casie Protank approved this waste stream for recycling. A copy of the waste profile and approval letter from Casie Protank are included in Appendix Q.

The metal structures were temporarily stored in the waste material staging area, and one rolloff container was used to transport the metal structures material from the site to Casie Protank's facility for recycling. A nonhazardous manifest was prepared for this load and was signed by the truck driver and a NYSEG representative prior to exiting the site. A copy of the nonhazardous manifest and transportation ticket for the one truckload of metal material transported to Casie Protank are included in Appendix R.

3.6 Offsite Removal of Miscellaneous Materials

During the NAPL barrier wall construction, nonhazardous site waste (such as food waste and PPE) was generated and transported to an offsite municipal solid waste facility. In addition, concrete and asphalt materials that were removed during the repair of the asphalt pavement within Court Street (as discussed in Section 2.8.2) were transported offsite to a local fill area.

4. Post-Construction Monitoring

4.1 Introduction

This section presents initial (12-month) monitoring plan for the NAPL barrier trench to determine optimal monitoring and NAPL recovery methods and frequencies. Due to the uncertainties associated with NAPL movement, little to no NAPL may accumulate in the recovery wells during the initial monitoring period. In any event, this post-construction monitoring plan will be revised, as appropriate, after 12 months.

4.2 Post-Construction Monitoring

Post-construction monitoring will be conducted to assess the location and amount of NAPL that enters the trench and to monitor the area between the trench and the Susquehanna River for the presence of NAPL. Initially, the NAPL trench will be monitored monthly for LNAPL and DNAPL for a period of 12 months. The monitoring activities will include the measuring and recording as listed below.

<u>DNAPL Recovery Wells</u>

- Depth to bottom of the DNAPL monitoring wells
- Presence, thickness, and visual characteristics of DNAPL
- Depth of groundwater

<u>LNAPL Recovery Wells</u>

- Presence, thickness, and visual characteristics of LNAPL
- Depth to LNAPL
- Depth to groundwater

If recoverable amounts (i.e., more than 6 inches) of DNAPL is present in a well, the DNAPL will be collected and contained for disposal. If recoverable amounts of LNAPL (i.e., more than 2 inches) are present in a well or piezometer, the LNAPL will be collected and contained for disposal. The recovered volumes of NAPL will be recorded.

Recovery monitoring data will be used to determine optimal removal frequencies. If, based on volumes of NAPL recovered and/or rate of NAPL accumulation, automated NAPL recovery systems are warranted, NYSEG (or their engineer) will propose a plan to assess and develop NAPL recovery methods for the NYSDEC's approval. If after 12 months, NAPL has not entered any recovery wells, NYSEG may propose less frequent monitoring (e.g., quarterly) for the NYSDEC's approval.

Monitoring Wells and Piezometers

In addition to the LNAPL and DNAPL Recovery Well Monitoring Program, select monitoring wells and piezometers will be monitored. The following locations will be monitored semi-annually for depth to groundwater and the presence, thickness, and visual characteristics of LNAPL or DNAPL: MW97-7S, NMW-2, PZ-0301D, PZ03-02A, PZ03-02D, PZ03-03A, PZ03B, PZ03-03D, PZ03-04A, PZ03-04B, PZ03-04D, PZ03-05A, PZ03-05B, PZ03-05C, PZ03-05D, PZ003-06A, PZ03-06B, PZ03-06C, PZ03-06D, PZ03-07A, PZ03-07B, PZ03-07C, PZ03-07D, PZ03-08A, PZ03-08B, PZ03-08C, and PZ03-08D.

5. References

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USGS, 2001. *Provisional Stage and Discharge Data for the Susquehanna River at Conklin, New York (Station #1503000)*. Obtained from the Internet: waterdata.usgs.gov

Tables

TABLE 1

SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING, BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Station	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
200+25	53.0	789.0	56.0	786.0	56.0	786.0	825
200+27	53.0	789.0	57.0	785.0	56.0	786.0	825
200+30	53.0	789.1	57.0	785.1	55.8	786.3	825
200+35	53.0	789.1	55.0	787.1	54.8	787.3	825
200+40	53.0	789.2	55.0	787.2	54.6	787.6	825
200+45	52.0	790.2	54.6	787.6	54.4	787.8	825
200+50	52.0	790.3	54.6	787.7	54.2	788.1	825
200+55	52.0	790.3	54.2	788.1	54.0	788.3	825
200+60	51.0	791.4	54.0	788.4	53.8	788.6	825
200+65	50.0	792.4	53.0	789.4	52.8	789.6	825
200+70	50.0	792.5	52.3	790.2	52.0	790.5	825
200+75	48.0	794.5	52.0	790.5	51.8	790.7	825
200+80	48.0	794.5	50.0	792.5	49.8	792.7	825
200+85	48.0	794.6	49.9	792.7	49.6	793.0	825
200+90	48.0	794.6	49.8	792.8	--	--	825
200+95	48.0	794.7	49.0	793.7	--	--	825
201+00	48.0	794.7	49.8	792.9	--	--	825
201+05	49.0	793.7	51.0	791.7	--	--	825
201+10	49.0	793.8	52.0	790.8	--	--	825
201+15	49.0	793.8	49.8	793.0	--	--	825
201+20	49.0	793.9	51.0	791.9	*Grout Plug*	--	--
201+25	49.0	794.0	50.0	793.0	*Grout Plug*	--	--
201+30	50.0	793.0	51.5	791.5	*Grout Plug*	--	--
201+35	50.0	793.1	53.0	790.1	53.0	790.1	827

TABLE 1

**SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING,
BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS**

**NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK**

	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
Station	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
201+40	50.0	793.1	53.5	789.6	53.0	790.1	827
201+45	50.0	793.2	52.4	790.8	52.2	791.0	827
201+50	51.0	792.2	52.0	791.2	52.0	791.2	827
201+51	51.0	792.2	52.0	791.2	51.8	791.4	827
201+55	51.0	792.2	52.1	791.1	51.7	791.5	827
201+60	51.0	792.3	51.7	791.6	51.6	791.7	827
201+65	49.5	793.8	50.5	792.8	50.4	792.9	827
201+70	49.5	793.9	50.5	792.9	50.2	793.2	827
201+75	49.5	793.9	50.4	793.0	50.0	793.4	827
201+80	49.0	794.5	50.3	793.2	49.8	793.7	827
201+85	49.0	794.5	50.2	793.3	49.6	793.9	827
201+90	48.0	795.5	50.0	793.5	49.4	794.1	827
201+95	48.0	795.6	49.0	794.6	48.6	795.0	827
202+00	48.0	795.5	48.5	795.0	48.0	795.5	827
202+40	44.0	800.0	48.9	795.1	NA	NA	827
202+45	44.0	800.0	49.3	794.7	48.5	795.5	827
202+50	44.0	800.0	48.3	795.7	47.5	796.5	827
202+55	44.0	800.0	48.0	796.0	47.0	797.0	827
202+60	44.0	800.0	46.6	797.4	46.2	797.8	827
202+65	44.0	800.0	46.3	797.7	46.0	798.0	827
202+70	44.0	800.0	46.0	798.0	45.9	798.1	827
202+75	43.0	801.0	45.9	798.1	45.8	798.2	827
202+80	43.0	801.0	45.8	798.2	45.7	798.3	827
202+85	43.0	801.0	45.6	798.4	45.5	798.5	827

TABLE 1

SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING, BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
Station	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
202+90	43.0	801.0	45.5	798.5	45.4	798.6	827
202+95	43.0	801.0	45.5	798.5	45.2	798.8	827
203+00	43.0	801.0	45.3	798.7	45.0	799.0	827
203+05	43.0	801.0	44.7	799.3	44.7	799.3	827
203+10	41.0	803.0	44.7	799.3	44.6	799.4	827
203+15	41.0	803.0	44.5	799.5	44.4	799.6	827
203+20	41.0	803.0	44.5	799.5	44.3	799.7	827
203+25	41.0	803.0	43.5	800.5	43.2	800.8	827
203+30	41.0	803.0	43.0	801.0	43.0	801.0	827
203+35	41.0	803.0	43.4	800.6	43.1	800.9	827
203+40	42.0	802.0	43.5	800.5	43.2	800.8	827
203+45	42.0	802.0	43.6	800.4	43.4	800.6	827
203+50	42.0	802.0	44.2	799.8	44.0	800.0	827
203+55	42.0	802.0	44.5	799.5	44.2	799.8	827
203+60	42.0	802.0	44.5	799.5	44.3	799.7	827
203+65	42.0	802.0	44.8	799.2	44.6	799.4	827
203+70	44.0	800.0	45.0	799.0	45.0	799.0	827
203+75	44.0	800.0	45.5	798.5	45.2	798.8	827
203+80	44.0	800.0	45.6	798.4	45.4	798.6	827
203+85	44.0	800.0	45.9	798.1	45.8	798.2	827
203+90	44.0	800.0	46.4	797.6	46.4	797.6	827
203+95	44.0	800.0	47.0	797.0	46.9	797.1	827
204+00	44.0	800.0	47.0	797.0	47.0	797.0	827
204+05	45.0	799.0	47.5	796.5	47.5	796.5	827

TABLE 1

SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING, BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Station	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
204+10	45.0	799.0	48.2	795.8	47.8	796.2	827
204+15	45.0	799.0	48.3	795.7	48.0	796.0	827
204+20	45.0	799.0	49.0	795.0	49.0	795.0	827
204+25	45.0	799.0	49.6	794.4	49.5	794.5	827
204+30	46.0	798.0	51.4	792.6	50.0	794.0	827
204+35	46.0	798.0	52.7	791.3	50.5	793.5	827
204+40	46.0	798.0	53.1	790.9	51.0	793.0	827
204+45	46.0	798.0	52.5	791.5	49.8	794.2	827
204+50	46.0	798.0	52.4	791.6	49.6	794.4	827
204+55	47.0	797.0	52.0	792.0	49.4	794.6	827
204+60	47.0	797.0	50.6	793.4	49.2	794.8	827
204+65	47.0	797.0	50.0	794.0	49.0	795.0	827
204+70	47.0	797.0	50.0	794.0	48.6	795.4	827
204+75	47.0	797.0	49.7	794.3	48.4	795.6	827
204+80	47.0	797.0	49.2	794.8	48.2	795.8	827
204+82	47.0	797.0	49.0	795.0	48.0	796.0	827
205+39	47.5	797.5	51.0	794.5	50.0	795.5	827
205+40	47.5	797.5	51.0	794.5	49.5	796.0	827
205+45	47.5	797.5	50.5	795	49.5	796.0	827
205+50	47.5	797.5	50.0	795.5	49.0	796.5	827
205+55	47.5	797.5	50.0	795.5	49.0	796.5	827
205+60	47.5	797.5	49.5	796	48.5	797.0	827
205+65	47.5	797.5	49.5	796	48.5	797.0	827
205+70	47.5	797.5	49.0	796.5	48.0	797.5	827

TABLE 1

SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING, BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
Station	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
205+75	47.5	797.5	49.0	796.5	48.0	797.5	827
205+80	47.5	797.5	49.0	796.5	48.0	797.5	827
205+85	47.5	797.5	49.0	796.5	48.0	797.5	827
205+86	47.5	797.5	50.0	795.5	48.0	797.5	827
206+13	49.0	800.9	51.0	798.9	50.5	799.4	827
206+15	49.0	800.9	51.0	798.9	50.1	799.8	827
206+20	48.5	801.2	50.0	799.7	49.9	799.8	827
206+25	48.0	801.3	49.5	799.8	49.6	799.7	827
206+30	48.0	801.3	84.5	764.8	49.5	799.8	827
206+35	48.0	801.0	49.0	800	49.0	800.0	827
206+40	48.0	801.0	49.0	800	48.8	800.2	827
206+45	48.0	801.0	49.0	800	48.7	800.3	827
206+50	48.0	800.7	48.5	800.2	48.4	800.3	827
206+55	48.0	800.7	48.5	800.2	48.4	800.3	827
206+60	48.0	800.7	48.5	800.2	48.2	800.5	827
206+65	48.0	800.7	48.5	800.2	48.0	800.7	827
206+70	48.0	800.7	48.5	800.2	48.0	800.7	827
206+75	48.0	800.7	48.5	800.2	48.0	800.7	827
206+80	48.0	800.7	48.5	800.2	48.0	800.7	827
206+85	48.0	800.7	48.5	800.2	47.8	800.9	827
206+90	45.0	803.4	46.0	802.4	45.0	803.4	827
206+95	45.0	803.4	46.0	802.4	45.0	803.4	827
207+00	43.0	805.1	44.0	804.1	43.5	804.6	827
207+05	43.0	805.1	44.0	804.1	43.5	804.6	827

TABLE 1

SUMMARY OF TRENCH, INVERT OF LATERAL COLLECTION PIPING, BOTTOM OF HDPE GEOMEMBRANE, AND STREEL SHEETING MEASUREMENTS/ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Station	Till		Trench Excavation		DNAPL Collection Pipe		HDPE Liner/Sheet Pile Panel Bottom Elevation
	Depth (ft)	Elevation	Depth (ft)	Elevation	Depth (ft)	Invert Elevation	
207+10	42.0	805.8	43.0	804.8	42.5	805.3	827
207+15	41.0	806.8	42.0	805.8	41.0	806.8	827
207+20	41.0	806.5	42.0	805.5	41.0	806.5	827
207+25	41.0	806.5	42.5	805	41.5	806.0	827
207+30	41.0	806.2	42.5	804.7	42.0	805.2	827
207+35	41.0	806.2	43.0	804.2	42.0	805.2	827
207+40	41.0	805.9	43.0	803.9	42.5	804.4	827
207+45	41.0	805.9	43.0	803.9	42.2	804.7	827

Notes:
1. Measurements collected by Geo-Solutions, Inc. and provided to ARCADIS BBL.
2. Component elevations referenced to the NGVD 29 Datum.
3. -- = Indicates NAPL barrier wall component not installed at this location.
4. NA = Indicates measurement was not taken at this location.

TABLE 2

SUMMARY OF PEA GRAVEL QUANTITIES

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Date	Invoice No.	Quantity (tons)	Date	Invoice No.	Quantity (tons)	Date	Invoice No.	Quantity (tons)
07/25/06	28458	28.27	07/25/06	--	35.24	09/13/06	29710	32.71
07/25/06	28455	32.34	07/25/06	--	27.99	09/13/06	29704	32.91
07/25/06	28454	35.87	07/25/06	--	22.94	09/13/06	29702	28.50
07/25/06	28452	23.75	07/25/06	--	36.64	09/19/06	--	32.73
07/25/06	28416	23.52	07/25/06	--	34.44	09/19/06	--	30.61
07/25/06	28403	23.69	08/30/06	29440	33.30	09/19/06	--	30.10
07/25/06	28450	23.80	08/30/06	29438	26.72	09/19/06	--	31.02
07/25/06	28449	35.28	08/31/06	29420	25.54	09/19/06	--	30.95
07/25/06	28448	28.50	08/31/06	29425	27.97	09/19/06	--	30.21
07/25/06	28447	35.82	08/31/06	29400	28.10	09/19/06	--	30.21
07/25/06	28434	36.77	08/31/06	29415	28.52	09/19/06	--	30.50
07/25/06	28446	36.06	08/31/06	29416	30.12	09/19/06	--	30.72
07/25/06	28443	23.87	08/31/06	29419	30.08	09/28/06	30080	23.25
07/25/06	28433	23.77	08/31/06	29402	32.75	09/28/06	30077	23.39
07/25/06	28442	39.11	08/31/06	29411	32.72	09/28/06	30071	23.37
07/25/06	28441	28.86	08/31/06	29417	31.05	09/28/06	30065	23.56
07/25/06	28428	28.59	08/31/06	29421	31.06	09/28/06	30060	26.96
07/25/06	28440	37.80	08/31/06	29422	30.47	09/28/06	30054	23.36
07/25/06	28437	36.09	08/31/06	29426	32.60	09/28/06	30053	23.34
07/25/06	28430	33.27	08/31/06	29427	32.83	09/28/06	30052	23.20
07/25/06	28418	35.53	08/31/06	29429	32.16	09/28/06	30083	23.41
07/25/06	28420	28.68	09/12/06	29692	27.23	10/02/06	30168	23.39
07/25/06	28411	28.32	09/12/06	29683	27.72	10/02/06	30160	23.71
07/25/06	28422	33.06	09/12/06	29688	27.92	10/02/06	30166	23.42
07/25/06	28412	36.37	09/12/06	29668	27.43	10/02/06	30162	23.76
07/25/06	28414	23.35	09/12/06	29666	27.84	10/02/06	30157	27.07
07/25/06	28423	23.60	09/12/06	29679	27.79	10/02/06	30161	25.32
07/25/06	28402	39.47	09/12/06	29662	27.78	10/02/06	30124	23.17
07/25/06	28415	35.62	09/12/06	29658	28.70	10/02/06	30133	23.60
07/25/06	28425	36.51	09/12/06	29653	25.23	10/02/06	30138	23.37
07/25/06	28427	33.50	09/13/06	29707	32.63	10/02/06	30146	25.74

TABLE 2

SUMMARY OF PEA GRAVEL QUANTITIES

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Date	Invoice No.	Quantity (tons)	Date	Invoice No.	Quantity (tons)	Date	Invoice No.	Quantity (tons)
10/02/06	30144	23.77	10/09/06	30404	23.03	10/18/06	30585	23.55
10/02/06	30151	25.00	10/09/06	30400	22.97	10/18/06	30591	23.47
10/02/06	30136	23.28	10/09/06	30398	23.03	10/18/06	30582	23.81
10/02/06	30145	23.48	10/09/06	30392	24.12	10/19/06	30623	19.12
10/02/06	30150	26.98	10/09/06	30389	23.38	10/19/06	30629	18.52
10/02/06	30139	23.50	10/09/06	30386	23.13	10/19/06	30620	19.45
10/02/06	30129	23.20	10/09/06	30385	37.71	10/19/06	30621	19.14
10/02/06	30152	27.81	10/09/06	30383	23.19	10/19/06	30619	18.34
10/02/06	--	23.29	10/09/06	30377	37.72	10/19/06	30617	18.46
10/03/06	30252	23.34	10/09/06	30382	37.70	10/20/06	30630	18.92
10/03/06	30245	22.94	10/09/06	30380	22.97	**Total Pea Gravel Delivered**		**4419.76**
10/03/06	30248	26.45	10/09/06	30376	23.00			
10/03/06	30237	23.21	10/09/06	30375	38.40			
10/03/06	30218	25.69	10/10/06	30422	22.27			
10/03/06	30226	24.71	10/10/06	30413	22.21			
10/03/06	30224	22.84	10/10/06	30416	22.29			
10/03/06	30215	23.34	10/10/06	30419	22.48			
10/03/06	30240	24.70	10/10/06	30407	22.34			
10/03/06	30202	23.61	10/10/06	--	22.66			
10/03/06	30207	28.16	10/17/06	30566	18.02			
10/03/06	30208	26.33	10/17/06	30565	18.35			
10/03/06	30204	26.06	10/17/06	30564	18.51			
10/03/06	30197	26.02	10/17/06	30563	17.25			
10/03/06	30195	23.17	10/17/06	30560	18.27			
10/03/06	30183	23.36	10/17/06	30559	18.21			
10/03/06	30188	26.76	10/17/06	30558	17.88			
10/03/06	30191	26.76	10/17/06	30555	18.15			
10/03/06	30185	26.36	10/17/06	30552	18.14			
10/03/06	30174	26.58	10/17/06	30546	17.88			
10/03/06	30181	26.59	10/18/06	30601	27.36			
10/03/06	30175	23.58	10/18/06	30599	23.38			

Notes:
1. Pea gravel was delivered to the NYSEG Binghamton Court Street Former MGP Site by Barney & Dickenson, Inc. on the dates indicated.
2. -- = Indicates invoice did not have an identification number.

TABLE 3

SUMMARY OF NON-HAZARDOUS MATERIALS DISPOSED AT SENECA MEADOWS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Date	Manifest No.	Weigh Ticket No.	Weight (tons)	Date	Manifest No.	Weigh Ticket No.	Weight (tons)
09/26/06	BING-06-01	450104	32.84	10/09/06	BING-06-42	1448250	31.56
09/26/06	BING-06-02	450104	22.39	10/09/06	BING-06-43	1447961	39.86
09/26/06	BING-06-03	450104	29.67	10/09/06	BING-06-44	1447974	33.43
09/26/06	BING-06-04	450104	32.86	10/09/06	BING-06-45	1447979	35.08
09/26/06	BING-06-05	1441960	31.10	10/09/06	BING-06-46	1447997	37.81
09/26/06	BING-06-06	1441965	31.57	10/09/06	BING-06-47	1448000	32.73
09/27/06	BING-06-07	1442175	33.23	10/09/06	BING-06-48	1448122	32.87
09/27/06	BING-06-08	1442227	33.73	10/09/06	BING-06-49	1447947	41.61
09/27/06	BING-06-09	1442254	30.02	10/09/06	BING-06-50	--	--
09/27/06	BING-06-10	1442189	35.32	10/10/06	BING-06-51	1448395	32.23
09/27/06	BING-06-11	1442142	34.37	10/10/06	BING-06-52	1448388	34.37
09/27/06	BING-06-12	1442388	39.39	10/10/06	BING-06-53	1448666	32.00
09/27/06	BING-06-13	1442402	31.85	10/10/06	BING-06-54	1448827	33.06
09/27/06	BING-06-14	1442435	35.62	10/10/06	BING-06-55	--	--
09/27/06	BING-06-15	1442458	32.51	10/10/06	BING-06-56	1448543	30.75
09/27/06	BING-06-16	1442449	30.14	10/10/06	BING-06-57	1448613	29.01
09/27/06	BING-06-17	1442494	27.58	10/10/06	BING-06-58	1448665	34.41
09/27/06	BING-06-18	1442521	30.94	10/10/06	BING-06-59	1448385	31.30
09/27/06	BING-06-19	1442545	31.65	10/11/06	BING-06-60	1449054	36.21
09/27/06	BING-06-20	1442565	34.45	10/11/06	BING-06-61	1448732	31.53
09/27/06	BING-06-21	1442619	32.89	10/11/06	BING-06-62	1448810	35.74
09/27/06	BING-06-22	1442615	34.26	10/11/06	BING-06-63	1448521	29.91
09/27/06	BING-06-23	1442627	33.57	10/11/06	BING-06-64	1449041	29.70
09/28/06	BING-06-24	1442781	34.32	10/11/06	BING-06-65	1449042	28.52
09/28/06	BING-06-25	1443072	32.87	10/12/06	BING-06-66	1449920	32.27
09/28/06	BING-06-26	1442844	38.73	10/12/06	BING-06-67	1449929	34.86
09/28/06	BING-06-27	1442888	31.82	10/12/06	BING-06-68	1449957	31.28
09/28/06	BING-06-28	1442899	31.58	10/12/06	BING-06-69	1449959	34.71
09/28/06	BING-06-29	1442928	35.35	10/13/06	BING-06-70	1450679	35.20
09/28/06	BING-06-30	1443031	38.89	10/13/06	BING-06-71	1450357	35.00
09/28/06	BING-06-31	1443084	37.97	10/13/06	BING-06-72	1450427	33.99
09/28/06	BING-06-32	1443103	33.61	10/13/06	BING-06-73	1450429	34.05
09/28/06	BING-06-33	1443135	42.71	10/13/06	BING-06-74	1450461	33.03
09/28/06	BING-06-34	1443128	33.09	10/13/06	BING-06-75	1450484	33.64
09/28/06	BING-06-35	1443132	32.33	10/13/06	BING-06-76	1450467	34.77
09/28/06	BING-06-36	1443142	29.36	10/13/06	BING-06-77	1450532	32.03
09/28/06	BING-06-37	1443175	27.23	10/13/06	BING-06-78	1450557	30.23
09/28/06	BING-06-38	1443185	15.44	10/13/06	BING-06-79	1450569	32.44
09/28/06	BING-06-39	1443203	25.38	10/13/06	BING-06-80	1450647	33.40
09/28/06	BING-06-40	1443218	20.64	10/13/06	BING-06-81	1450334	31.82

TABLE 3

SUMMARY OF NON-HAZARDOUS MATERIALS DISPOSED AT SENECA MEADOWS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Date	Manifest No.	Weigh Ticket No.	Weight (tons)	Date	Manifest No.	Weigh Ticket No.	Weight (tons)
09/28/06	BING-06-41	1443230	18.65	10/13/06	BING-06-82	1450694	35.48
10/14/06	BING-06-83	1450812	29.19	10/26/06	BING-06-124	1456340	34.06
10/14/06	BING-06-84	1450804	35.21	10/26/06	BING-06-125	1456343	34.10
10/14/06	BING-06-85	1450856	32.97	10/26/06	BING-06-126	1456416	35.95
10/14/06	BING-06-86	1450751	31.01	10/26/06	BING-06-127	1456395	36.72
10/16/06	BING-06-87	1451233	34.17	10/26/06	BING-06-128	1456436	37.40
10/16/06	BING-06-88	1451248	33.09	10/27/06	BING-06-129	1456825	34.73
10/16/06	BING-06-89	1451264	30.35	10/27/06	BING-06-130	1456826	36.17
10/16/06	BING-06-90	1451275	26.35	10/27/06	BING-06-131	1456892	35.66
10/16/06	BING-06-91	1451325	37.46	10/27/06	BING-06-132	1456874	34.95
10/16/06	BING-06-92	1451305	33.02	10/27/06	BING-06-133	1456886	33.42
10/16/06	BING-06-93	1451341	34.46	10/31/06	BING-06-134	1458045	39.42
10/16/06	BING-06-94	1451368	41.80	11/01/06	BING-06-135	1458734	39.64
10/16/06	BING-06-95	1451412	29.91	11/01/06	BING-06-136	1458531	33.81
10/18/06	BING-06-96	1452472	33.07	11/01/06	BING-06-137	1458553	37.61
10/18/06	BING-06-97	1452480	34.86	11/01/06	BING-06-138	1458570	33.87
10/18/06	BING-06-98	1452526	28.84	11/01/06	BING-06-139	1458558	35.47
10/18/06	BING-06-99	1452518	29.09	11/01/06	BING-06-140	1458564	33.16
10/18/06	BING-06-100	1452517	32.00	11/01/06	BING-06-141	1458615	32.78
10/18/06	BING-06-101	1452568	34.56	11/01/06	BING-06-142	1458590	33.32
10/19/06	BING-06-102	1452897	32.25	11/01/06	BING-06-143	1458621	36.64
10/19/06	BING-06-103	1452898	33.49	11/01/06	BING-06-144	1458622	32.48
10/19/06	BING-06-104	1452945	33.64	11/01/06	BING-06-145	1458517	40.89
10/19/06	BING-06-105	1452967	34.43	11/01/06	BING-06-146	1458745	35.43
10/19/06	BING-06-106	1452926	37.01	11/02/06	BING-06-147	1458834	35.96
10/19/06	BING-06-107	1453059	33.52	11/02/06	BING-06-148	1458823	34.58
10/19/06	BING-06-108	1453097	32.89	11/02/06	BING-06-149	1459086	35.24
10/19/06	BING-06-109	1453082	33.13	11/02/06	BING-06-150	1458798	33.67
10/19/06	BING-06-110	1453130	34.57	11/02/06	BING-06-151	1458864	34.00
10/19/06	BING-06-111	1453367	37.76	11/02/06	BING-06-152	1458888	35.73
10/20/06	BING-06-112	1453588	32.66	11/02/06	BING-06-153	1458882	34.13
10/20/06	BING-06-113	1453622	30.47	11/02/06	BING-06-154	1458979	37.87
10/20/06	BING-06-114	1453589	30.78	11/02/06	BING-06-155	1458990	28.60
10/20/06	BING-06-115	1453649	31.47	11/02/06	BING-06-156	1459016	31.11
10/20/06	BING-06-116	1453770	33.84	11/02/06	BING-06-157	1459007	32.42
10/20/06	BING-06-117	1453756	32.92	11/02/06	BING-06-158	1459032	31.18
10/20/06	BING-06-118	1453768	27.10	11/02/06	BING-06-159	1459077	33.51
10/20/06	BING-06-119	1453773	34.06	11/02/06	BING-06-160	1458824	32.02
10/20/06	BING-06-120	1453736	33.24	11/02/06	BING-06-161	1459094	35.62
10/20/06	BING-06-121	1453781	30.14	11/02/06	BING-06-162	1459143	35.90

TABLE 3

SUMMARY OF NON-HAZARDOUS MATERIALS DISPOSED AT SENECA MEADOWS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Date	Manifest No.	Weigh Ticket No.	Weight (tons)	Date	Manifest No.	Weigh Ticket No.	Weight (tons)
10/20/06	BING-06-122	1453749	26.52 [3]	11/02/06	BING-06-163	1459193	36.00
10/20/06	BING-06-123	1453791	26.85	11/02/06	BING-06-164	1459194	35.29
11/03/06	BING-06-165	1459359	30.37	11/08/06	BING-06-171	1460894	32.02
11/03/06	BING-06-166	1459361	28.75	11/08/06	BING-06-172	1460872	34.72
11/03/06	BING-06-167	1459360	28.35	11/08/06	BING-06-173	1460893	40.21
11/03/06	BING-06-168	1459483	34.40	11/08/06	BING-06-174	1460926	38.81
11/03/06	BING-06-169	1459481	33.70	11/08/06	BING-06-175	1460927	40.05
11/03/06	BING-06-170	1459488	18.12	11/08/06	BING-06-176	1460941	59.37
						TOTAL (tons)	**5,787**

Notes:
1. Summary of non-hazardous material disposal of at Seneca Meadows generated from non-hazardous waste disposal manifests and weigh tickets (see Appendix O).
2. -- = Indicates weigh ticket missing for truck load.
3. Original weigh ticket indicated 23.52 tons of material. Weigh ticket was hand-marked with edit quantity.

TABLE 4

SUMARY OF DNAPL RECOVERY AND
LNAPL MONITORING TOP OF WELL CASING ELEVATIONS

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

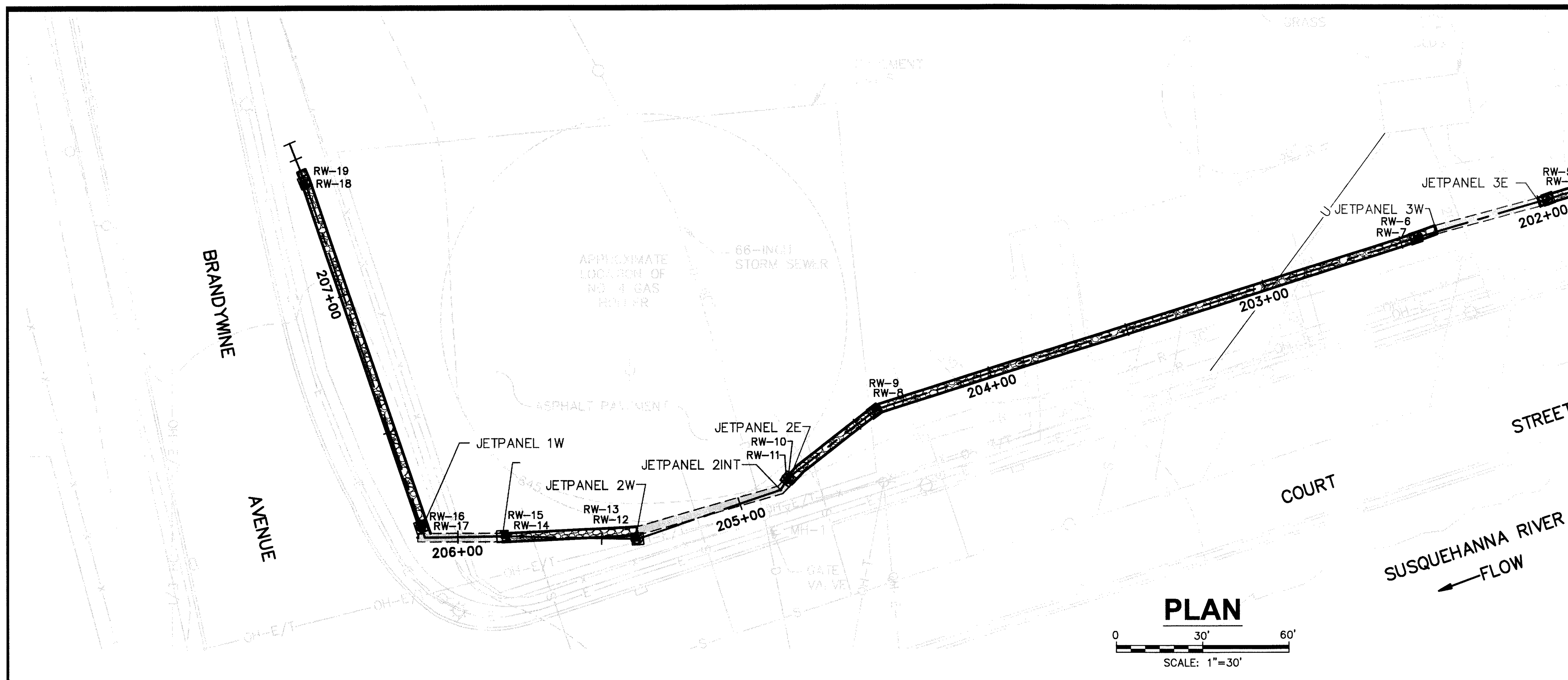
Well ID	Purpose	Well Bottom Elevation (FAMSL)	Top of Casing (FAMSL)
RW-1	DNAPL Recovery	788.11	842.31
RW-2	DNAPL Recovery	789.82	842.12
RW-3	LNAPL Monitoring	825.08	841.83
RW-4	LNAPL Monitoring	825.41	842.51
RW-5	DNAPL Recovery	793.88	842.48
RW-6	DNAPL Recovery	794.47	843.57
RW-7	LNAPL Monitoring	825.38	843.58
RW-8	LNAPL Monitoring	824.95	843.05
RW-9	DNAPL Recovery	790.57	843.52
RW-10	LNAPL Monitoring	827.31	843.91
RW-11	DNAPL Recovery	794.14	843.84
RW-12	DNAPL Recovery	796.69	844.65
RW-13	LNAPL Monitoring	826.05	844.75
RW-14	LNAPL Monitoring	827.67	845.27
RW-15	DNAPL Recovery	796.03	845.23
RW-16	DNAPL Recovery	798.50	848.41
RW-17	LNAPL Monitoring	825.25	848.34
RW-18	DNAPL Recovery	803.84	845.82
RW-19	LNAPL Monitoring	826.70	845.81
RW-20	LNAPL Monitoring	826.51	841.96
RW-21	LNAPL Monitoring	826.02	842.02
RW-22	DNAPL Recovery	789.77	841.97

Notes:
1. Elevations referenced to the NAVD 88 Datum
2. FAMSL = feet above mean sea level.

ARCADIS BBL

Appendix A

Record Drawing



PLAN

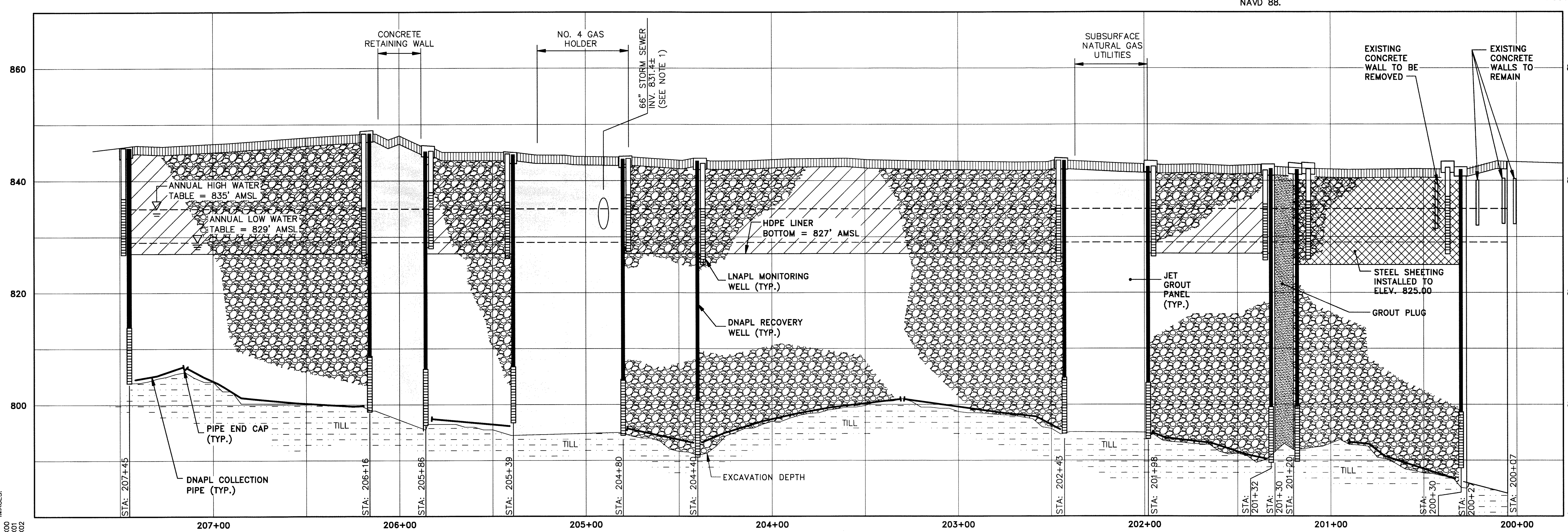
0 30' 60'
SCALE: 1"=30'

NOTES:

1. BARRIER WALL ALIGNMENT BASED ON SURVEYED LOCATION OF RECOVERY WELLS AND JET GROUT PANEL LOCATIONS SURVEYED BY NYSEG ON AUGUST 17, 2006 AND DECEMBER 28, 2006.
2. TOP OF CASING AND GROUND ELEVATIONS ARE BASED ON SURVEYS CONDUCTED BY NYSEG DURING DECEMBER 2006 AND JULY 2007.
3. THE EXCAVATION DEPTH OF THE BOTTOM OF THE BARRIER WALL TRENCH, AS PRESENTED ON THIS DRAWING IS APPROXIMATE AND BASED ON MEASUREMENTS MADE FROM THE GROUND SURFACE DURING TRENCH CONSTRUCTION. THE TRENCH BOTTOM, AND HORIZONTAL CONVEYANCE PIPE LOCATIONS HAVE NOT BEEN SURVEYED, AND ARE THEREFORE APPROXIMATE.
4. LNAPL MONITORING WELL, DNAPL RECOVERY WELL, AND WELL VAULT DIMENSIONS ARE NOT TO SCALE.
5. HDPE PANELS ARE OVERLAPPED A MINIMUM OF 4 FEET.
6. RECOVERY WELLS LOCATED BY GLOBAL POSITIONING SYSTEM (GPS). REFER TO NORTH AMERICAN DATUM 1983 (NAD83). STATE PLANE: NEW YORK CENTRAL VERTICAL DATUM NAVD 88.

LEGEND

- ALIGNMENT OF NAPL BARRIER WALL
- WELL VAULT, DNAPL RECOVERY WELL, AND LNAPL MONITORING WELL
- JETPANEL 2W — AS-BUILT JET GROUT PANEL LOCATION AND SURVEYED POINT (SEPTEMBER 2006)
- GROUT PLUG
- SURFACE RESTORATION TO MATCH SURROUNDING GRADE
- 60 MIL HDPE GEOMEMBRANE LINER
- GRANULAR FILL
- EXISTING TILL LAYER
- EXISTING MANHOLE LOCATION
- EXISTING LIGHT POLE
- EXISTING UTILITY POLE
- EXISTING POTABLE WATER SUPPLY LINE
- EXISTING STORM DRAIN LINE
- EXISTING SANITARY SEWER
- EXISTING UNDERGROUND ELECTRIC TRANSMISSION LINE
- EXISTING OVERHEAD ELECTRIC TRANSMISSION LINE
- EXISTING OVERHEAD TELECOMMUNICATION TRANSMISSION LINE
- EXISTING OVERHEAD ELECTRIC AND TELECOMMUNICATION TRANSMISSION LINE
- EXISTING NATURAL GAS TRANSMISSION LINE
- RETIRED NATURAL GAS TRANSMISSION LINE
- U — UNDERGROUND UTILITY ADDED BY NYSEG POST BARRIER WALL CONSTRUCTION



PROFILE

0 30' 60'
HORIZONTAL SCALE: 1"=30'
0 10' 20'
VERTICAL SCALE: 1"=10'

(RECORD DRAWING: MADE FROM DRAWING NO. 2, TRACER NO. 13061001/13061G02.dwg, DATED JULY 7, 2006)

Graphic Scale

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. **USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.**

No.	Date	Revisions	Init
3	6/09/08	REVISED TO ADDRESS NYSDEC COMMENTS AND UPDATE WELL LOCATIONS AND DEPTHS	NES/KLS

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: MARGARET A. CARRILLO-SHERIDAN
Professional Engineer's No.: 082251
State: NY
Date Signed: 23-June-2008
Project Mgr.: DLM
Designed by: MCS
Drawn by: GHS

STATE OF NEW YORK — LICENSED PROFESSIONAL ENGINEER — 082251

ARCADIS BBL
Infrastructure, environment, facilities

NEW YORK STATE ELECTRIC & GAS CORPORATION • BINGHAMTON, NEW YORK
BINGHAMTON COURT STREET FORMER MGP SITE
NAPL BARRIER WALL IRM FINAL REPORT

AS-BUILT NAPL BARRIER WALL PLAN AND PROFILE

BBL Project No.: 130.61
Date: MARCH 2, 2007
ARCADIS of New York, Inc.
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

1

SYR-85-GHS GMS KLS L: ON=*, OFF=*REF (C-LDOT-PNTS-WELLTOPS
G:\CAD\ACT\B0013074\0000\00001\DWG\13074G02.DWG SAVED: 6/23/2008 3:20 PM LAYOUT:1 PAGESETUP:---- PENTABLE:PLTFULL.CTB PRINTED: 6/23/2008 3:34 PM BY: KSARTORI
XREFS: 13074X00 13074X01 13074X02 IMAGES: PROJECTNAME: ----

ARCADIS BBL

Appendix B

Weekly Construction Reports

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

Dates Covered: July 17, 2006 to July 28, 2006

Activities Performed During Time Period

- Royal Environmental, Inc. (Royal) completed pre-trench excavation activities in the eastern portion of the site from Station 201+40 to Station 200+95 and in the Binghamton Material Handling, Inc. (BMH) building parking lot from Station 200+95 to Station 200+60. The pre-trenching was completed to depths ranging from 7 to 8 below ground surface (bgs). Royal encountered numerous abandoned natural gas distribution lines ranging in size from 2 to 8 inches in diameter. The abandoned natural gas lines were cut and sealed by New York State Electric & Gas Corporation (NYSEG) personnel to facilitate the installation of the NAPL barrier wall (to be conducted in subsequent weeks).

- A Rain For Rent 21,000-gallon frac tank was mobilized to the site to containerize water encountered in the natural gas distribution lines during pre-trench excavation activities.

- Geo-Solutions, Inc. (Geo-Solutions) installed the jet-grout panel between Station 205+82 and Station 206+12 (west most jet-grout panel). A total of 20 jet-grout applications (drilling and grout installation) were completed to depths ranging from 47 to 48.5 feet bgs and were keyed into the till unit a minimum of 6 inches.

- Approximately 1,200 tons of ¼-inch-diameter washed pea gravel was purchased and delivered to the site by Barney and Dickenson Sand and Gravel (Barney and Dickenson).

- Geo-Solutions moved jet-grouting equipment to facilitate the installation of the jet-grout panel in the vicinity of the existing 66-inch storm sewer. Geo-Solutions began to install the jet-grout panel at this location on July 26, 2006.

Activities Planned for the Next Week

- Royal will continue to excavate through the BMH building parking lot to Station 200+00. NYSEG personnel will cut and cap abandoned storm sewer piping that is expected to be encountered during excavation activities. Excavation depths are anticipated to be 15 feet bgs.

- Geo-Solutions will continue to install vertical jet-grout applications in the vicinity of the existing 66-inch storm sewer.

- NYSEG personnel will re-cut and re-cap an existing 8-inch diameter active natural gas distribution line at Station 201+60. The natural gas line will be re-cut due to its close proximity to the pre-trench excavation and NAPL barrier wall installation activities (to be conducted in subsequent weeks).

- NYSEG personnel will survey the completed west-most jet-grout panel from Station 205+82 and Station 206+12 in support of the preparation of as-built drawings.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

- Columbia Gas personnel will be moving out of the onsite building on July 31, 2006. BBL Environmental Services, Inc. (BBLES), Royal, and Geo-Solutions personnel will then use the building as a field office. Tracy Blazicek (NYSEG) has indicated that the utility lines that service the building will remain in place (supported in the pretrench excavation) until the NAPL barrier wall is installed at this portion of the site (the utility lines will then be cut and capped).

Problems Encountered and Solutions Achieved

- Geo-Solutions has indicated that there has been a delay in mobilizing the long-stick excavator to be utilized during the installation of the NAPL barrier wall. BBLES Project Manager, Joseph Molina, is currently working with Geo-Solutions to resolve this issue.

- Geo-Solutions encountered subsurface obstructions during installation of the jet-grout panel in the vicinity of the 66-inch storm sewer. Geo-Solutions has speculated that the obstructions include the footer of historical subsurface structures (No. 4 Gas Holder) and unknown debris (i.e., construction and demolition [C&D] material, timbers, etc.). Geo-Solutions will alter jet-grout application locations to facilitate completion of the jet-grout panel.

- Royal has encountered subsurface obstructions (e.g., former building foundations and walls) during pre-trench excavation activities in the vicinity of Station 200+50. It is anticipated that the subsurface obstructions will continue to be encountered as the pre-trenching continues east toward Station 200+00. Royal will continue to demolish and remove the subsurface obstructions, when encountered.

Items Requiring Further Action or Followup

Joseph Molina will continue to coordinate with Geo-Solutions to resolve the delays in mobilizing the long-stick excavator to the site.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
Keith White, C.P.G., BBL, an ARCADIS company
Joseph Molina, P.E., BBLES, an ARCADIS company
David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

Dates Covered: July 28, 2006 to August 4, 2006

Activities Performed During Time Period

- Royal Environmental, Inc. (Royal) completed pre-trench excavation activities in the Binghamton Material Handling, Inc. (BMH) building parking lot from Station 200+60 to Station 200+43. Royal encountered an abandoned six-inch-diameter steel utility line (unknown service) which was cut and sealed with mortar. During the pre-trench excavation activities, Royal encountered two vertical concrete walls, approximately 33 feet apart. The area between the walls contained pipe fragments, rebar, timbers, scrap metal, structural steel, concrete, and brick, which was subsequently removed by Royal as part of the pre-trench excavation activities. Pre-trench excavation activities in this portion of the site have been progressing slower than expected. Royal has mobilized a larger excavator equipped with a hoe ram to expedite the pre-trench excavation activities.

- Geo-Solutions, Inc. (Geo-Solutions) continued to install vertical jet-grout applications (drilling and grout installation) in the vicinity of the 66-inch storm sewer.

- Columbia Gas personnel moved out of the onsite building on July 31, 2006. BBLES, an Arcadis company (BBLES), Royal, and Geo-Solutions are now using the building as a field office. Electric and water services to the building remain active. NYSEG has established telephone service for the building through Verizon. Landline telephone numbers for the field office including the following:

  - David Budosh (BBLES): (607) 771-6042
  - Conference Room: (607) 771-6175
  - Fax Machine: (607) 771-6178
  - Geo-Solutions: (607) 771-6181

Activities Planned for the Next Week

- Royal will continue to excavate through the BMH building parking lot to Station 200+00.

- Geo-Solutions will complete the installation of the vertical jet-grout applications in the vicinity of the 66-inch storm sewer.

- Geo-Solutions will move jet-grout equipment and begin installation of the jet-grout panel in the vicinity of active natural gas transmission lines from Station 202+00 to Station 202+40.

- Geo-Solutions will mobilize the long-stick excavator to the site by August 11, 2006 to facilitate the excavation of the NAPL barrier wall trench. NAPL barrier wall trench excavation activities are anticipated to begin on August 14, 2006.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

Problems Encountered and Solutions Achieved

- Geo-Solutions previously indicated that there was a delay in mobilizing the long-stick excavator. The long-stick excavator will be mobilized to the site by August 11, 2006.

- Royal has encountered large subsurface obstructions and debris during the pre-trench excavation activities in the vicinity of the BMH building parking lot. A larger excavator equipped with a hoe ram has been mobilized to the site and is being utilized to expedite the pre-trench excavation activities. During the August 4, 2006 conference call, the difficulties in trench excavation were discussed. BBL indicated that the design modifications would be forthcoming in the next week to address these obstructions.

Items Requiring Further Action or Followup

None.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
Keith White, C.P.G., BBL, an ARCADIS company
Joseph Molina, P.E., BBLES, an ARCADIS company
David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

Dates Covered: August 5, 2006 to August 11, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed installation of the vertical and two angled (8-degree) jet-grout applications (drilling and grout installation) in the vicinity of the 66-inch storm sewer. Geo-Solutions moved jet-grout equipment and began installation of the jet-grout panel in the vicinity of the active natural gas transmission lines from Station 202+00 and 202+40.

- NYSEG personnel re-cut and re-capped an existing 8-inch diameter active natural gas distribution line at Station 201+50. The natural gas line was re-cut due to its close proximity to the pre-trench excavation and NAPL barrier wall installation activities. The line was initially cut during the week of July 24, 2006.

- Excavation activities in the vicinity of the Binghamton Material Handling, Inc. (BMH) building parking lot from Station 200+00 to Station 200+43 were temporarily suspended due to the presence of subsurface obstructions (i.e., concrete walls and debris).

- N&N Drilling Supply Mfr. (N&N) delivered (on August 7, 2006) the 8-inch diameter stainless steel well casings to be used as DNAPL recovery wells. 6-inch diameter high-density polyethylene (HDPE) piping was delivered to the site on August 8, 2006.

- Boart Longyear, an environmental drilling contractor, has begun drilling vertical holes into the subsurface concrete wall at Station 200+43 to expedite the removal of the subsurface obstructions. Boart Longyear is planning to continue work though the weekend (August 12 and 13, 2006).

Activities Planned for the Next Week

- Geo-Solutions will complete installation of the jet-grout panel in the vicinity of the active natural gas transmission lines and the remaining angled jet-grout applications in the vicinity of the 66-inch storm sewer.

- Geo-Solutions will begin installation of the proposed additional jet-grout panel to be completed from Station 200+07 to Station 200+21.

- Boart Longyear will continue drilling vertical holes into the subsurface concrete wall at Station 200+43 and will begin drilling jet-grout application pilot holes to facilitate the installation of the newly proposed jet-grout panel from Station 200+07 to Station 200+23.

- The long-stick excavator will be mobilized to the site on either August 16 or 17, 2006 (dependent on securing the proper state transportation permits).

- A meeting with the City of Binghamton Engineer has tentatively been scheduled for August 15, 2006 to discuss Brandywine Avenue and sidewalk closer during excavation of the NAPL barrier trench.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET SITE
BINGHAMTON, NEW YORK

Problems Encountered and Solutions Achieved

- As discussed previously, Royal Environmental, Inc. (Royal) has encountered large subsurface obstructions (concrete walls) and debris during the pre-trench excavation activities in the vicinity of the BMH building parking lot. Design modifications to address these obstructions are currently being evaluated by BBL.

Items Requiring Further Action or Followup

- A final design modification to address the subsurface obstructions in the vicinity of the BMH building parking lot will be selected by BBL during the week of August 14, 2006.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
Keith White, C.P.G., BBL, an ARCADIS company
Joseph Molina, P.E., BBLES, an ARCADIS company
David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #4

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: August 12, 2006 to August 18, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed installation of the jet-grout applications (drilling and grout installation) in the vicinity 16-inch and 20-inch diameter active natural gas transmission lines from Station 202+00 and 202+40.

- Boart Longyear completed drilling 20 vertical holes into the subsurface concrete wall located at Station 200+43 to expedite the removal of the subsurface obstruction. Boart Longyear also completed pre-drilling jet-grout application holes through the subsurface debris from Station 200+07 to Station 200+38 in the vicinity of Binghamton Material Handling, Inc. (BMH) building parking lot.

- Geo-Solutions began installing the new jet-grout panel from Station 200+05 to Station 200+25 in the vicinity of the BMH building parking lot.

- NYSEG's survey crew established coordinates for the three original jet-grout panels using global positioning system (GPS) equipment in support of the preparation of as-built drawings.

- The long-stick excavator was mobilized to the site on August 18, 2006 to facilitate the excavation of the NAPL barrier wall trench.

- BBLES submitted a NYSDOT Highway Work Permit Application for Non-Utility Work (lane closure activities) in support of the NAPL barrier trench excavation activities scheduled to begin on August 23, 2006. NYSDOT has given BBLES verbal approval to precede with the lane closure activities.

- BBLES collected a water sample from the Rain-For-Rent 21,000-gallon frac tank and soil samples from the soils stockpiled within the onsite containment area in support of determining disposal requirements.

Activities Planned for the Next Week

- Geo-Solutions will complete installation of the new jet-grout panel in the vicinity of the BMH building parking lot from Station 200+05 to Station 200+25.

- Geo-Solutions will begin excavation of the NAPL barrier wall trench from Station 205+25 (±) to Station 205+90 (±) on August 23, 2006.

- Geo-Solutions will demobilize the drill rig, jet-grout application equipment, and the jet-grout batch plant from the site.

- Royal Environmental, Inc. (Royal) will remove the subsurface concrete wall (4-foot thick) located at Station 200+43, which has been pre-drilled by Boart Longyear to expedite removal of the wall.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #4

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Problems Encountered and Solutions Achieved

- As discussed previously, Royal had encountered large subsurface obstructions (concrete walls) and debris during the pre-trench excavation activities in the vicinity of the BMH building parking lot. BBL has prepared design modifications to address the subsurface obstructions, which include the installation of an additional jet-grout panel from Station 200+05 to Station 200+25 and the repositioning of the collection wells previously located at Station 200+00 to Station 200+25.

Items Requiring Further Action or Followup

None.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
Keith White, C.P.G., BBL, an ARCADIS company
Joseph Molina, P.E., BBLES, an ARCADIS company
David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #5

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: August 19, 2006 to August 25, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed installation of the jet-grout applications (drilling and grout installation) in the vicinity of the Binghamton Material Handling, Inc. (BMH) building parking lot from Station 200+05 to Station 200+25.

- Geo-Solutions completed installation of the remaining angled jet-grout applications in the vicinity of the 66-inch storm sewer.

- Geo-Solutions began breaking down the drill rig, jet-grout application equipment, and the jet-grout batch plant to facilitate demobilization of the machinery/equipment.

- BBL conducted an onsite meeting with Mr. John Baylor of the New York State Department of Transportation (NYSDOT) to review the lane closure plan and the schedule for the NAPL barrier wall construction activities that will require altering traffic patterns on Brandywine Avenue.

Activities Planned for the Next Week

- Geo-Solutions will begin excavating the NAPL barrier wall trench from Station 205+39 (±) to Station 205+86 (±).

- Geo-Solutions will begin excavation of the NAPL barrier wall trench along Brandywine Avenue from Station 206+15 (±) to Station 207+45 (±).

- Royal Environmental, Inc. (Royal) will remove the subsurface concrete wall (4-foot thick) located at Station 200+43, which has been pre-drilled by Boart Longyear to expedite removal of the wall.

Problems Encountered and Solutions Achieved

- During installation of the eastern 41° jet-grout application in the vicinity of 66-inch storm sewer, Geo-Solutions penetrated the 66-inch storm sewer piping and PVC liner. BBL confirmed penetration via visual review of the storm sewer interior on August 24, 2006. BBL temporarily repaired the puncture utilizing the expanding foam that was used to seal natural gas transmission lines during pre-trenching activities. BBL is currently coordinating with NYSEG and Sevenson Environmental Services, Inc. (Sevenson) (contractor that installed the PVC liner in the 66-inch storm sewer pipe) to evaluate permanent storm sewer repair options.

Items Requiring Further Action or Followup

- As indicated above, the 66-inch storm sewer was penetrated during jet-grout application. BBL, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #5

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
Keith White, C.P.G., BBL, an ARCADIS company
Joseph Molina, P.E., BBLES, an ARCADIS company
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NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #6

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: August 26, 2006 to September 1, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed excavation and began to backfill the NAPL barrier wall trench from Station 205+39 (±) to Station 205+86 (±).

- Geo-Solutions mobilized an additional Rain-For-Rent Frac Tank to the site to store bio-polymer slurry.

- Geo-Solutions demobilized jet-grout batch plant and drilling equipment.

- Royal Environmental, Inc. (Royal) began to remove the subsurface concrete wall located at Station 200+43, which was pre-drilled by Boart Longyear to expedite removal of the wall.

Activities Planned for the Next Week

- Geo-Solutions mobilize the long-stick excavator and begin excavation of the NAPL barrier wall trench along Brandywine Avenue from Station 206+15 (±) to Station 207+45 (±).

- Royal will expanded the material staging area to accommodate excavation material from NAPL barrier wall trench.

- BBLES will coordinate with Seneca Meadows Landfill for the transportation and disposal of characterized soil material generated during pre-trench excavation activities.

Problems Encountered and Solutions Achieved

None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during jet-grout application. BBL, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
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Margaret A. Carrillo-Sheridan, P.E., BBL, an ARCADIS company
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David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #7

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: August 2, 2006 to September 8, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) backfilled the NAPL barrier wall trench from Station 205+39 (±) to Station 205+86 (±) with pea gravel up to within three feet of the surrounding grade. Stainless steel DNAPL and LNAPL recovery wells were installed at Stations 205+39 and Station 205+86 and 47 linear-feet of 6-inch-diamter HDPE DNAPL collection pipe was installed in the bottom of the trench. The 60 mil HDPE liner was vertically installed in the trench to facilitate the collection of LNAPL. Geo-Solutions has begun to breakdown the bio-polymer slurry that supported the trench excavation prior to placement of the backfill.

- BBLES, an ARCADIS company (BBLES) closed the northbound lane of Brandywine Avenue as per the NYSDOT-approved Traffic Plan. The lane will remained closed for the duration of the NAPL barrier wall construction activities along Brandywine Avenue.

- Geo-Solutions began to excavate the NAPL barrier wall trench along Brandywine Avenue from Station 206+15 (±) to Station 207+45 (±). The stainless steel DNAPL and LNAPL recovery wells were installed at Station 206+15 and 104 linear-feet of 6-inch-diamter HDPE DNAPL collection has been installed in the bottom of the trench.

- Royal Environmental, Inc. (Royal) removed the subsurface concrete wall located in the Binghamton Material Handling, Inc. (BMH) building parking lot at Station 200+43 and backfilled the excavated area with an imported clay-type material.

- Royal expanded the soil staging area northward to accommodate material removed from the excavation of the NAPL barrier wall trench along Brandywine Avenue.

- BBLES continued to collect soil samples of the excavated material to facilitate transportation and disposal of the excavated material.

Activities Planned for the Next Week

- Geo-Solutions will continue to excavate the NAPL barrier wall trench along Brandywine Avenue and backfill the trench excavation with pea gravel and install the 60 mil HDPE liner, stainless steel DNAPL recovery well, HDPE DNAPL collection piping.

- Geo-Solutions will begin excavation of the NAPL barrier wall trench east of the 66-inch storm sewer from Station 204+82 (±) to Station 200+25 (±).

- Clean Harbors Environmental Services, Inc. (Clean Harbors) will remove water from the onsite frac tank (removed from utility lines during pre-trench excavation activities) to facilitate transportation and offsite disposal of the water.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #7

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Problems Encountered and Solutions Achieved

None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during jet-grout application. BBL, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
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David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #8

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: September 9, 2006 to September 15, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed excavation of the NAPL barrier wall trench along Brandywine Avenue from Station 206+15 (±) to Station 207+45 (±). The stainless steel DNAPL and LNAPL recovery wells were installed at Station 207+45 and the 6-inch-diamter HDPE DNAPL collection pipe has been installed in the bottom of the trench. Geo-Solutions installed the 60 mil HDPE liner vertically in the trench to facilitate the collection of LNAPL and backfilled the trench with pea gravel to within three feet of the surrounding grade. Security fencing will remain in place along Brandywine Avenue until the trench excavation has been backfilled to match the surrounding grade.

- Geo-Solutions continues to breakdown the bio-polymer slurry that supported the NAPL barrier wall trench from Station 205+39 (±) to Station 205+86 (±) prior to placement of the backfill.

- Geo-Solutions began excavation of the NAPL barrier wall trench from 204+82 (±) to Station 202+37 (±) and encountered 48-inch-diameter by 10-foot-tall subsurface cast-iron structure (including 30-inch-diameter inlet/outlet piping) associated with the former MGP at Station 204+70. Geo-Solutions suspended NAPL barrier wall trench excavation activities and Royal Environmental, Inc. (Royal) removed the structure and approximately 15 linear-feet of 30-inch-diameter inlet/outlet piping. Royal performed additional pre-trench excavation activities from Station 204+70 to 204+22 to verify the absence/presence of additional piping associated with the former MGP. An additional 20-inch-diameter cast-iron pipeline was encountered at Station 204+29. Royal cut and plugged the pipeline through the width of the trench and backfilled the pre-trench excavation area.

- BBLES, an ARCADIS company (BBLES) continues to keep the northbound lane of Brandywine Avenue closed as per the NYSDOT-approved Traffic Plan. The lane will remained closed for the duration of the NAPL barrier wall construction activities along Brandywine Avenue.

- Royal constructed two additional soil staging areas approximately 25 feet north of the NAPL barrier wall alignment to minimize onsite handling/transportation of excavated material. The soil staging areas are located approximately from Station 205+00 to Station 205+50 and from Station 201+25 to 201+75.

- Clean Harbors Environmental Services, Inc. (Clean Harbors) removed approximately 9,600 gallons of non-hazardous water from the onsite frac tank (removed from utility lines during pre-trench excavation activities) to facilitate transportation and offsite disposal in Baltimore, Maryland. Geo-Solutions is now utilizing the frac tank to store bio-polymer slurry.

- BBLES continued to collect soil samples of the excavated material to facilitate offsite transportation and disposal of the excavated material.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #8

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

- Verizon has disconnected all land-based phone lines servicing the onsite building (formerly Columbia Gas). All communication with onsite personnel will be completed through the use of cellular telephones.

Activities Planned for the Next Week

- Geo-Solutions will continue excavation of the NAPL barrier wall trench east of the 66-inch storm sewer from Station 204+82 (±) to Station 202+37 (±) with work schedule through at least September 24, 2006.

- Geo-Solutions will begin to break down the bio-polymer slurry in the backfilled trench excavation along Brandywine Avenue.

- Royal will complete pre-trench excavation activities in front of the onsite building from Station 202+00 to Station 201+75.

Problems Encountered and Solutions Achieved

- As indicated above, Geo-Solutions encountered a subsurface cast-iron structure and inlet/outlet piping associated with the former MGP and suspended NAPL barrier wall trench excavation activities. Royal removed the structure, associated inlet/outlet piping, additional piping encountered east of the subsurface structure, and backfilled the excavation area. Geo-Solutions will continue excavation of the NAPL barrier wall trench.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during jet-grout application. BBL, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
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David Budosh, BBLES, an ARCADIS company
Jason Golubski, BBL, an ARCADIS company

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #9

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: September 16, 2006 to September 22, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed the degradation of the bio-polymer slurry that supported the NAPL barrier wall trench from Station 205+39 (±) to Station 205+86 (±) prior to placement of the pea gravel backfill.

- Geo-Solutions began to break down the bio-polymer slurry that supported the NAPL barrier wall trench along Brandywine Ave from 206+15 (±) to Station 207+45 (±).

- Geo-Solutions restarted excavation of the NAPL barrier wall trench at Station 204+82. Due to unstable soil conditions caused by recent wet weather and excavation of former MGP structures, Geo-Solutions used mats under the long-stick excavator from Station 204+82 to Station 204+00; however, soil conditions remained unstable and Geo-Solutions halted excavation in this portion of the site once again. Geo-Solutions mixed two bulk loads of powdered cement into the soil to stabilize soil/backfill in this portion of the site. Geo-Solutions has since began excavation of the NAPL barrier wall trench in the Binghamton Material Handling, Inc. (BMH) building parking lot at Station 200+25. On Thursday September 21, 2006, BBL observed a small amount of bio-polymer slurry was observed trickling into the Susquehanna River via the 24-inch and 18-inch diameter outfalls along the flood wall. It is believed that the bio-slurry migrated from the trench excavation through the porous fill materials and infiltrated the pipes leading to the outfalls. Work was stopped until the problem could be addressed. On Friday September 22, 2006, airplugs were placed in the storm sewer lines to prevent bio-polymer slurry from entering the river. The plugs will be checked daily prior to any IRM construction activities. Weekend work is currently planned for Geo-Solutions and Royal Environmental, Inc. (Royal).

- NYSEG disconnected the power lines servicing the former Columbia Gas building and removed the secondary utility pole located along the centerline of the NAPL barrier wall at Station 201+05.

- Royal completed pre-trench excavation activities through the driveway of the former Columbia Gas building from Station 201+75 to Station 202+00. The City of Binghamton Water Department cut and capped the potable water line that serviced the former Columbia Gas building and Royal cut and sealed (via mortar) an abandoned 30-inch gas main located approximately 12 inches below grade. The driveway servicing the former Columbia Gas building will remained closed and the first driveway located at Station 203+75 has been reopened for deliveries and loading out of vehicles.

Activities Planned for the Next Week

- Geo-Solutions will continue excavation the NAPL barrier wall trench from Station 200+25 to Station 202+00.

- Riccelli Enterprises (Riccelli) will send six dump trucks to the site on Tuesday, September 26, 2006 to be loaded with excavated soil material by Royal. Riccelli will transport the excavated soil material to Seneca Meadows Landfill for disposal.

Problems Encountered and Solutions Achieved

- As indicated above, soil conditions from Station 204+82 to Station 204+00 were too unstable for the long-stick excavator to continue excavation of the NAPL barrier wall trench in this portion of the site. Powdered cement has been mixed into the soil to stabilize soil/backfill.

- As indicated above, a small amount of bio-polymer slurry was observed entering the Susquehanna River on Thursday September 21, 2006. On Friday September 22, 2006, airplugs were placed in the storm sewer lines to prevent bio-polymer slurry from entering the river. The plugs will be checked daily prior to any IRM construction activities.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during jet-grout application. BBL, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
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Margaret A. Carrillo-Sheridan, P.E., BBL
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David Budosh, BBLES
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NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #10

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: September 23, 2006 to September 29, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) has completed breaking down the bio-polymer slurry that supported the NAPL barrier wall trench along Brandywine Avenue from 206+15 (±) to Station 207+45 (±). The remaining open portion of the trench has been backfilled to roughly match the surrounding grade and topsoil and seed will be placed during final site restoration. The lane closure in Brandywine Avenue (including security fencing) has been removed.

- Riccelli Enterprises (Riccelli) has sent 41 dump trucks to the site for the transportation of excavated material to Seneca Meadows Landfill for disposal. Approximately 1,250 tons of excavated material has been transported to Seneca Meadows. All excavated material characterized to date has been removed. BBLES is currently awaiting the results for the laboratory analysis for soil pile SP-5 before continuing transportation and offsite disposal of excavated materials.

- NYSEG has expressed the desire to re-connect the 8-inch-diameter active natural gas transmission line located approximately at Station 201+50 by October 15, 2006. The line was previously cut and capped to facilitate installation of the NAPL barrier wall.

- Geo-Solutions completed excavation of the NAPL barrier wall trench from Station 200+25 to Station 200+84 (a local high point in the confining till layer) and installed the stainless steel DNAPL recovery and LNAPL monitoring wells at Station 200+30. Additionally the 6-inch-diameter HDPE collection piping has been installed along the top of till from Station 200+30 to Station 200+84.

- Geo-Solutions continued excavation of the NAPL barrier wall trench from Station 200+84 to Station 201+50 on September 27, 2006, at which time BBLES and Geo-Solutions personnel observed the bio-polymer slurry level fall approximately 8 to 10 feet within the trench excavation. Geo-Solutions immediately halted excavation and began to backfill this portion of the trench (i.e., Station 201+50) with the previously excavated material to plug the area where the slurry was lost. Once the area was plugged with the previously excavated material, Geo-Solutions pumped additional slurry in the trench to approximately 3 feet below grade.

  BBLES inspected the 24-inch and 18-inch diameter storm sewer outfalls at the Susquehanna River, and the airplugs installed on September 22, 2006 were still in place and no slurry was observed entering the river. BBLES contacted City of Binghamton officials and requested to have the sewer main within Court Street checked for the presence of bio-polymer slurry. Before a City work crew arrived onsite, BBLES and Geo-Solutions personnel observed the pavement cracking in the westbound lane of Court Street between approximate Stations 200+70 and 201+55. BBLES and Royal Environmental, Inc. (Royal) then placed traffic control devices within the westbound lane of Court Street to divert traffic away from the cracked pavement. The City work crew then arrived onsite and checked the sewer main for the presence of slurry. No slurry was observed in the sewer main.

Once the pavement cracking was observed in the west bound land of Court Street, cracking was also observed in the grass area between approximate Stations 200+70 and 201+55. At this time, it was decided to backfill the entire length of the excavation (between approximate Stations 200+25 and 201+50) with the imported pea gravel to grade to prevent additional movement of the asphalt pavement and grass area. The cause of the slurry lost and final resting location of the slurry is still being assessed.

Activities Planned for the Next Week

- Geo-Solutions is scheduled to restart NAPL barrier wall trench excavation activities at Station 204+85 during the week of October 2, 2006.

- Riccelli, pending the results for the laboratory analysis of soil pile SP-5, will continue sending dump trucks to the site to be loaded with excavated material by Royal. Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.

Problems Encountered and Solutions Achieved

- As indicated above, the bio-polymer slurry level in the trench excavation fell approximately 8 to 10 feet. Cracked pavement has been observed in westbound lane of Court Street and within the grass area. Excavation activities have been halted in this portion of the site and the open trench has been backfill with pea gravel to grade and remaining slurry has been removed. The cause of the slurry lost and final resting location of the slurry is still being assessed.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during jet-grout application. BBLES, working with NYSEG and Sevenson, will develop and implement a permanent remedy to address the damage to the 66-inch storm sewer.

- As indicated above, the bio-polymer slurry level in the trench excavation fell approximately 8 to 10 feet and cracked pavement was observed in westbound lane of Court Street and within the grass area. BBLES, working with Geo-Solutions, is currently assessing the cause of these events.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL
Keith White, C.P.G., BBL
Joseph Molina, P.E., BBLES
David Budosh, BBLES
Jason Golubski, BBL

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #11

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: September 30, 2006 to October 6, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) resumed NAPL barrier wall trench excavation activities at Station 204+82 and is progressing eastward. Geo-Solutions has installed the stainless steel DNAPL recovery wells at Station 204+80 and Station 204+35 and has installed the HDPE DNAPL collection piping along the top of till between the two DNAPL recovery wells. Geo-Solutions is continuing to work toward the east end of the jet-grout panel located at 202+37.

- Royal Environmental, Inc. (Royal) is performing exploratory excavations (to approximately 10 feet below the surrounding grade) through the pea gravel placed from Station 201+65 to Station 200+25 in an effort to determine the cause of bio-slurry loss on September 27, 2006.

- BBLES has collected and submitted a soil sample from soil pile SP-6 for laboratory analysis to facilitate transportation and offsite disposal of the excavated material.

- NYSEG has expressed the desire to re-connect the 8-inch-diameter active natural gas transmission line located approximately at Station 201+50 by October 15, 2006. The line was previously cut and capped to facilitate installation of the NAPL barrier wall.

Activities Planned for the Next Week

- Geo-Solutions will complete NAPL barrier wall trench excavation activities, including recovery/monitoring well installation and HDPE liner and backfill placement, to Station 202+37. Geo-Solutions will resume NAPL barrier wall trench excavation activities from Station 202+00 to Station 200+80.

- Riccelli Enterprises (Riccelli) will send dump trucks to the site to be loaded with excavated material from soil pile SP-5 by Royal. Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.

- Royal will begin final site restoration activities, including side walk and vegetated topsoil restoration/replacement, along Brandywine Avenue.

Problems Encountered and Solutions Achieved

- None.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #11

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during the jet-grout application. BBLES will subcontract with Lash Contracting, Inc., who will install PVC patch panels and plugs, manufactured by Danby Pipe, to repair the damage caused during jet-grout application, as well as address pre-existing maintenance issues (i.e., leaks).

- As indicated in Weekly Progress Report #10, the bio-polymer slurry level in the trench excavation fell approximately 8 to 10 feet and cracked pavement was observed in westbound lane of Court Street and within the grass area on September 27, 2006. BBLES is currently assessing the cause of these events.

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL
Keith White, C.P.G., BBL
Joseph Molina, P.E., BBLES
David Budosh, BBLES
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NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #12

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: October 7, 2006 to October 13, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed NAPL barrier wall trench excavation activities along Court Street from Station 204+82 to Station 202+37 and installed all DNAPL recovery wells, LNAPL monitoring wells, HDPE collection piping, and HDPE liner (LNAPL barrier) for this portion of the NAPL barrier wall. The trench has been backfilled with pea gravel to within 3 feet of the surrounding grade and Geo-Solutions has begun breaking down the bio-polymer slurry.

- Geo-Solutions completed installation of a grout panel from Station 201+20 to Station 201+30.

- Geo-Solutions attempted to install the HDPE liner (LNAPL barrier) from Station 200+25 to Station 201+20; however, the liner could not be installed because the trench walls could not support liner. Alternative LNAPL barriers are currently being evaluated.

- Royal Environmental, Inc. (Royal) loaded Riccelli Enterprises (Riccelli) trucks with material from soil piles SP-5 and SP-6. Riccelli transported the material to Seneca Meadows Landfill for disposal.

- Royal began decontamination of the empty Rain-For-Rent frac tanks that are longer being utilized by Geo-Solutions.

- BBLES has collected and submitted soil samples from soil piles SP-7 and SP-8 for laboratory analysis to facilitate transportation and offsite disposal of the excavated material.

- NYSEG has expressed the desire to re-connect the 8-inch-diameter active natural gas transmission line located approximately at Station 201+50 by October 15, 2006. The line was previously cut and capped to facilitate installation of the NAPL barrier wall.

Activities Planned for the Next Week

- Geo-Solutions will complete NAPL barrier wall trench excavation activities, including recovery/monitoring well installation and HDPE liner and backfill placement from Station 201+30 to Station 202+00.

- Geo-Solutions will begin demobilizing trench excavation equipment.

- Riccelli will send dump trucks to the site to be loaded with excavated material from soil piles SP-7 and SP-8 by Royal (pending the results of the laboratory analysis for the material). Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.

- Royal will continue decontamination of Rain-For-Rent frac tanks no longer being utilized by Geo-Solutions.

- Royal will continue to backfill open portions of NAPL barrier wall trench (remaining 3 feet) with appropriate sub-base materials.

- Royal (Pavement Division) is tentatively scheduled to begin repairs to the pavement and sub-base material in Court Street. The Court Street lane closure will be removed following the completion of the repair activities.

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during the jet-grout application. Lash Contracting, Inc. (Lash) is tentatively scheduled to conduct storm sewer liner repair activities in early November. Lash will install PVC patch panels and plugs, manufactured by Danby Pipe, to repair the damage caused during jet-grout application, as well as to address pre-existing maintenance issues (i.e., leaks).

If there are any objections to this report, please contact Joseph Molina, P.E., BBLES, an ARCADIS company, as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL
Keith White, C.P.G., BBL
Joseph Molina, P.E., BBLES
David Budosh, BBLES
Jason Golubski, BBL

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #13

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: October 14, 2006 to October 20, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed breaking down the bio-polymer slurry in the NAPL barrier wall trench excavation from Station 204+82 to Station 202+37. The remaining 3 feet of NAPL barrier wall trench excavation is now ready to be backfilled to match the surrounding grade.

- Geo-Solutions has completed NAPL barrier wall trench excavation activities from Station 202+00 to Station 201+30 and have installed all DNAPL recovery wells, LNAPL monitoring wells, and HDPE liner (LNAPL barrier). Geo-Solutions have begun breaking down the bio-polymer slurry in this portion of the NAPL barrier wall trench.

- Royal Environmental, Inc. (Royal) loaded Riccelli Enterprises (Riccelli) trucks with material from soil piles SP-6, SP-7 and SP-8. Riccelli transported the material to Seneca Meadows Landfill for disposal.

- Royal continues decontamination of the empty Rain-For-Rent frac tanks that are no longer being utilized by Geo-Solutions.

- BBLES has collected and submitted soil samples from soil pile SP-9 for laboratory analysis to facilitate transportation and offsite disposal of the excavated material.

- NYSEG and BBLES have established temporary gas service to the Binghamton Materials Handing, Inc. (BMH) building.

- Geo-Solutions has decontaminated and started dismantling the long-stick excavator and additional equipment to facilitate demobilization.

- New York State Department of Transportation (NYSDOT) collected two core samples from Court Street to evaluate the necessary repairs to the road surface and sub-base. The findings and recommendations were submitted to Margaret A. Carrillo-Sheridan, P.E., BBL, via electronic mail, detailing the required repairs.

Activities Planned for the Next Week

- Geo-Solutions will install the HDPE liner (or other appropriate LNAPL barrier) in the NAPL barrier wall trench from Station 200+25 to Station 201+20.

- Royal will continue decontamination of the empty Rain-For-Rent frac tanks that are no longer being utilized by Geo-Solutions.

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #13

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

- Riccelli will send dump trucks to the site to be loaded with excavated material from soil piles SP-7, SP-8, and SP-9 (pending the results of the laboratory analysis for the material) by Royal. Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.

- Royal will backfill open portions (remaining 3 feet) of NAPL barrier wall trench excavation from Station 204+82 to Station 202+37 with appropriate sub-base materials.

- Royal's Pavement Division is tentatively scheduled to begin repairs to the pavement and sub-base material in Court Street. The Court Street lane closure will be removed following the completion of the repair activities.

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during the jet-grout application. Lash Contracting, Inc. (Lash) is tentatively scheduled to conduct storm sewer liner repair activities in early November. Lash will install PVC patch panels and plugs, manufactured by Danby Pipe, to repair the damage caused during jet-grout application, as well as to address pre-existing maintenance issues (i.e., leaks).

If there are any objections to this report, please contact Joseph Molina as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
Anthony Karwiel, NYSDEC
Margaret A. Carrillo-Sheridan, P.E., BBL
Keith White, C.P.G., BBL
Joseph Molina, P.E., BBLES
David Budosh, BBLES
Jason Golubski, BBL

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #14

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: October 21, 2006 to October 27, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) continues to breakdown the bio-polymer slurry in the NAPL barrier wall trench excavation from Station 202+00 to Station 200+25.
- Geo-Solutions dismantled and demobilized the long-stick excavator.
- Royal Environmental, Inc. (Royal) loaded Riccelli Enterprises (Riccelli) trucks with material from soil pile SP-9. Riccelli transported the material to Seneca Meadows Landfill for disposal.
- BBLES has collected and submitted soil samples from soil piles SP-10 and SP-11 for laboratory analysis to facilitate transportation and offsite disposal of the excavated material.
- Royal continues decontamination of the empty Rain-For-Rent frac tanks that are no longer being utilized by Geo-Solutions.
- Royal has placed topsoil in the remaining 6 inches (approximately) of the NAPL barrier wall trench excavation along Brandywine Avenue.
- Royal's Pavement Division initiated Court Street pavement repair activities. Pavement repair activities were halted after City of Binghamton officials notified BBLES that a water main break had occurred in Court Street at Station 200+30.

Activities Planned for the Next Week

- Geo-Solutions will install the LNAPL barrier in the NAPL barrier wall trench from Station 200+25 to Station 201+20.
- NYSEG will permanently re-establish the natural gas transmission line that services Binghamton Material Handling, Inc. (BMH) located approximately at Station 201+50.
- Royal will continue decontamination of the empty Rain-For-Rent frac tanks that are no longer being utilized by Geo-Solutions.
- Riccelli will send dump trucks to the site to be loaded with excavated material from soil piles SP-10 and SP-11 (pending the results of the laboratory analysis for the material) by Royal. Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.
- Royal will backfill open portions (remaining 3 feet) of NAPL barrier wall trench excavation from Station 204+82 to Station 202+37 with appropriate sub-base materials.

- Royal's Pavement Division is tentatively scheduled to complete repairs to the pavement and sub-base material in Court Street. The Court Street lane closure will be removed following the completion of the repair activities.

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report #5, the 66-inch storm sewer was penetrated during the jet-grout application. Lash Contracting, Inc. (Lash) is tentatively scheduled to conduct storm sewer liner repair activities in early November. Lash will install PVC patch panels and plugs, manufactured by Danby Pipe, to repair the damage caused during jet-grout application, as well as to address pre-existing maintenance issues (i.e., leaks).

If there are any objections to this report, please contact Joseph Molina as soon as possible.

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NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #15

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: October 28, 2006 to November 3, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) completed breaking down the bio-polymer slurry in the NAPL barrier wall trench excavation from Station 202+00 to Station 200+25.
- Geo-Solutions installed the LNAPL barrier in the NAPL barrier wall trench from Station 200+25 to Station 201+20.
- Royal Environmental, Inc. (Royal) loaded Riccelli Enterprises (Riccelli) trucks with material from soil piles SP-9, SP-10, and SP-11. Riccelli transported the material to Seneca Meadows Landfill for disposal.
- Royal completed decontamination of the empty Rain-For-Rent frac tanks that are no longer being utilized by Geo-Solutions. BBLES collected and submitted surface wipe samples of the frac tanks' interior to facilitate demobilization.
- Royal's Pavement Division continued Court Street pavement repair activities.

Activities Planned for the Next Week

- NYSEG will permanently re-establish the natural gas transmission line that services Binghamton Material Handling, Inc. (BMH) located approximately at Station 201+50.
- Rain-for-Rent frac tanks will be demobilized pending the results for the laboratory analysis of the surface wipe samples.
- Riccelli will send dump trucks to the site to be loaded with excavated material from soil piles SP-9. Riccelli will transport the excavated material to Seneca Meadows Landfill for disposal.
- Royal will backfill open portions (remaining 3 feet) of NAPL barrier wall trench excavation from Station 204+82 to Station 200+25 with appropriate sub-base materials.
- Royal's Pavement Division is tentatively scheduled to complete repairs Court Street pavement repairs.
- Casie ProTank is scheduled to pickup the cast-iron and steel storage structures and miscellaneous piping removed during excavation activities to facilitate transportation and disposal/recycling of the material.
- Lash Contracting, Inc. (Lash) is scheduled to begin the 66-inch storm sewer liner repair activities on November 6, 2006, weather permitting.

- Royal will continue site restoration and site cleanup activities including re-establishing the NYSEG property fence line in all areas of the site.

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- None.

If there are any objections to this report, please contact Joseph Molina as soon as possible.

cc: Tracy Blazicek, CHMM, NYSEG
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Jason Golubski, BBL

NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #16

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: November 4, 2006 to November 10, 2006

Activities Performed During Time Period

- Geo-Solutions, Inc. (Geo-Solutions) has demobilized all remaining equipment and labor from the site.
- Royal Environmental, Inc. (Royal) has backfilled all remaining open portions of the NAPL barrier wall trench excavation to within 6-inches of the surrounding grade to facilitate topsoil/pavement placement/installation.
- Royal loaded Riccelli Enterprises (Riccelli) trucks with material from soil pile SP-9. Riccelli transported the material to Seneca Meadows Landfill for disposal. All excavated soil material has been removed from the site.
- Royal continues decontamination of one empty Rain-For-Rent frac tank; two of the frac tanks were demobilized from the site.
- Royal's Pavement Division completed Court Street pavement repair activities including placement of sub-base material, base course, and binder course. The Court Street lane closure was removed following completion of the pavement repair activities.
- Royal began site restoration and site cleanup activities, including dismantling the soil staging areas and restoring/grading areas disturbed during IRM activities.
- Casie ProTank removed the steel and cast-iron subsurface storage structures and piping excavated during pre-trenching activities.
- Lash Contracting, Inc. (Lash) mobilized to the site and completed the 66-inch storm sewer repair activities.

Activities Planned for the Next Week

- NYSEG will permanently re-establish the natural gas transmission line that services Binghamton Material Handling, Inc. (BMH) located approximately at Station 201+50.
- The remaining Rain-for-Rent frac tank will be demobilized pending the results for the laboratory analysis of the surface wipe samples.
- Royal's Pavement Division will begin restoration of the BMH building parking lot.
- Royal's Pavement Division is tentatively scheduled to be complete Brandywine Avenue sidewalk repairs and remove the sidewalk closure.

- Royal is tentatively schedule to begin completion of the DNAPL/LNAPL recovery/monitoring wells. Work activities will include cutting the wells below the ground surface and installing the well vaults and caps.

- Royal will continue site restoration and site cleanup activities including: placement of topsoil, seed, and fertilizer (weather permitting); and re-establishing the NYSEG property fence line in all areas of the site.

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report # 9, on Thursday September 21, 2006, BBLES observed a small amount of bio-polymer slurry trickling into the Susquehanna River via the 24-inch and 18-inch diameter outfalls along the flood wall. On Friday September 22, 2006, air plugs were placed in the storm sewer lines to prevent bio-polymer slurry from entering the river. The air plugs and any bio-polymer slurry remaining in the piping will be removed during site restoration activities.

If there are any objections to this report, please contact Joseph Molina as soon as possible.

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David Budosh, BBLES
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NAPL BARRIER WALL CONSTRUCTION
WEEKLY PROGRESS REPORT #17

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Dates Covered: November 11, 2006 to November 17, 2006

Activities Performed During Time Period

- NYSEG permanently re-established the 2-inch diameter natural gas transmission line that services the Binghamton Material Handling, Inc. (BMH) building. The 8-inch diameter natural gas transmission line has not been reestablished.

- Royal Environmental, Inc.'s (Royal's) pavement subcontractor restored the pavement in the BMH building parking lot.

- Royal's pavement subcontractor restored the sidewalk along Brandywine Avenue.

- Royal cut the DNAPL recovery wells and the LNAPL monitoring wells to grade and installed the protective well vaults.

- Royal's fencing subcontractor began reestablishing the NYSEG property fence line along Court Street and Brandywine Avenue.

- NYSEG surveyed the location of the DNAPL recovery wells, LNAPL monitoring wells, and additional jet-grout plug panel.

- Royal continued general site restoration and site cleanup activities.

- Lash Contracting, Inc. (Lash) demobilized equipment from the site that was used to complete the 66-inch storm sewer repair activities.

Activities Planned for the Next Week

- Royal's fencing subcontractor will continue to reestablish the NYSEG property fence line.

- Royal will complete site restoration and site cleanup activities including: placement of topsoil, seed, and mulch (weather permitting).

Problems Encountered and Solutions Achieved

- None.

Items Requiring Further Action or Followup

- As indicated in Weekly Progress Report # 9, on Thursday September 21, 2006, BBLES observed a small amount of bio-polymer slurry trickling into the Susquehanna River via the 24-inch and 18-inch diameter outfalls along the flood wall. On Friday September 22, 2006, air plugs were placed in the storm sewer lines to prevent bio-polymer slurry from entering the river. The air plugs and any bio-polymer slurry remaining in the piping will be removed during site restoration activities.

If there are any objections to this report, please contact Joseph Molina as soon as possible.

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Appendix C

Photographs

Appendix C – Photographs

New York State Electric & Gas Corporation
Binghamton Court Street Former MGP Site
Binghamton, New York

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 001	
PHOTOGRAPHER: DMB	
DATE: 8/1/2006	
DIRECTION: West	
COMMENT: Material staging area consisting of HDPE liner and hay bale berms constructed near southwest corner of the site.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 002	
PHOTOGRAPHER: DMB	
DATE: 8/1/2006	
DIRECTION: Southwest	
COMMENT: Geo-Solutions performing jet-grouting in the vicinity of the 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 003 **PHOTOGRAPHER:** DMB **DATE:** 8/1/2006 **DIRECTION:** East **COMMENT:** Geo-Solutions performing jet-grouting in the vicinity of the 66-inch storm sewer. Jet-grout spoils gravity drained to return pit and subsequently transferred to material staging area.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 004 **PHOTOGRAPHER:** DMB **DATE:** 8/1/2006 **DIRECTION:** South **COMMENT:** Geo-Solutions jet grout mixing and pumping equipment.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 005 **PHOTOGRAPHER:** DMB **DATE:** 8/2/2006 **DIRECTION:** East **COMMENT:** Pre-trench excavation activities in the Binghamton Materials Handling, Inc. parking lot. Subsurface concrete walls and C&D fill material encountered in this portion of the site.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 006 **PHOTOGRAPHER:** DMB **DATE:** 8/2/2006 **DIRECTION:** West **COMMENT:** Pre-trench excavation activities in the Binghamton Materials Handling, Inc. parking lot. Subsurface concrete walls and C&D fill material encountered in this portion of the site.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 007 **PHOTOGRAPHER:** DMB **DATE:** 8/2/2006 **DIRECTION:** South **COMMENT:** Subsurface concrete wall encountered during pre-trench excavation activities in Binghamton Materials Handling, Inc. parking lot.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 008 **PHOTOGRAPHER:** DMB **DATE:** 8/3/2006 **DIRECTION:** East **COMMENT:** Subsurface concrete wall encountered during pre-trench excavation activities in Binghamton Materials Handling, Inc. parking lot.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 009	
PHOTOGRAPHER: DMB	
DATE: 8/7/2006	
DIRECTION: East	
COMMENT: C&D fill material encountered under Binghamton Materials Handling, Inc. parking lot during pre-trench excavation activities.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 010	
PHOTOGRAPHER: DMB	
DATE: 8/8/2006	
DIRECTION: East	
COMMENT: Geo-Solutions performing jet-grouting in the vicinity of subsurface utilities in front of the gas control building. Jet grout spoils gravity drained to return pit and subsequently transferred to material staging area.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 011 **PHOTOGRAPHER:** DMB **DATE:** 8/10/2006 **DIRECTION:** West **COMMENT:** Geo-Solutions performing jet-grouting in the vicinity of subsurface utilities in front of the gas control building.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 012 **PHOTOGRAPHER:** DMB **DATE:** 8/10/2006 **DIRECTION:** West **COMMENT:** Boart Longyear completing sonic drilling through subsurface concrete walls encountered in Binghamton Materials Handling, Inc. parking lot during pre-trench excavation activities to facilitate jet-grouting in this portion of the site.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 013	
PHOTOGRAPHER: DMB	
DATE: 8/16/2006	
DIRECTION: East	
COMMENT: Geo-Solutions completing jet-grouting in the Binghamton Materials Handling, Inc. parking lot.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 014	
PHOTOGRAPHER: DMB	
DATE: 8/28/2006	
DIRECTION: West	
COMMENT: Geo-Solutions conducting slurry-supported trench excavation with the long-stick excavator west of the 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 015	
PHOTOGRAPHER: DMB	
DATE: 8/31/2006	
DIRECTION: West	
COMMENT: Geo-Solutions conducting slurry-supported trench excavation west of the 66-inch storm sewer. Geo-Solutions taking measurements to verify depth of excavation.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 016	
PHOTOGRAPHER: DMB	
DATE: 8/31/2006	
DIRECTION: East	
COMMENT: Geo-Solutions installing DNAPL recovery well in barrier wall trench excavation west of 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 017	
PHOTOGRAPHER: DMB	
DATE: 8/31/206	
DIRECTION: West	
COMMENT: Geo-Solutions installing DNAPL recovery well and DNAPL collection piping in barrier wall excavation west of 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 018	
PHOTOGRAPHER: DMB	
DATE: 8/31/2006	
DIRECTION: East	
COMMENT: Geo-Solutions placing pea gravel backfill into barrier wall excavation west 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 019 **PHOTOGRAPHER:** DMB **DATE:** 8/31/2006 **DIRECTION:** East **COMMENT:** Geo-Solutions installing HDPE LNAPL barrier in barrier wall trench excavation west of 66-inch storm sewer.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 020 **PHOTOGRAPHER:** DMB **DATE:** 9/1/2006 **DIRECTION:** East **COMMENT:** HDPE LNAPL barrier anchored in barrier wall trench excavation west of 66-inch storm sewer prior bio-polymer slurry degradation.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 021	
PHOTOGRAPHER: DMB	
DATE: 9/6/2006	
DIRECTION: North	
COMMENT: Geo-Solutions installing DNAPL recovery well in south end of barrier wall excavation along Brandywine Avenue.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 022	
PHOTOGRAPHER: DMB	
DATE: 9/12/2006	
DIRECTION: Northeast	
COMMENT: Royal Environmental removing cast-iron structure associated with former MGP at station 204+70 located east of the 66-inch storm sewer jet grout panel.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 023 **PHOTOGRAPHER:** DMB **DATE:** 9/20/2006 **DIRECTION:** North **COMMENT:** Geo-Solutions degrading bio-polymer slurry along Brandywine Avenue via recirculation through the barrier wall excavation after placement of pea gravel backfill.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 024 **PHOTOGRAPHER:** DMB **DATE:** 9/29/2006 **DIRECTION:** North **COMMENT:** Barrier wall trench excavation along Brandywine Avenue completed with general fill (prior to top soil placement, sidewalk repairs, and installation of well vaults).	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 025 **PHOTOGRAPHER:** JRG **DATE:** 12/28/2006 **DIRECTION:** West **COMMENT:** Well vaults installed near 66-inch storm sewer jet grout panel following site restoration activities (facing west).	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 026 **PHOTOGRAPHER:** JRG **DATE:** 12/28/2006 **DIRECTION:** East **COMMENT:** Well vault installed near 66-inch storm sewer jet grout panel following site restoration activities (face east).	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 027	
PHOTOGRAPHER: JRG	
DATE: 12/28/2006	
DIRECTION: North	
COMMENT: Barrier wall trench excavation along Brandywine Avenue completed with top soil placement, sidewalk repairs, installation of well vaults and new perimeter fencing.	

CLIENT: NYSEG	**SITE NAME:** Binghamton Court Street Former MGP Site
PROJECT #: 13074.001	**SITE LOCATION:** Binghamton, New York
PHOTOGRAPH #: 028	
PHOTOGRAPHER: JRG	
DATE: 12/28/2006	
DIRECTION: East	
COMMENT: Pavement restoration in Binghamton Materials Handling, Inc. parking lot and installation of new perimeter fencing on eastern portion of the site.	

Appendix D

Letter to NYSDEC for Design Modifications

Transmitted Via Electronic Mail/U.S. Mail

August 15, 2006

Mr. Anthony Karwiel
New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7014
Phone (518) 402-9662
Fax (518) 402-9679

Re: NYSEG Binghamton Court Street
Former MGP Site
BBL Project #: 0130.13074

Dear Mr. Karwiel:

Per our telephone conversation on Friday afternoon, August 11, 2006, please find attached a modified design drawing for the NAPL Barrier Wall. The barrier wall configuration has been slightly modified to accommodate obstructions that were encountered during the pre-trench activities on the Binghamton Materials Handling Property at 295 Court Street.

As you are aware, we have encountered four buried foundation walls at the following approximate stations:

- 20+00
- 20+07
- 20+21
- 20+43

These walls appear to be up to 4 feet thick and vary in depth. We have confirmed that the wall at station 20+43 extends from 7 feet below ground surface (bgs) to 17 feet bgs. The wall at station 20+21 extends from approximately 1 foot bgs to at least 14 feet bgs.

The fill that was placed around these foundation walls is comprised primarily of masonry materials (full-size brick and large sections of concrete), and structural steel. There is very little soil and the fill materials have very little cohesiveness.

To install the gravel filled trench, BBL Environmental Services, Inc., an ARCADIS company (BBLES) needs to remove all obstructions from the trench alignment (including the old foundation walls). Due to the integrity of the walls, and the lack of cohesion in the surrounding fill materials, we do not believe it is feasible to remove each of the walls and install the gravel trench as originally proposed.

The modified design consists of removing the wall at station 20+43, and installing the gravel trench to station 20+21 (i.e., the west side of the foundation wall located at that station). The barrier wall between station 20+21 and station 20+07 would be jet grouted to form a low permeable barrier, and the wall be ended at station 20+07.

This modified design shortens the overall gravel trench length by less than 3.5%, and the overall barrier wall length by 0.99%. We have reviewed the observed distribution of NAPL in the subsurface in this area of the proposed trench and found that NAPL extends eastward from the site to roughly station 20+43. The original design extended the trench an additional 43 feet eastward (to station 20+00) as a conservative safety factor. We have also reviewed the 3D MODFLOW groundwater flow model that we used along with Dr. Kueper (Queens University) to develop the conceptual design for the barrier. That review indicated that the NAPL capture zone for the barrier modification proposed above would extend to approximately station 20+15, that is, only 15 feet from the original proposed end of the barrier. Based on this information, we are confident that the integrity of the barrier will be maintained with the proposed modification.

Per our telephone conversation, BBLES anticipates beginning installation of the jet grout barrier between station 20+07 and station 20+21 on Tuesday, August 15, and completing the pretrench activities (including the foundation wall removal at station 20+43) during the week of August 14.

I will be on vacation during the week of August 14, 2006. However, if you have any questions, please do not hesitate to contact Mr. Tracy Blazicek of NYSEG (607-762-8839), Mr. Joseph Molina of BBLES (585-292-6740, ext. 12), or Mr. Keith White of BBL (315-671-9530).

Sincerely,

BLASLAND, BOUCK & LEE, INC.

Margaret Carrillo-Sheridan

Margaret Carrillo-Sheridan, P.E.
Vice President

MC-S/jlc
Enclosure: 1

cc: Tracy Blazicek, CHMM, New York State Electric & Gas Corporation
Joseph Molina, P.E., BBL, an ARCADIS company
Keith White, P.G., BBL, an ARCADIS company

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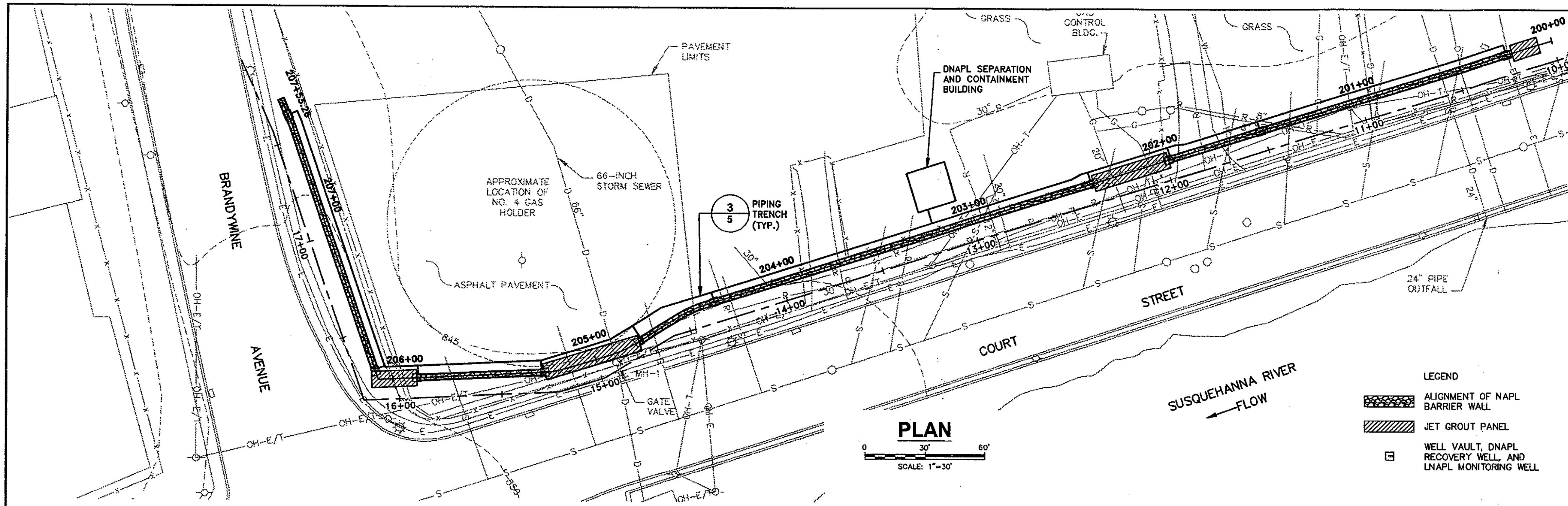
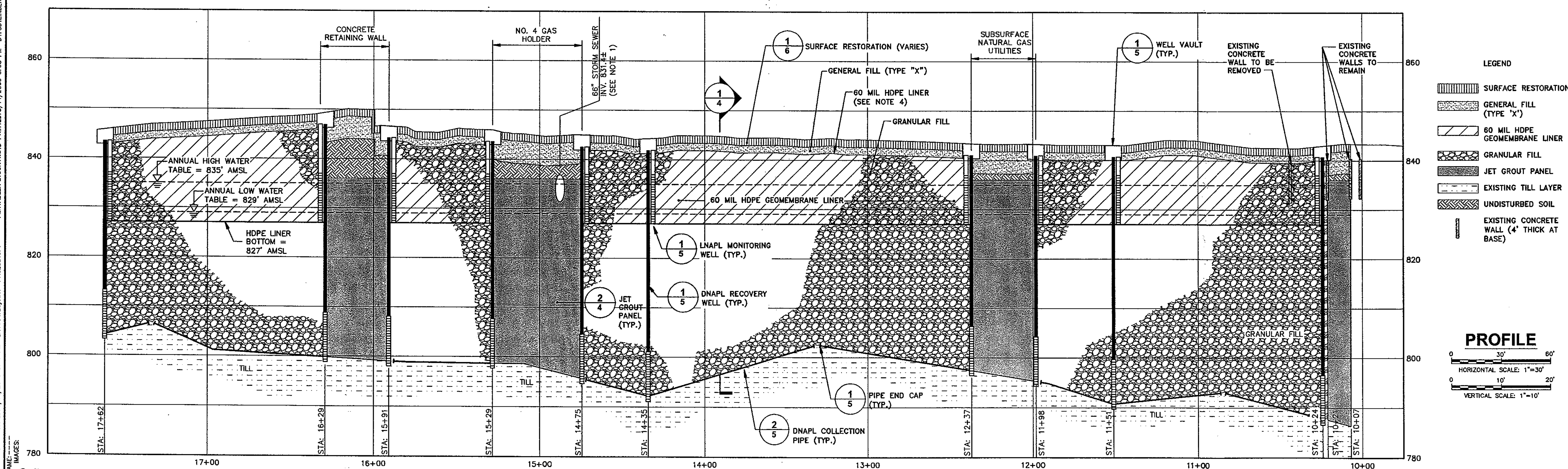


NOTES:

1. JET GROUT AREA SHOULD EXTEND A MINIMUM OF 10 FEET PAST EDGE OF 66" STORM SEWER.
2. SEE DESIGN DRAWING NO. 1 FOR LEGEND.
3. LNAPL MONITORING WELL, DNAPL RECOVERY WELL, AND WELL VAULT DIMENSIONS ARE NOT TO SCALE.
4. HDPE PANELS WILL BE OVERLAPPED A MINIMUM OF 4 FEET, AS APPROPRIATE.
5. TOP OF TILL LOCATION BASED ON SOIL BORING INFORMATION OBTAINED DURING PREVIOUS SITE INVESTIGATIONS.
6. NAPL BARRIER WALL IS PROJECTED ON THE PROFILE IN ACCORDANCE WITH THE STATIONING INDICATED ON THE PLAN. THE ACTUAL PATH OF THE NAPL BARRIER WALL WILL BE AS SHOWN ON THE PLAN.
7. NAPL BARRIER WALL ALIGNMENT AND WELL LOCATIONS TO BE MODIFIED AS NECESSARY BASED ON FIELD CONDITIONS.



Graphic Scale

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: MARGARET A. CARRILLO-SHERIDAN
Professional Engineer's No.: 082251
State: NY
Date Signed:
Project Mgr.: DLM | Designed by: MCS | Drawn by: GHS

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

NEW YORK STATE ELECTRIC & GAS CORPORATION • BINGHAMTON, NEW YORK
BINGHAMTON COURT STREET FORMER MGP SITE
NAPL BARRIER WALL IRM

PROPOSED NAPL BARRIER WALL PLAN AND PROFILE

BBL Project No. 130.61
Date JULY 7, 2006
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

2

SYR-85-GHS GHS GHS L: ON=*, OFF=REF, (0-LOOT-PNTS-WELLTOPS
F:\ACTIVE\—DWG\ACT\13061001\13061G02.DWG SAVED:6/14/2006 5:07 PM LAYOUT:Layout1 PAGESETUP:---- PENTABLE:PLTCONT1.CTB PRINTED:6/14/2006 5:08 PM BY:GSTEINBERGER
PROJECTNAME: ---- XREFS: 13061X00 13061X01 13061X02 IMAGES:

Appendix E

Jet Grout Quality Control Testing Results – Unconfined Compressive Strength and Permeability

APPENDIX E

JET GROUT QUALITY CONTROL TESTING RESULTS
UNCONFINED COMPRESSIVE STRENGTH AND PERMEABILITY

NEW YORK STATE ELECTRIC & GAS CORPORATION
BINGHAMTON COURT STREET FORMER MGP SITE
BINGHAMTON, NEW YORK

Column No.	Location	Date Sampled	Cure (Days)	Unconfined Compressive Strength (PSI)	Permeability (cm/sec)
P-3	West jet grout panel (Station 205+86 to 206+16)	7/20/2006	7	397	7.0 x 10-7
S-104	66-inch storm sewer jet grout panel (Station 204+80 to 205+39)	8/1/2006	9	272	4.1 x 10-7
S-115	66-inch storm sewer jet grout panel (Station 204+80 to 205+39)	8/4/2006	7	578	1.5 x 10-7
S-201	Eastern center jet grout pannel (Station 201+98 to 202+43)	8/8/2006	9	298	3.6 x 10-7
			28	385	--
S-213	East jet grout panel (Station 200+007 to 200+27)	8/15/2006	7	156	3.9 x 10-7
			28	530	--
S-302	East jet grout panel (Station 200+007 to 200+27)	8/17/2006	21	842	5.1 x 10-8
15° West	66-inch storm sewer jet grout panel, angled injection (Station 204+80 to 205+39)	8/23/2006	15	747	2.4 x 10-8

Note:
1. Unconfined compressive strength and permeability tested by Geotechnics Geotechnical and Geosynthetic Laboratory located in East Pittsburgh, PA.
2. -- = Indicates the sample was not tested for the given parameter.
3. PSI = Pounds per square-inch.

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Appendix F

IRM Monitoring Log

DRAFT

IRM MONITORING LOG
STORM SEWER INTERIM REMEDIAL MEASURE MONITORING PROGRAM

NEW YORK STATE ELECTRIC & GAS CORPORATION
COURT STREET SITE
BINGHAMTON, NEW YORK

Date/Time: July 25, 2006 10:15 to 11:30 AM, August 24, 2006 9:30 to 10:00 AM
Monitoring Personnel: Wayne DeCarr, Tim Henson and Roger Elliot
Weather: Sunny, 80 degrees for both dates

1. Infiltration observed? No
2. Staining observed? Yes

If yes to either 1 or 2 above, monitoring personnel must complete the required documentation below.

Distance Downstream of Manhole MH-2 (ingress/ egress)	The location of the staining or location of infiltration with respect to the circumference of the pipe wall (e.g., using clock position[4])	Approximate surface area of the staining	Description (including approximate dimensions) of the opening or breach in the liner in which staining/infiltration is observed
101 feet	Right side (west side) from 12 o'clock to 4 o'clock position	Approximately 1.4 sq.ft. (~ 3"wide X 69"long)	Infiltration appears to be from a seam in the liner. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
104 feet	Right side (west side) from 12 o'clock to 4 o'clock position	Approximately 1.0 sq.ft. (~ 2"wide X 69"long)	Infiltration appears to be from a a seam in the liner. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
108 feet	Right side (west side) from 2 o'clock to 6 o'clock position	Approximately 2.9 sq.ft. (~ 6"wide X 69"long)	Infiltration appears to be from a plug (~1") in the liner where grout was added. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
114 feet	Right and left side (all the way around)	Approximately 2.9 sq.ft. (~ 2"wide X 207" long).	Infiltration appears to be from a seam in the liner. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
174 feet	Right side (west side) from 12 o'clock to 6 o'clock position.	Approximately 0.7 sq.ft. (~ 1"wide X 104"long)	Infiltration appears to be from a seam in the liner. No breach was observed only a thin (less than 1/8 inch) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
259 feet	Right and left side (all the way around)	Approximately 4.3 sq.ft. (~ 3"wide X 207"long)	Infiltration appears to be from a seam in the liner. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.
267 feet	Left side (east side) from 11 o'clock to 6 o'clock position	Approximately 3.0 sq.ft. (~ 5"wide X 87"long)	Infiltration appears to be from a seam in the liner. No breach was observed only a thin (less than 1/8 inch thick) build-up on the pipe wall of a brown/black residue with a watery consistency and a coal tar-like odor.

Notes:

1. NAPL - non-aqueous phase liquid.
2. Observations shall be measured from manhole MH-2 using a tape measure.
3. Reference to photograph and/or videotape documentation shall be provided as appropriate.
4. Clock position along the pipe circumference (looking downstream) shall refer to the following:
   - 12 o'clock to refer to the top of the pipe (overhead);
   - 3 o'clock to refer to the midpoint (between the 12 o'clock and 6 o'clock positions) along the right side of the pipe sidewall;
   - 6 o'clock to refer to the bottom of the pipe;
   - 9 o'clock to refer to the midpoint (between the 12 o'clock and 6 o'clock positions) along the left side of the pipe sidewall; and
   - Appropriate clock positions between the above-referenced locations.

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Appendix G

Repair Procedures for Danby PVC Lining System in the Existing 66-inch Diameter Storm Sewer

Danby of North America, Inc.
P.O. Box 5127
Cary, North Carolina 27512-5127
Tel: (919) 467-7799
Fax: (919) 467-7754

Tim Higgins
Lash Contracting, Inc.
794 Watervliet Shaker Road
Latham. NY 12110

Re: Binghamton Repair of Danby Lining in 66" RCP

I have reviewed the photos you sent on the NAPL leaks in the Binghamton 66" RCP storm drain that was lined with Danby in 2003. It appears that 6 of the 7 leaks described were due to leaks at the joiner strip. The 7th was due to lack of sealing under a grout cap. Without further physical inspection it is not possible to determine the extent of the leaking joints. For example, the photos you sent appear to be leaks from small leaks at one point in the joint with the NAPL then running down the liner along the joiner strip. These should be fairly easy to fix with either the 3M product we recommend or thermal welding. On the other hand, the two cases (114' & 259') where the NAPL leakage goes all the way around the inner surface probably indicates extensive joint leakage vs small point sources. These too can be fixed using the same methods but will take longer. (It is possible that these larger leaks can be eliminated or reduced simply by re-seating the joiner strip with hammer blows. DO NOT remove the old joiner strip.) Thus I recommend the following procedure:

1. Clean the NAPL leakage with absorbent paper cloth away from the PL3 joints to determine the source and extent of the leakage.
2. Using a solvent appropriate for NAPL, clean the PVC surface in the immediate vicinity of the leak.
3. Wipe the area clean and dry.
4. If the flow of NAPL from the leak is temporarily stopped;
5. Following manufacturer's recommended practice (including applying surface cleaner & abrading) apply 3M DP- 605 Scotch-Weld to the area.
6. If the flow of NAPL continues;
7. Following manufacturer's recommended practice, seal the leak by injecting urethane foam through the PVC material at the leak location.
8. After the leak abates, follow step #5 above.
9. For the cases of greater leakage extent (@ 114' & 259'), first assure good seating and locking of the joiner strip in the PL3 edge joint by firm hammer blows along the entire extent of the leaking area, and then follow steps #1 -#8.
10. For the case of the leak at the grout plug, remove the old grout plug, follow steps #1-#8 as appropriate with the Scotch-Weld product applied under the rim of the new grout plug.

I have reviewed the photos of the drill damage in the Binghamton 66" RCP storm drain that was lined with Danby in 2003. It appears that the extent of the damage is about 2 feet or less in each of the 3 locations. The most seriously damaged area is the one where the drill actually breached the Danby liner and split the strip over about a 2-foot length. The other 2 areas have liner deformation but no breach.

All 3 areas can be repaired without permanent damage to the structure. However, the presence of the (urethane?) foam presents some uncertainties about the best method of repair that can only be resolved by physical inspection by our field staff. Further, I will need to know the specific foam product used in the temporary repair. I recommend the following procedure:

1. Remove the foam product from the surface of the PVC.
2. Using a fine grit 4" grinder, cut out the entire damaged section of PL3, the cuts in the vertical direction should be parallel to the joiner strip such that the removed section is 10.0" wide.
3. Remove any materials (grout or foam) from behind the cutout section and extending as far as practical behind the remaining PVC PL3 in all 4 directions. At the top of the cutout area, remove material behind the "good" PL3 in the center of the panel to provide a grout flow path from a 1+ 9/16" hole drilled 3" above the top of the cutout.
4. Cut a section of Danby "Invert Liner" to the length of the removed section less 0.25".
5. As a trial fit, flex the "Invert Liner" patch into an arch across the width with the ribs on the inside of the arch and then engage the edge connectors onto the cut edge of the PL3, releasing the arch as allowed by the fit.
6. If interference is experienced before the patch is fully engaged along the edge cut, remove up to 1.0" (or more) of the long lip of the edge connector and retry the trial fit of #5. Repeat as necessary to obtain a satisfactory fit and then remove the patch.
7. Following manufacturer's recommended practice (including applying surface cleaner & abrading) apply 3M DP- 605 Scotch-Weld to the entire area adjacent to the cut edges of the PL3 (suggest 3 parallel heavy beads spaced 0.25" apart) as well as one heavy bead on the inner surface of the short lip of the "Invert Liner" edge connector.
8. Insert the patch as in #5 above leaving approximately equal 1/8" gap between the top and bottom of the patch and the top and bottom of the horizontal 10" cut edges of the PL3. Firmly press the lips of the patch edge connectors to distribute the Scotch-Weld approximately uniformly and in intimate contact with both materials' surfaces. Wipe off excess adhesive/sealer from the surfaces but insuring that the adhesive/sealer is uniformly in contact with the edge of the patch and the PL3.
9. Cut 2 pieces of Danby "H" strip each 11" long. Remove the top portion of the "H" strip by cutting through the center post just below the top (the top may be slightly arched). Remove 1/2" of the center post from each end, leaving approximately 10". Repeat for the second 11" long "H" strip.
10. Place 3 heavy beads of Scotch-Weld entirely around the 1/8" gap between the patch and the PL3 as well as under the top of the 11" long modified "H" strip (now a short and wide "T" strip). Press the short (about 1/2") center post of the "T" strip into the 1/8" gap between the patch and the PL3. Put pressure on the "T" strip to insure distribution of the Scotch-Weld and intimate contact with both surfaces. Wipe off excess adhesive/sealer from the surfaces but insuring that the adhesive/sealer is uniformly in contact with the edge of the patch and the PL3.
11. Repeat #10 for the second 11" "T" strip.
12. After the Scotch-Weld has cured and formed good adhesive bonds (see 3M literature), fill the cavity behind the patched area with a flowable high strength cementitious grout via the 1+9/16" hole at thetop end of the patch area. Avoid trapping air by placing the grout through a tube/hose that

extends down to the bottom of the cavity but does not prevent air from escaping through the grouting hole.

13. When the grout fills the cavity, insert a Danby grout plug in the hole. Seal the grout plug with Scotch-Weld under the lip of the grout plug. Make sure both surfaces are clean and dry when the Scotch-Weld is applied.
14. Depending on the vertical length of the patch, external support of the patch may be required to prevent buckling due to grout hydrostatic pressure. If so, it may be advantageous to use a quick setting grout.

If you need additional information, please let me know.

Best regards,

George McAlpine

George McAlpine
President

cc: Joe Molina, BBL

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Appendix H

Summary of Repairs for the Danby PVC Lining System in the Existing 66-inch Diameter Storm Sewer

NEW YORK STATE ELECTRIC & GAS
BINGHAMTON COURT STREET SITE
<u>REPAIRS TO 66-INCH-DIAMETER STORM SEWER</u>

<u>Monday, November 6, 2006</u> – LASH Contracting, Inc. (LASH) mobilized to the site and set up 2 diesel Godwin Pumps, an 8-inch-diameter and a 12-inch-diameter, at MH-2 with steel on grade discharge pipe to MH-1.

<u>Tuesday, November 7, 2006</u> – LASH installed a 4-inch-diameter electric submersible pump in the Tompkins Street Stormwater Pump Station (TSSWPS) and began pipe/pump station dewatering. After several hours LASH determined that the 4-inch-diameter submersible pump was insufficient to dewater.

Tracy Blazicek of New York State Electric & Gas (NYSEG) visited the site to observe progress and discuss the project. George and Keith McAlpine of Danby North America, Inc. (Danby) arrived at the site to assist in repairs throughout the week.

<u>Wednesday, November 8, 2006</u> – LASH mobilized a second 8-inch-diameter Godwin Pump and set the pump adjacent to the TSSWPS and along with the 4-inch-diameter electric submersible pump began dewatering activities. After several hours of pumping the pipe was dewatered enough for LASH to make a reconnaissance of the pipeline to visually inspect the areas to be repaired.

During the day on and off rain showers caused an increase of storm water run off flow into the storm sewer system. The diesel pumps that LASH had set up were of sufficient capacity to handle the flow when it was not raining but as the rain continued it became apparent that the diesel pump at the TSSWPS would not keep up with the moderate rain event. Blasland, Bouck & Lee, Inc., an ARCADIS company (BBL) looked at the 10 day forecast and determined that the following 2 days, Thursday and Friday, would be the last rain free days before a series of heavy rain storms would reach the Binghamton, New York area. BBL made the decision to proceed with the repairs on Thursday and Friday and work late if necessary to complete all of the repairs.

Tracy Blazicek of NYSEG visited the site along with John Ferraro of Rochester Gas & Electric (RG&E).

<u>Thursday, November 9, 2006</u> – LASH dewatered the TSSWPS, installed an inflatable sewer plug just downstream of MH-2, and began pipe repairs.

LASH worked on the area of the storm sewer just upstream of Manhole No. 1 where the pipe was damaged during the NAPL interception trench installation. The three areas damaged (one damaged from the jet grout drill, the other two from drilling water that caused buckling due to hydraulic pressure) were repaired by cutting out the damaged liner section, removing the grout layer from behind the liner (grout layer approximately ½-inch thick), cleaning the edges of the intact adjacent liner, putting a urethane sealant on the overlapping edges of the patch and intact liner and securing the patch to the intact liner with ¾-inch long stainless steal screws. To complete the repair in these three spots grout will be injected behind the patches on Friday, November 10, 2006. LASH also prepared the locations identified by BBL during the July 25, 2006 and August 24, 2006 pipe inspections and several other areas identified by BBL on November 9, 2006.

John Ferraro of RG&E visited the site and looked at the Danby Liner System in the pipe and under Court Street to see if the system could be used on a project they have at RG&E.

NEW YORK STATE ELECTRIC & GAS
BINGHAMTON COURT STREET SITE
REPAIRS TO 66-INCH-DIAMETER STORM SEWER

Friday, November 10, 2006 – LASH dewatered the pump station and ran the bypass pump at MH-2 pumping to MH-1. LASH completed the repairs where the drill damage was done by placing non-shrink grout behind the three repair patches installed on November 9, 2006. LASH removed a 10-inch by 10-inch section of liner across the seam at the seam leak at the 259 feet downstream of manhole MH-2 location. The 10-inch by 10-inch section was removed from the 3 o'clock pipe position. The grout appeared to be homogeneous with no voids and in good condition. LASH installed a repair patch on the inspection location using same procedures described above for the drill damage areas. LASH made repairs to the seven locations identified during the July and August 2006 pipe inspections and at eight other locations identified by BBL on November 9, 2006.

The 16 identified leaking areas fell into three categories as follows:

- 2 leaks due to missing grout plugs;
- 2 leaks due to leaking grout plugs; and
- 11 leaks due to leaking seams.

LASH replaced missing and leaking plugs and sealed the plugs with 3M Scotch-Weld® urethane adhesive DP605NS. LASH cleaned and sealed the leaking seams with the same 3M Scotch-Weld® urethane adhesive.

LASH removed the inflatable sewer plug from the 66-inch-diameter storm sewer and disconnected/broke down the Godwin Pumps at MH-2 and the TSSWPS. LASH picked up and left site for the weekend with plans to return Tuesday, November 14, 2006 to oversee pickup of the two Godwin diesel pumps and to make repairs to the top section of manhole MH-2.

Tuesday, November 14, 2006 – LASH completed removal of the Godwin diesel pumps and steel on grade piping. LASH also repaired the top section of manhole MH-2 that was damaged during the pipe dewatering operations.

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Appendix I

Specification Information for Adeka Sealant

ADEKA ULTRA SEAL

A-30

OCM, Inc. Chicago, IL

Sales Information: (847) 955-9700

Contact Local Representative

Technical Information :(800) 999-3959

Properties	A-30 Resin	A-30 Catalyst
Appearance	Clear Liquid	Clear Liquid
SP (72° F.)	1.05	1.09
Viscosity (MPa.x/77° F).	2000~3000	300~800
Mixing Ratio (resin:catalyst)	**15:1**	
Pot life 50% RH (70~75 deg.F.)	**1~2 Hours**	
Gel time 50% RH (70~75 deg.F.)	**5~6 Hours**	
Cure time 50% RH (70~75 deg.F.)	**12~18 Hours**	

ADEKA ULTRA SEAL A-30 - Improved waterstop system for sealing sheet pile interlocks prior to driving.

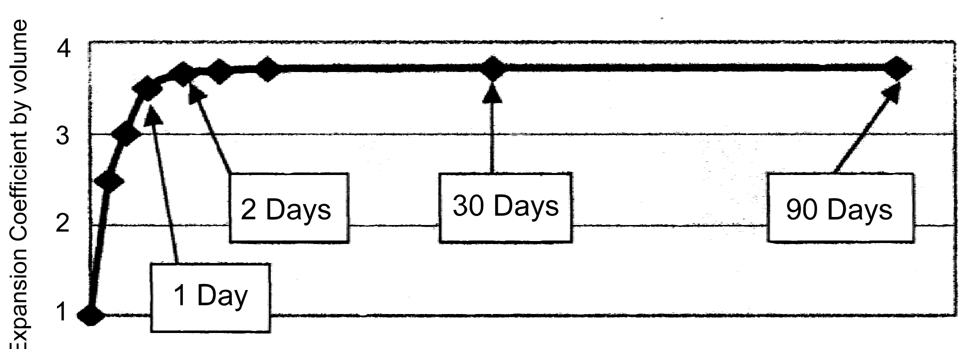
Packaging	(2 components - 15:1 ratio) **:**
A-30 Resin	20 Liter (5.3 gallon) pail - Net - 15 kg (14.28 liters - 3.77 gallons)
A-30 Hardener	1 Liter (1.06 quart) can - Net - 1 kg (0.92 liters - 0.97 quarts)

Total Net = Resin + Catalyst = 15.20 Liters = 4.0 Gallons

Characteristics:

1. Improved chemical resistance and durability even under alkaline ground water conditions.
2. Easy to use two part urethane system. Packaged in ratio amounts. No measuring necessary.
3. The curing process begins when the two components are mixed (chemical cure). Curing is not as dependent on humidity and temperature.
4. Cured A-30 has excellent adhesive strength.
5. A-30 has a high rate of expansion and will withstand approximately 160 foot hydrostatic head (50 meters).

A-30 Expansion Curve



Immersion time (days)

A-30 APPLICATION PROCEDURES:

Application of A-30 and pile driving procedures are identical with published Adeka Ultra Seal A-50 instructions except for mixing procedures and pot life of mixed material.

Basic Application:

1. Thoroughly clean socket (female) side of the interlock. Remove any rust or dirt from the interlock section. Use wire brush or small sander and air blast to remove any debris. Wipe with solvent if any oil or grease is present.
2. LEVEL PILES AND PLUG ENDS (FOAM WORKS WELL). **MAINTAIN LEVEL UNTIL A-30 IS CURED.**
3. Pour A-30 catalyst (1 liter can) into A-30 resin (5 gallon pail).
4. Mix thoroughly (hand mix by stirring or use power mixer).
5. Pour appropriate amount of A-30 into the level interlock. The amount of A-30 required will vary depending on type of sheet pile. Check with your local representative for recommended coverage.
6. Protect the sheet pile from premature exposure to moisture prior to driving.
7. Drive pile with male or thumb side leading.
8. Drive to final depth at initial driving time. The sheet must be driven to final depth within 2 hours once the pile is in contact with water.

A-30 Cold Temperature Cure Times in Hours
(approximate - not specification)

Temperature Degrees F.	Curing Time Hours
0	168
20	120
30	72
50	36
70	16

Curing time is dependent on environmental conditions and thickness of A-30. Your curing time may vary significantly from above values. Check curing stage before moving sheet piles.

A-30 IS AN IMPROVED VERSION OF A-50

A-30 has good resistance to a number of chemical contaminants. Some chemicals in higher concentrations may affect the performance of A-30. Consult your local Adeka representative before using in a contaminated area. Or call (800) 999-3959 for more information. Visit www.adeka.com for more information.

OCM, INC.

Sales Information: (847) 955-9700 Technical Information (800) 999-3959

ADEKA ULTRA SEAL A-30
SEAL SHEET PILE INTERLOCKS
BEFORE DRIVING

A-30 is an excellent choice for sealing sheet pile interlocks. Following are general comments regarding A-30 installation and performance. **A-30 is a two component product mixed in a 15:1 ratio. The expansion coefficient is approximately 3 times by volume .**

1. Level sheet piles in the horizontal position with the receiving socket exposed for filling. Clean thoroughly. Pour A-30 into the socket portion of the interlock to the appropriate depth. Before applying A-30, measure the maximum gap when the pile interlock is in its widest position (between male/female sides). Fill interlock to a depth equal to the widest gap of the paired interlock. For example, if the gap between the male and female side of the interlock is 1/8", the depth of A-30 must be 1/8". **IMPORTANT- DO NOT APPLY LESS THAN REQUIRED. INSUFFICIENT AMOUNTS OF A-30 MAY ALLOW WATER MIGRATION THROUGH THE LOCKS.**

2. A-30 will bond to the steel and cure to a cloudy translucent rubber like material. If long term storage is anticipated, invert piles and cover. Piles may be driven anytime after the A-30 has cured.

3. When exposed to high humidity or moisture, the material may change to a white color. Since A-30 has an expansion rate of 3 times by volume, a slight amount of expansion will not affect its function or performance. Although high humidity will not damage the material, do not let allow the material to be exposed to rain or other sources of water.

4. If gaps in the "bead" of A-30 occur, they can be filled with new A-30. New A-30 can be brushed on for a light touch up. A-30 will bond to the steel and the cured A-30.

5 As sheet piles are "threaded" or put together, portions of the A-30 bead may be scraped, gouged or otherwise displaced depending on interlock clearances. This is normal; since A-30 expands up to 3 times by volume, only small quantities are required to effectively seal the interlock areas.

6. Temperatures - Driving temperatures will not damage the function of the A-30. However, in some rare instances it can be physically damaged if the driving temperatures cause the material to burn.

7. A-30 **has** excellent resistance to many chemical contaminants. Very low levels of contaminants such as oils, fuels, gasolines, coal tars, creosote and others may be present without deteriorating A-30. Check with your local representative before using in the presence of **any** contaminants. A pH level between 4 and 9 is generally safe*. We **request** information about **any** projects where A-30 may be in contact with chemical contaminants. We will advise and make recommendations based on each individual case and contaminant level.

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Appendix J

Air Monitoring Results

VOCs

BBL ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG Binghamton IRM **Date:** 9/5/06
Monitoring Instruments: MiniRAE 2000
Air Monitor: W.K.D **Activity:** Pre Trench Excavation
Level of Protection: Level D

Time	Location	Instrument Reading Upwind	D1	D2	Comments
9:00	Station 1542	0.00	0.7	0.9	Excavating Buried Structure @Station 1542
9:20		0.00	0.0	0.8	
9:30		0.00	0.6	0.9	
10:10		0.00	0.0	0.9	
10:30		0.00	0.0	0.7	
10:45		0.00	0.8	0.9	
11:15		0.00	0.5	0.8	
11:30		0.5	0.0	0.9	
Lunch & Excavator Repairs		0.3	0.2	0.6	
145		0.3	0.0	0.6	
2:05		0.0	0.0	0.6	
2:45		0.0	0.0	0.7	
3:15		0.0	0.5	0.0	

Dust

BBL ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG-Binghamton IRM
Date: 7/5/06
Monitoring Instruments: Dust Trak
Air Monitor: WKD
Activity: Pre Trench Excavation
Level of Protection: Level D

Time	Location	Instrument Reading: Upwind	D1	D2	Comments
9:00	Station 1542	—	—	—	Excavating Buried Structure @Station 1542
9:20		—	—	—	
9:30		—	—	—	
10:10		0.057	0.075	—	
10:30		0.048	0.057	0.055	
10:45		0.058	0.044	0.044	
11:15		0.045	0.042	0.043	
11:30		0.058	0.041	0.042	
Lunch + Eq Repairs		—	—	—	
1:45		0.028	0.035	0.032	
2:05		0.019	0.023	0.024	
2:45		0.020	0.020	0.022	
3:15		0.023	0.016	0.020	
3:30		0.015	0.023	0.020	

TrakPro v3.41, Test: Test004, Date: 07/05/2006 09:41:23
Serial Number: 85201544
Cal. Date: Aerosol
06/14/2006 7/5/06 Upwind

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/05/2006	09:56:23	0.053
07/05/2006	10:11:23	0.057
07/05/2006	10:26:23	0.246
07/05/2006	10:41:23	0.113
07/05/2006	10:56:23	0.045
07/05/2006	11:11:23	0.041
07/05/2006	11:26:23	0.042
07/05/2006	11:41:23	0.050
07/05/2006	11:56:23	0.053
07/05/2006	12:11:23	0.035
07/05/2006	12:26:23	0.041
07/05/2006	12:41:23	0.037
07/05/2006	12:56:23	0.034
07/05/2006	13:11:23	0.033
07/05/2006	13:26:23	0.029
07/05/2006	13:41:23	0.028
07/05/2006	13:56:23	0.023
07/05/2006	14:11:23	0.019
07/05/2006	14:26:23	0.018
07/05/2006	14:41:23	0.020
07/05/2006	14:56:23	0.015
07/05/2006	15:11:23	0.024
07/05/2006	15:26:23	0.015
07/05/2006	15:41:23	0.016
07/05/2006	15:56:23	0.017
07/05/2006	16:11:23	0.017
07/05/2006	16:26:23	0.014

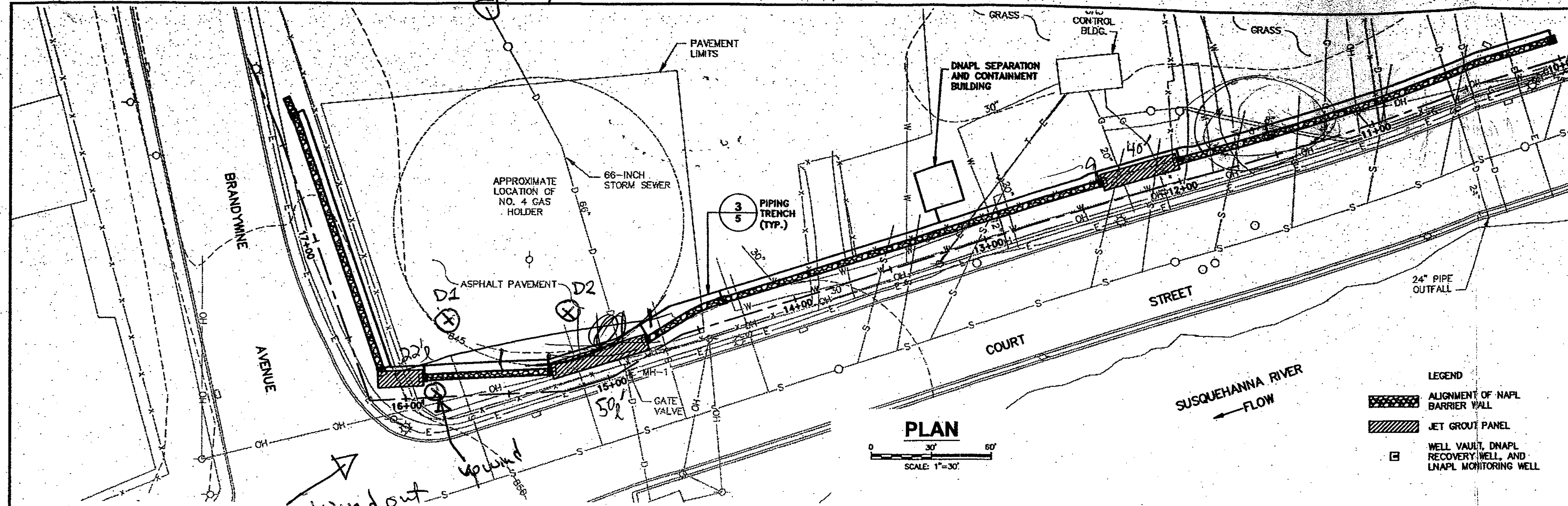
TrakPro v3.41, Test: Test001, Date: 07/05/2006 09:59:49
Serial Number: 85201531
Cal. Date: Aerosol
06/07/2006 7/5/06 D1

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/05/2006	10:14:49	0.075
07/05/2006	10:29:49	0.057
07/05/2006	10:44:49	0.044
07/05/2006	10:59:49	0.045
07/05/2006	11:14:49	0.042
07/05/2006	11:29:49	0.056
07/05/2006	11:44:49	0.059
07/05/2006	11:59:49	0.058
07/05/2006	12:14:49	0.039
07/05/2006	12:29:49	0.043
07/05/2006	12:44:49	0.038
07/05/2006	12:59:49	0.035
07/05/2006	13:14:49	0.035
07/05/2006	13:29:49	0.033
07/05/2006	13:44:49	0.030
07/05/2006	13:59:49	0.023
07/05/2006	14:14:49	0.022
07/05/2006	14:29:49	0.019
07/05/2006	14:44:49	0.020
07/05/2006	14:59:49	0.026
07/05/2006	15:14:49	0.023
07/05/2006	15:29:49	0.023
07/05/2006	15:44:49	0.026
07/05/2006	15:59:49	0.016
07/05/2006	16:14:49	0.014
07/05/2006	16:29:49	0.017

TrakPro v3.41, Test: Test001, Date: 07/05/2006 10:13:01
Serial Number: 85201529
Cal. Date: Aerosol
06/06/2006 7/5/06 D2

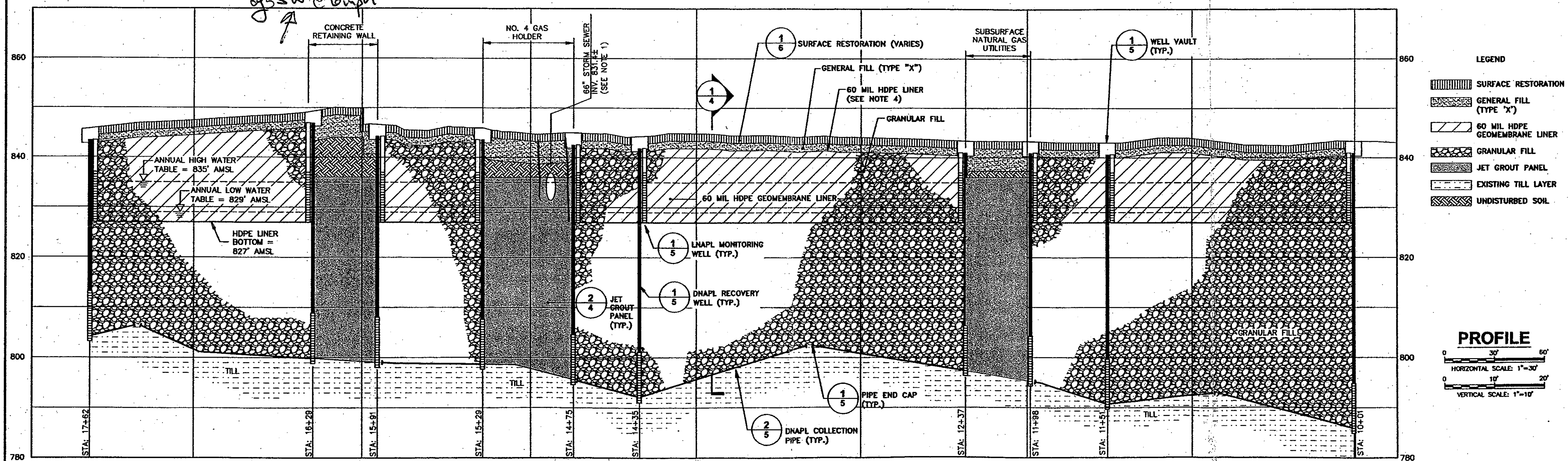
Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/05/2006	10:28:01	0.055
07/05/2006	10:43:01	0.044
07/05/2006	10:58:01	0.046
07/05/2006	11:13:01	0.043
07/05/2006	11:28:01	0.043
07/05/2006	11:43:01	0.051
07/05/2006	11:58:01	0.057
07/05/2006	12:13:01	0.039
07/05/2006	12:28:01	0.045
07/05/2006	12:43:01	0.042
07/05/2006	12:58:01	0.036
07/05/2006	13:13:01	0.038
07/05/2006	13:28:01	0.035
07/05/2006	13:43:01	0.032
07/05/2006	13:58:01	0.026
07/05/2006	14:13:01	0.024
07/05/2006	14:28:01	0.022
07/05/2006	14:43:01	0.022
07/05/2006	14:58:01	0.020
07/05/2006	15:13:01	0.027
07/05/2006	15:28:01	0.020
07/05/2006	15:43:01	0.022
07/05/2006	15:58:01	0.017
07/05/2006	16:13:01	0.017

July 5, 2006 Air Monitor Locations



NOTES:

1. JET GROUT AREA SHOULD EXTEND A MINIMUM OF 10 FEET PAST EDGE OF 66" STORM SEWER.
2. SEE DESIGN DRAWING NO. 1 FOR LEGEND.
3. LNAPL MONITORING WELL, DNAPL RECOVERY WELL, AND WELL VAULT DIMENSIONS ARE NOT TO SCALE.
4. HDPE PANELS WILL BE OVERLAPPED A MINIMUM OF 4 FEET, AS APPROPRIATE.
5. TOP OF TILL LOCATION BASED ON SOIL BORING INFORMATION OBTAINED DURING PREVIOUS SITE INVESTIGATIONS.
6. NAPL BARRIER WALL IS PROJECTED ON THE PROFILE IN ACCORDANCE WITH THE STATIONING INDICATED ON THE PLAN. THE ACTUAL PATH OF THE NAPL BARRIER WALL WILL BE AS SHOWN ON THE PLAN.
7. NAPL BARRIER WALL ALIGNMENT AND WELL LOCATIONS TO BE MODIFIED AS NECESSARY BASED ON FIELD CONDITIONS.



X: 13061X00.DWG, X01.DWG, X02.DWG
L: ON=*, OFF=REF
P: PAGESET/PLT-CDL
5/3/06 SYR-85-GHS PRO GHS
13061001/13061G02.DWG

DRAFT
NOT FOR CONSTRUCTION

Graphic Scale

THIS DRAWING WAS PREPARED AT THE SCALE INDICATED IN THE TITLE BLOCK. INACCURACIES IN THE STATED SCALE MAY BE INTRODUCED WHEN DRAWINGS ARE REPRODUCED. USE THE GRAPHIC SCALE BAR IN THE TITLE BLOCK TO DETERMINE THE ACTUAL SCALE OF THIS DRAWING.

No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: MARGARET A. CARRILLO-SHERIDAN
Professional Engineer's No.: 082251
State: NY | Date Signed:
Project Mgr.: DLM | Designed by: MCS | Drawn by: GHS

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

NEW YORK STATE ELECTRIC & GAS CORPORATION • BINGHAMTON, NEW YORK
BINGHAMTON COURT STREET FORMER MGP SITE
NAPL BARRIER WALL IRM

PROPOSED NAPL BARRIER WALL PLAN AND PROFILE

BBL Project No. 130.61
Date MAY 2006
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

2

VOC's

BBL ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG Binghamton - Court St **Date:** July 6, 2006

Monitoring Instruments: Mini Rae 2000

Air Monitor: [illegible] **Activity:** Pretrench Excavation

Level of Protection: Level D

Time	Location	Instrument Reading (upwind)	D1	D2	Comments
10:00	work @ station 1485	0.0	0.0	0.0	
10:15	1455	0.0	0.2	0.0	
10:30	1440	0.0	0.0	0.0	
11:00	1420	0.0	0.0	0.0	
11:15	1410	0.0	0.1	0.0	
11:30	1405	0.1	0.0	0.0	
11:45	work @ station 1405	0.2	0.0	0.1	
Lunch	—	—	—	—	
13:00		0.00	0.0	0.0	
13:15		0.0	0.0	0.0	
13:30		0.0	0.0	0.0	
13:45		0.0	0.0	0.0	
14:00		0.0	0.0	0.0	
14:15		0.0	0.0	0.0	
14:30	Excavation @	0.0	0.0	0.0	
14:45	station 15+42	0.0	0.0	0.0	
15:00		0.0	0.0	0.0	
15:30		0.0	0.0	0.0	
16:00	Wall Demolition @	0.0	0.0	0.0	
16:30	Station 16+00	0.0	0.0	0.0	

04/28/06
https://www.mybbl.com/MyBBL/FileArchive/Corporate Forms/Health Safety/Standard_BBLES_HASP_Forms.doc

BBL ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG Binghamton - Court St. **Date:** July 6, 2006

Monitoring Instruments: Dust Trak

Air Monitor: WKD **Activity:** Pretrench Excavation

Level of Protection: Level D

Time	Location	Instrument Reading Upwind	D1	D2	Comments
10:00	station@station 1485	0.007	0.025	0.014	
10:15	1455	0.011	0.025	0.014	
10:30	1440	0.011	0.021	0.014	
1100	1420	0.006	0.035	0.012	
11:15	1410	0.008	0.041	0.026	
11:30	1405	0.008	0.045	0.016	
11:45	1405	0.007	0.055	0.014	
lunch		—	—	—	
13:00		0.007	0.028	0.015	
13:15		0.005	0.049	0.015	
13:30		0.004	0.069	0.012	
13:45		0.017	0.034	0.012	
14:00		0.006	0.093	0.012	
14.15		0.003	[illegible]	0.017	
14:30	Excavation@	0.015	0.032	0.016	
14:45	station 15+43	0.057	0.108	0.028	
15:00		0.030	0.103	0.017	
15:30		0.026	0.031	0.055	
16:00	Wall Demolition	0.013	0.014	0.026	
16:30	@ station 16+00	0.009	0.018	0.015	

TrakPro v3.41, Test: Test005, Date: 07/06/2006 09:37:12
Serial Number: 85201544
Cal. Date: Aerosol
06/14/2006

7/6/06 Upwind

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/06/2006	09:52:12	0.012
07/06/2006	10:07:12	0.014
07/06/2006	10:22:12	0.011
07/06/2006	10:37:12	0.011
07/06/2006	10:52:12	0.006
07/06/2006	11:07:12	0.006
07/06/2006	11:22:12	0.008
07/06/2006	11:37:12	0.008
07/06/2006	11:52:12	0.007
07/06/2006	12:07:12	0.008
07/06/2006	12:22:12	0.019
07/06/2006	12:37:12	0.009
07/06/2006	12:52:12	0.009
07/06/2006	13:07:12	0.010
07/06/2006	13:22:12	0.005
07/06/2006	13:37:12	0.004
07/06/2006	13:52:12	0.017
07/06/2006	14:07:12	0.006
07/06/2006	14:22:12	0.006
07/06/2006	14:37:12	0.015
07/06/2006	14:52:12	0.057
07/06/2006	15:07:12	0.030
07/06/2006	15:22:12	0.031
07/06/2006	15:37:12	0.026
07/06/2006	15:52:12	0.021
07/06/2006	16:07:12	0.013
07/06/2006	16:22:12	0.009
07/06/2006	16:37:12	0.009

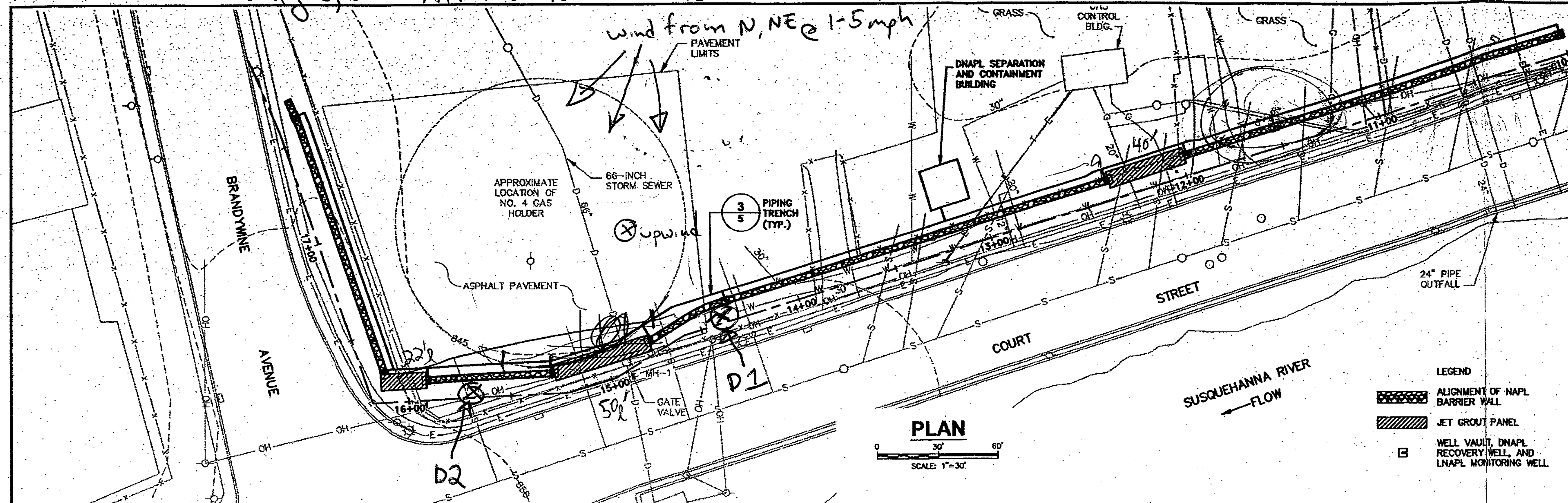
TrakPro v3.41, Test: Test002, Date: 07/06/2006 10:02:13
Serial Number: 85201531
Cal. Date: Aerosol
06/07/2006 7/6/06 D1

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/06/2006	10:17:13	0.025
07/06/2006	10:32:13	0.021
07/06/2006	10:47:13	0.028
07/06/2006	11:02:13	0.035
07/06/2006	11:17:13	0.041
07/06/2006	11:32:13	0.045
07/06/2006	11:47:13	0.055
07/06/2006	12:02:13	0.037
07/06/2006	12:17:13	0.026
07/06/2006	12:32:13	0.020
07/06/2006	12:47:13	0.012
07/06/2006	13:02:13	0.025
07/06/2006	13:17:13	0.049
07/06/2006	13:32:13	0.069
07/06/2006	13:47:13	0.034
07/06/2006	14:02:13	0.093
07/06/2006	14:17:13	0.127
07/06/2006	14:32:13	0.032
07/06/2006	14:47:13	0.108
07/06/2006	15:02:13	0.103
07/06/2006	15:17:13	0.147
07/06/2006	15:32:13	0.031
07/06/2006	15:47:13	0.090
07/06/2006	16:02:13	0.041
07/06/2006	16:17:13	0.014
07/06/2006	16:32:13	0.018
07/06/2006	16:47:13	0.031

TrakPro v3.41, Test: Test002, Date: 07/06/2006 10:08:59
Serial Number: 85201529
Cal. Date: Aerosol
06/06/2006 7/6/06 DZ

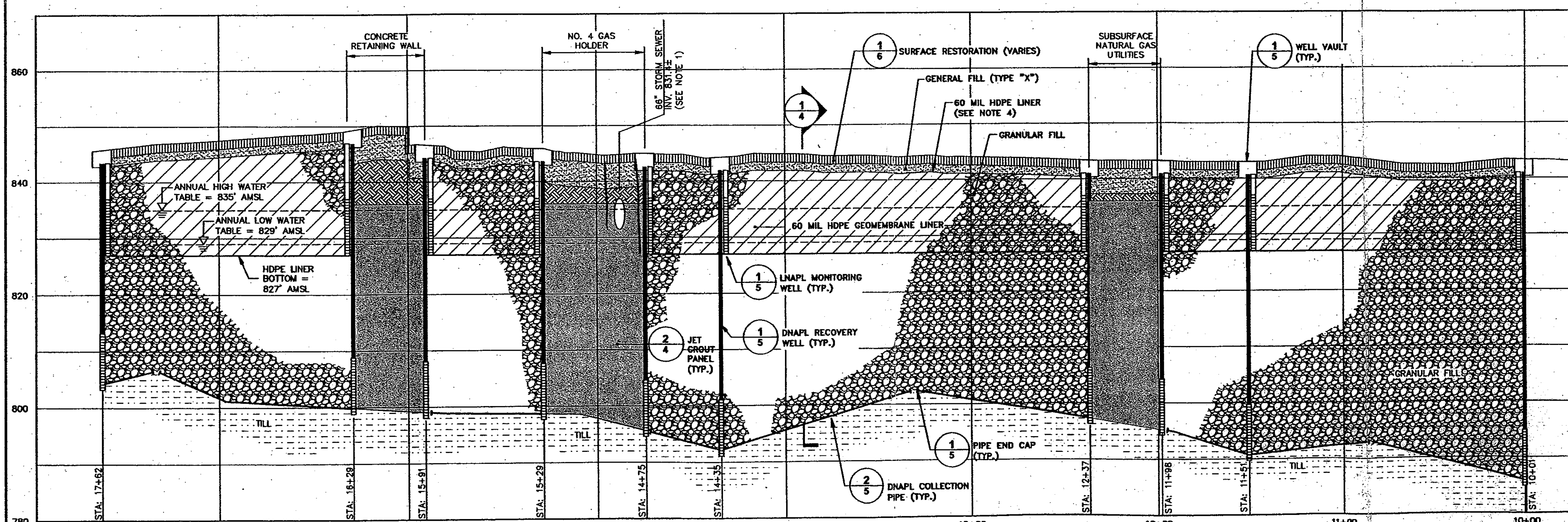
Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/06/2006	10:23:59	0.014
07/06/2006	10:38:59	0.012
07/06/2006	10:53:59	0.012
07/06/2006	11:08:59	0.012
07/06/2006	11:23:59	0.026
07/06/2006	11:38:59	0.016
07/06/2006	11:53:59	0.014
07/06/2006	12:08:59	0.014
07/06/2006	12:23:59	0.016
07/06/2006	12:38:59	0.012
07/06/2006	12:53:59	0.015
07/06/2006	13:08:59	0.013
07/06/2006	13:23:59	0.015
07/06/2006	13:38:59	0.012
07/06/2006	13:53:59	0.012
07/06/2006	14:08:59	0.017
07/06/2006	14:23:59	0.017
07/06/2006	14:38:59	0.016
07/06/2006	14:53:59	0.028
07/06/2006	15:08:59	0.017
07/06/2006	15:23:59	0.037
07/06/2006	15:38:59	0.055
07/06/2006	15:53:59	0.041
07/06/2006	16:08:59	0.026
07/06/2006	16:23:59	0.022
07/06/2006	16:38:59	0.015

July 6, 2006 Air Monitor Locations



NOTES:

1. JET GROUT AREA SHOULD EXTEND A MINIMUM OF 10 FEET PAST EDGE OF 66" STORM SEWER.
2. SEE DESIGN DRAWING NO. 1 FOR LEGEND.
3. LNAPL MONITORING WELL, DNAPL RECOVERY WELL, AND WELL VAULT DIMENSIONS ARE NOT TO SCALE.
4. HDPE PANELS WILL BE OVERLAPPED A MINIMUM OF 4 FEET, AS APPROPRIATE.
5. TOP OF TILL LOCATION BASED ON SOIL BORING INFORMATION OBTAINED DURING PREVIOUS SITE INVESTIGATIONS.
6. NAPL BARRIER WALL IS PROJECTED ON THE PROFILE IN ACCORDANCE WITH THE STATIONING INDICATED ON THE PLAN. THE ACTUAL PATH OF THE NAPL BARRIER WALL WILL BE AS SHOWN ON THE PLAN.
7. NAPL BARRIER WALL ALIGNMENT AND WELL LOCATIONS TO BE MODIFIED AS NECESSARY BASED ON FIELD CONDITIONS.



LEGEND

- SURFACE RESTORATION
- GENERAL FILL (TYPE "X")
- 60 MIL HDPE GEOMEMBRANE LINER
- GRANULAR FILL
- JET GROUT PANEL
- EXISTING TILL LAYER
- UNDISTURBED SOIL

PROFILE

HORIZONTAL SCALE: 1"=30'

VERTICAL SCALE: 1"=10'

X: 13061X00.DWG, X01.DWG, X02.DWG
L: ON, *, OFF; REF
P: PAGESET/PLT-CDL
5/3/06 SYR-85-GHS PRO GHS
13061001/13061G02.DWG

DRAFT
NOT FOR CONSTRUCTION

Graphic Scale

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No.	Date	Revisions	Init

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

Professional Engineer's Name: MARGARET A. CARRILLO-SHERIDAN
Professional Engineer's No.: 082251
State: NY | Date Signed:
Project Mgr.: DLM | Designed by: MCS | Drawn by: GHS

BBL
BLASLAND, BOUCK & LEE, INC.
engineers, scientists, economists

NEW YORK STATE ELECTRIC & GAS CORPORATION • BINGHAMTON, NEW YORK
BINGHAMTON COURT STREET FORMER MGP SITE
NAPL BARRIER WALL IRM

PROPOSED NAPL BARRIER WALL PLAN AND PROFILE

BBL Project No. 130.61
Date MAY 2006
Blasland, Bouck & Lee, Inc.
Corporate Headquarters
6723 Towpath Road
Syracuse, NY 13214
315-446-9120

2

VOCs

BBL
ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG Binghamton Barrier Wall **Date:** July 7, 2006

Monitoring Instruments: mini RAE 2000

Air Monitor: WKD **Activity:** Pre Trench Excavating

Level of Protection: Level D

Time	Location	Instrument Reading: Upwind	D1	D2	Comments
9:00	Excavation @ 14+05	0.0	0.0	0.0	
9:15	to Station 13+60	0.0	0.0	0.0	
9:30		0.0	0.0	0.0	
9:45		0.0	0.0	0.0	
10:00		0.0	0.0	0.0	
10:15		0.0	0.0	0.0	
10:30		0.0	0.0	0.0	
10:45		0.0	0.0	0.0	
11:00		0.0	0.0	0.0	
11:15		0.0	0.0	0.0	
11:30		0.0	0.0	0.0	
11:45		0.0	0.0	0.0	
Lunch		0.0	0.0	0.0	
13:00		0.0	0.0	0.0	
13:15		0.0	0.0	0.0	
13:45		0.0	0.0	0.0	
14:00		0.0	0.0	0.0	
14:30		0.0	0.0	0.0	
15:00		0.0	0.0	0.0	

Dust

BBL
ENVIRONMENTAL SERVICES, INC.
Remedial Management & Construction

Air Monitoring Log

Project: NYSEG - Binghamton Brandywine **Date:** July 7, 2006
Monitoring Instruments: DustTrak
Air Monitor: WKD **Activity:** Pre-Trench Excavation
Level of Protection: Level D

Time	Location	Instrument Reading: Upwind	D1	D2	Comments
9:00	Excavation @ 14+05	—	—	—	
9:15	to station 13+60	0.016	0.039	0.039	
9:30		0.013	0.066	0.025	
9:45		0.013	0.037	0.024	
10:00		0.034	0.040	0.024	
10:15		0.044	0.078	0.022	
10:30		0.015	0.055	0.025	
10:45		0.021	0.182	0.030	
11:00		0.014	0.035	0.028	
11:15		0.013	0.033	0.021	
11:30		0.016	0.110	0.040	
11:45		0.010	0.043	0.035	
Lunch		—	—	—	
13:00		0.019	0.039	0.049	
13:15		0.012	0.025	0.045	
13:45		0.015	0.084	0.056	
14:00		0.011	0.030	0.026	
14:30		0.015	0.049	0.032	
15:00		0.016	0.156	0.062	
	Work over for the day				

TrakPro v3.41, Test: Test006, Date: 07/07/2006 09:05:19
Serial Number: 85201544
Cal. Date: Aerosol
06/14/2006

7/7/06 upwind

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/07/2006	09:20:19	0.016
07/07/2006	09:35:19	0.013
07/07/2006	09:50:19	0.013
07/07/2006	10:05:19	0.034
07/07/2006	10:20:19	0.044
07/07/2006	10:35:19	0.015
07/07/2006	10:50:19	0.021
07/07/2006	11:05:19	0.014
07/07/2006	11:20:19	0.013
07/07/2006	11:35:19	0.010
07/07/2006	11:50:19	0.010
07/07/2006	12:05:19	0.015
07/07/2006	12:20:19	0.017
07/07/2006	12:35:19	0.013
07/07/2006	12:50:19	0.015
07/07/2006	13:05:19	0.019
07/07/2006	13:20:19	0.012
07/07/2006	13:35:19	0.013
07/07/2006	13:50:19	0.015
07/07/2006	14:05:19	0.011
07/07/2006	14:20:19	0.013
07/07/2006	14:35:19	0.015
07/07/2006	14:50:19	0.017
07/07/2006	15:05:19	0.016

TrakPro v3.41, Test: Test003, Date: 07/07/2006 09:05:33
Serial Number: 85201531
Cal. Date: Aerosol
06/07/2006 7/7/06 D1

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/07/2006	09:20:33	0.039
07/07/2006	09:35:33	0.066
07/07/2006	09:50:33	0.037
07/07/2006	10:05:33	0.040
07/07/2006	10:20:33	0.078
07/07/2006	10:35:33	0.055
07/07/2006	10:50:33	0.182
07/07/2006	11:05:33	0.035
07/07/2006	11:20:33	0.033
07/07/2006	11:35:33	0.110
07/07/2006	11:50:33	0.043
07/07/2006	12:05:33	0.043
07/07/2006	12:20:33	0.028
07/07/2006	12:35:33	0.024
07/07/2006	12:50:33	0.034
07/07/2006	13:05:33	0.039
07/07/2006	13:20:33	0.025
07/07/2006	13:35:33	0.084
07/07/2006	13:50:33	0.030
07/07/2006	14:05:33	0.027
07/07/2006	14:20:33	0.024
07/07/2006	14:35:33	0.049
07/07/2006	14:50:33	0.083
07/07/2006	15:05:33	0.156

TrakPro v3.41, Test: Test003, Date: 07/07/2006 09:06:06
Serial Number: 85201529
Cal. Date: Aerosol
06/06/2006

7/7/06 D2

Date MM/dd/yyyy	Time hh:mm:ss	Aerosol mg/m^3
07/07/2006	09:21:06	0.039
07/07/2006	09:36:06	0.025
07/07/2006	09:51:06	0.024
07/07/2006	10:06:06	0.024
07/07/2006	10:21:06	0.022
07/07/2006	10:36:06	0.025
07/07/2006	10:51:06	0.030
07/07/2006	11:06:06	0.028
07/07/2006	11:21:06	0.021
07/07/2006	11:36:06	0.040
07/07/2006	11:51:06	0.035
07/07/2006	12:06:06	0.040
07/07/2006	12:21:06	0.028
07/07/2006	12:36:06	0.026
07/07/2006	12:51:06	0.030
07/07/2006	13:06:06	0.049
07/07/2006	13:21:06	0.045
07/07/2006	13:36:06	0.056
07/07/2006	13:51:06	0.026
07/07/2006	14:06:06	0.039
07/07/2006	14:21:06	0.037
07/07/2006	14:36:06	0.032
07/07/2006	14:51:06	0.035
07/07/2006	15:06:06	0.062