102ND STREET LANDFILL SITE

NIAGARA FALLS, NEW YORK

ANNUAL REPORT 2006



Miller Springs Remediation Management, Inc. and Olin Corporation

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EXECUTIVE SUMMARY

The following report describes the Operation and Maintenance (O&M) activities for 2006 for the 102nd Street Landfill Site (Site) located in Niagara Falls, New York. The Site covers approximately 22.1 acres and consists of two separate properties owned by Occidental Chemical Corporation (OxyChem) (15.6 acres) and Olin Corporation (6.5 acres). Both OxyChem's and Olin's responsibilities at the Site are currently operated by Miller Springs Remediation Management, Inc. (MSRM), an affiliate of OxyChem.

During 2006, the Remedial Action System Components (RASC) at 102nd Street performed well. The leachate collection system removed 343,727 gallons of Aqueous Phase Leachate (APL) from the site. Water level monitoring showed that an inward gradient was maintained for 100% of the time at nine of the well pairs. Only one well pair (PCM-07/PZ-07) on the north side of the site indicated that an inward gradient was not being maintained (three of the four monitoring events) in that location. However, analytical results indicate no site parameters above the survey levels (Site base line guidance values from Table 2.1 of the Site O&M Manual, 2001) outside of the slurry wall at PCM-07.

It should also be noted that the Buffalo Avenue storm sewer immediately adjacent to PCM-07 has an invert elevation of 563.5 above mean sea level (AMSL) which is below the average water level in PCM-07 (approximately 565 AMSL). It is possible that groundwater infiltration into the sewer at this location is depressing the groundwater elevations outside of the slurry wall.

In 2006, 8,796 gallons of Non-Aqueous Phase Leachate (NAPL) were recovered from the Site NAPL Recovery Wells. The recovered NAPL was then sent to an off Site incinerator (CleanHarbors Deer Park, TX) for final destruction.

i

1.0 INTRODUCTION

This report describes the Operation and Maintenance (O&M) Activities for 2006 for the 102nd Street

Landfill Site (Site) located in Niagara Falls, New York. The Site covers approximately 22.1 acres and consists of two separate properties owned by Occidental Chemical Corporation (15.6 acres) and Olin Corporation (6.5 acres). The Site is bordered by the Niagara River to the south, Buffalo Avenue to the north, Griffon Park to the west, and privately owned land to the east. A perimeter fence restricts Site access. Authorized vehicular traffic access is provided from Buffalo Avenue by fence gates.



The RASC at the Site that have associated O&M activities are as follows (see figure 1 for the site layout):

- a landfill cap;
- a perimeter slurry wall;
- an aqueous phase liquid (APL) collection and discharge system;
- a non-aqueous phase liquid (NAPL) recovery system;
- post-RA system performance monitoring; and
- a perimeter fence.

Remedial construction at the site was completed in 1999 and groundwater pumping began in March of the same year.

The Final Close Out Report for the site was issued on August 13, 1999 and comments were received on July 11, 2000. Final responses to the comments were submitted to the agencies on September 22, 2000.

Final revisions to the Operations and Maintenance Manual were submitted to the agencies on August 17, 2001 and final approval of the manual was received on October 24, 2001.

The Certificate of Completion for the site was submitted to the agencies on January 14, 2002 and was accepted by the agencies on March 13, 2002, signifying that all remedial work had been completed. As a result, the formal initiation of O&M for the site occurred in April 2002.

This report is the fifth Annual Report for the Site, covering all O&M activities for the calendar year of 2006.

2.0 MONITORING AND TESTING

2.1 MONITORING PLAN

2.1.1 WATER LEVEL MONITORING

Water levels in the piezometers and monitoring wells were measured quarterly throughout 2006 in accordance with the O&M Plan.

Water level data have been converted to elevations and are listed on the Annual Report Forms, in *Appendix A*. The data for 2002 through 2006 have also been graphed to show the groundwater elevation trends. Graphs are also included in *Appendix A*. Additionally *Table 2.1* shows the elevations for each of the pairings and the gradients achieved for the quarterly events throughout the year.

The hydraulic monitoring program currently consists of quarterly measurements of water levels in 20 monitoring wells located outside (10, PCM series) and inside (10, PZ series) of the area enclosed by the slurry wall. Listed below are the pairings that are used to monitor the gradients inside and outside of the slurry wall.

<u>Pair</u>	<u>Outside</u>	<u>Inside</u>	<u>Location</u>
1	PCM-01	PZ-01	West Side
2	PCM-02	PZ-02	Southwest Side
3	PCM-03	PZ-03	South Side
4	PCM-04	PZ-04	South Side
5	PCM-05	PZ-05	Southeast Side
6	PCM-06	PZ-06	Northeast Side
7	PCM-07	PZ-07	North Side
8	PCM-08	PZ-08	North Side
9	PCM-09	PZ-09	North Side
10	PCM-10	PZ-10	Northwest Side

Inward gradients towards the landfill were prevalent at the following well pairs:

- West side pairs 1 and 2 showed inward gradients during all monitoring events.
- East side of the site, well pair 6 showed a consistent inward gradient for all monitoring events.
- South side of the site, along the Niagara River, well pairs 3, 4 and 5 consistently showed an inward gradient.
- North side of the site, along Buffalo Avenue, well pair 8 showed an inward gradient for all the monitoring events; well pair 7 showed an inward gradient for only 1 of the 4 events. The storm sewer immediately adjacent to PCM-07 on Buffalo Avenue is believed to be influencing PCM-07. It appears from the available data that groundwater infiltration into the sewer at this location is depressing the groundwater elevations outside of the slurry wall. Well pair 10 showed an inward gradient for all of the monitoring events throughout the year; well pair 9

while detecting as "Dry" (PZ-9) for three of four events showed an inward gradients throughout the year. For the purposes of graphing, the water level in either PCM-09 or PZ-09 was generally considered to be just below the bottom of the well when monitoring indicated the well was "Dry".

Wells PZ-08 and PZ-09 along the Northern side of the Site have detected "Dry" two and three out of the four monitoring events respectively. These wells are quite shallow and are presently are equipped with 4' long screens. When constructed, these wells were drilled six (6) inches into the confining layer below the landfill (clay or till). Therefore, the fact that these wells are dry indicates that the overburden above the confining layer has been dewatered and containment in this area is assured.

2.1.2 GROUNDWATER QUALITY MONITORING

The groundwater quality monitoring program consists of ten (10) Overburden Monitoring Wells (OMWS) PCM-01 – PCM-10 and three (3) Bedrock Wells PCBM-01 – PCBM-03 sampled quarterly for the first 2 years, semi-annually for 8 years (*currently under*, 2012) and annually thereafter.

Groundwater quality monitoring events for 2006 occurred semi-annually, starting in June for the first semi-annual event and in December for the second semi-annual event. *Table 2.2* shows the results from both of the monitoring events.

Concentrations are being monitored and graphed to determine if any of the levels are increasing. To date no substantial increases have been observed. Graphs are attached in Appendix B.

2.1.3 NAPL PRESENCE MONITORING

NAPL presence monitoring of the eight NAPL Recovery (NR) wells (NR-1, NR-2, NR-3, NR-4, NR-5, NR-7, NR-8 and NR-10) began in April 2002 immediately after the EPA approved the Certificate of Completion. Per the O&M Manual, NAPL presence is to be checked each month for the first three months (fulfilled in 2002) and quarterly after. The results of this monitoring are presented in the Annual Report Form, which are attached as part of *Appendix A*.

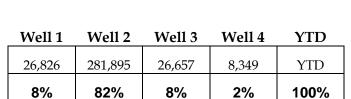
3.0 OPERATION OF 102ND STREET LANDFILL SYSTEMS

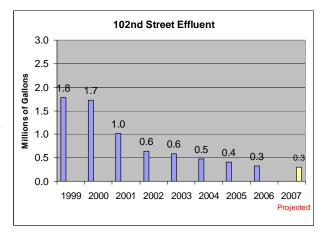
3.1 APL COLLECTION AND DISCHARGE SYSTEM OPERATION

The individual APL pumps (4) in the APL collection wet wells operated throughout 2006 on level control. All well pumps were set to start up at an elevation of 562.1 AMSL (one foot below the average Niagara River water level) and shut down when elevations in the wells reached 561.8 AMSL.

A total of 343,727 gallons of APL were removed from the site and pumped to the Love Canal Treatment Facility (LCTF). There the APL was treated and discharged to the City of Niagara Falls Sanitary Sewer System. A total of 7 million gallons have been recovered from the Site since pumping was initiated in March of 1999.

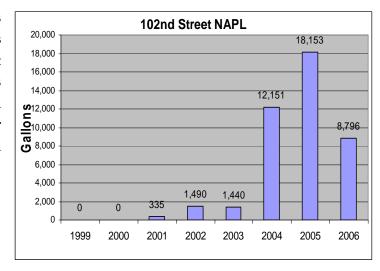
Listed below are four (4) wet wells and the gallons and percentiles of APL the individual wells had collected on Site for the year.





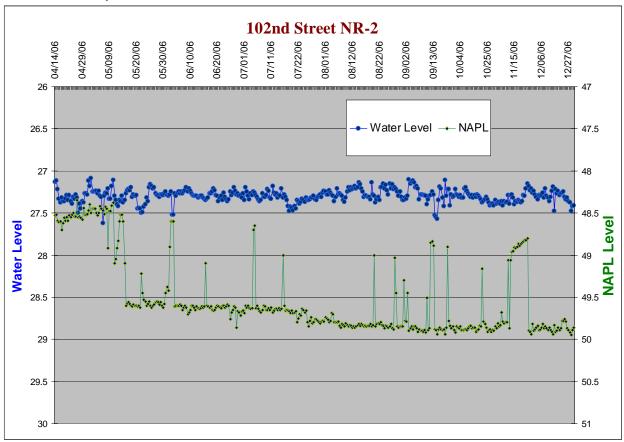
3.2 NAPL RECOVERY

A total of 8,796 gallons (three tanker trailers & one drum) of material (NAPL) was removed from the NAPL Recovery Wells at the site in 2006. Most of it from NR-2. This material was transported to the Clean Harbors Facility in Deer Park, Texas for incineration. Efforts of NAPL recovery from NR-2 will continue in 2007.



As outlined in the above section **2.1.3 NAPL Presence Monitoring.** A concentrated effort was implemented in 2004 to monitor and extract NAPL in the most efficient manner as possible from NAPL Recovery well (NR) NR-2. This was based on the approved work plan "NAPL Extraction Program Work Plan for Accelerated Recovery "submitted to NYSDEC December 2003. This task was achieved by concentrating on the known quick recharge well NR-02. In 2006, NAPL was recovered continuously from April through December 2006 from NR-02 for a total NAPL recovery of 8,738 gallons. A summary of the NAPL monitoring and the extractions are outlined in *Appendix B*.

Presented in chart form are the water levels versus the levels of NAPL in NR-2 during the Accelerated NAPL Recovery efforts in 2006.



NAPL Recovery, Gallons

Historical NAPL recoveries from the on Site NAPL Recovery Wells.

	2001	2002	2003	2004	2005	2006	Totals
NR-1	55	0	60	0	0	30	145
NR-2	200	1,490	1,355	12,151	18,153	8,738	42,087
NR-3	40	0	0	0	0	10	50
NR-4	0	0	0	0	0	0	0
NR-5	40	0	20	0	0	10	70
NR-7	0	0	0	0	0	0	0
NR-8	0	0	5	0	0	8	13
NR-10	0	0	0	0	0	0	0
Total	335	1,490	1,440	12,151	18,153	8,796	42,365

4.0 SITE MAINTENANCE AND INSPECTIONS

4.1 SITE INSPECTIONS

Annual Site Inspections was held on May 31, 2006 with representatives from NYSDEC, MSRM and CRA. The Site inspection reviews Remedial Action System Components to ensure the Site's integrity.

The inspection covered all portions of the landfill remediation including the APL Collection System, APL Discharge System, Landfill Cap, Bulkhead, and Storm Sewer. Items requiring attention that were noted during inspections for the year were as follow:

Repair to lateral fence at sewer outfall.

Repairs were made as described in subsequent MAINTENACE section of this report.

NYSDEC Region-9 performed a hazardous waste compliance inspection on September 27, 2006. NYSDEC inspection concluded that the Site is being maintained and operated at all standards set by New York State Hazardous Waste Regulations with no exceptions.

4.2 MAINTENANCE

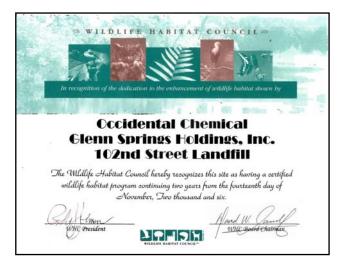
Maintenance included mowing the landfill vegetation to inhibit the growth of woody material and

filling of holes found in the soil cover made by burrowing animals. All pumps and on site control equipment were maintained throughout the year with scheduled preventive maintenance to ensure all equipment was functioning correctly. Repairs were made to the fence along storm sewer outfall along the river. Replacement of bent well casing PZ-10 located on the Northwest corner of Site.



4.3 SITE BEAUTIFICATION/WILDLIFE

National recognition in 2006 of the Site's Wildlife/Beautification by the Wildlife Habitat Council (WHC), a nonprofit, non-lobbying group of corporations, conservation organizations, and individuals dedicated to restoring and enhancing wildlife habitat. Site's visual impact and wildlife habitat was implemented in 2005 with the recommendations from the Wildlife Habitat Council.



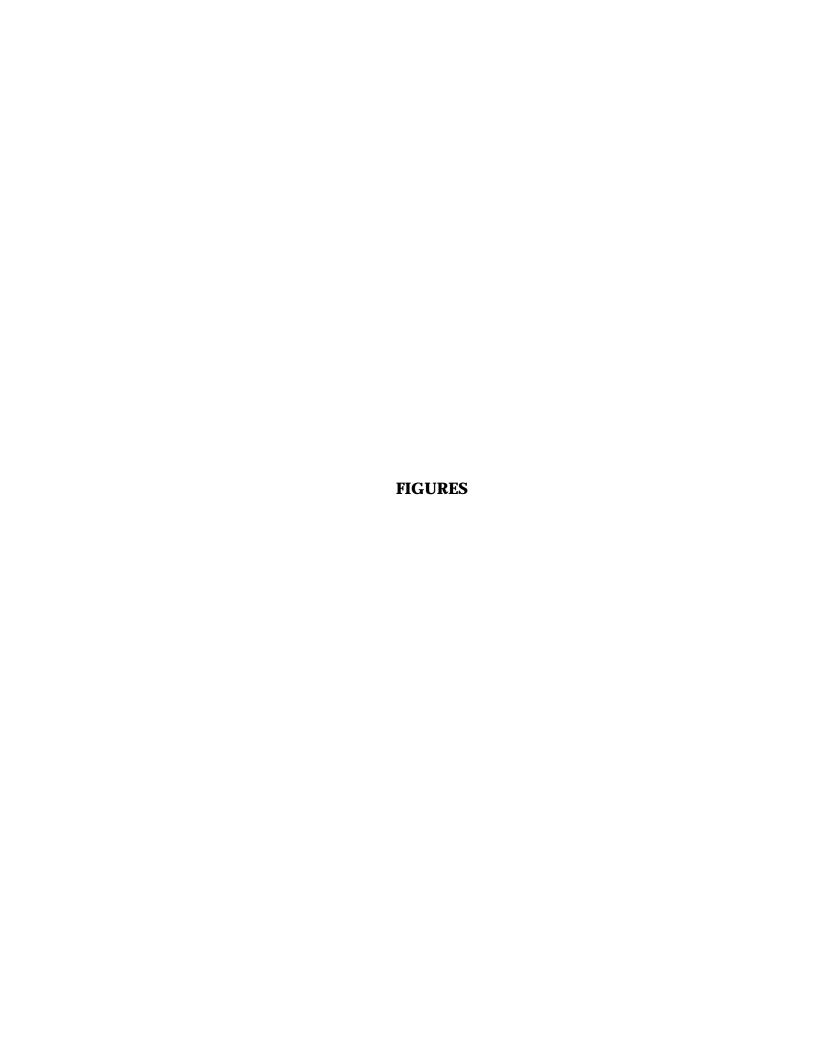
Enhancements were mainly concentrated along the fence line adjacent to the City of Niagara Falls Park (West Side of Site). Bluebird houses and bat boxes (mosquito's control) were installed at the northern and southern corners of the Site.

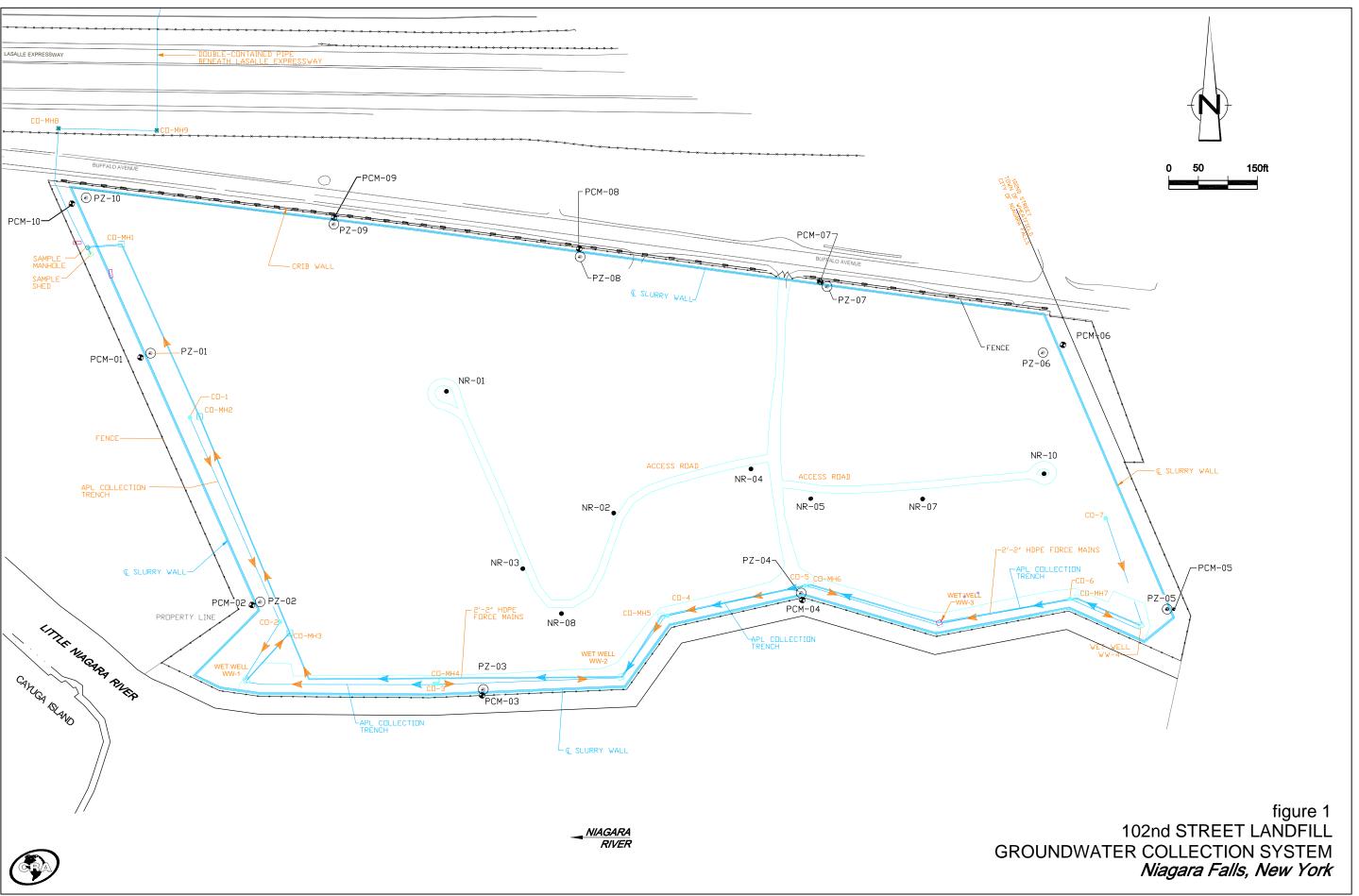




5.0 <u>CONCLUSION</u>

The 2006 data indicate that there was no significant change in chemical and hydrological conditions at the Site. The forcemain system continues to pump sufficient leachate from the landfill so as to maintain an inward gradient across the slurry wall. The slurry wall is successfully functioning preventing off-Site migration and influx of groundwater. A total of 343,727 gallons of APL were removed from the site and pumped to the LCTF. A total of 8,796 gallons of NAPL was recovered, which was sent off Site for incineration.





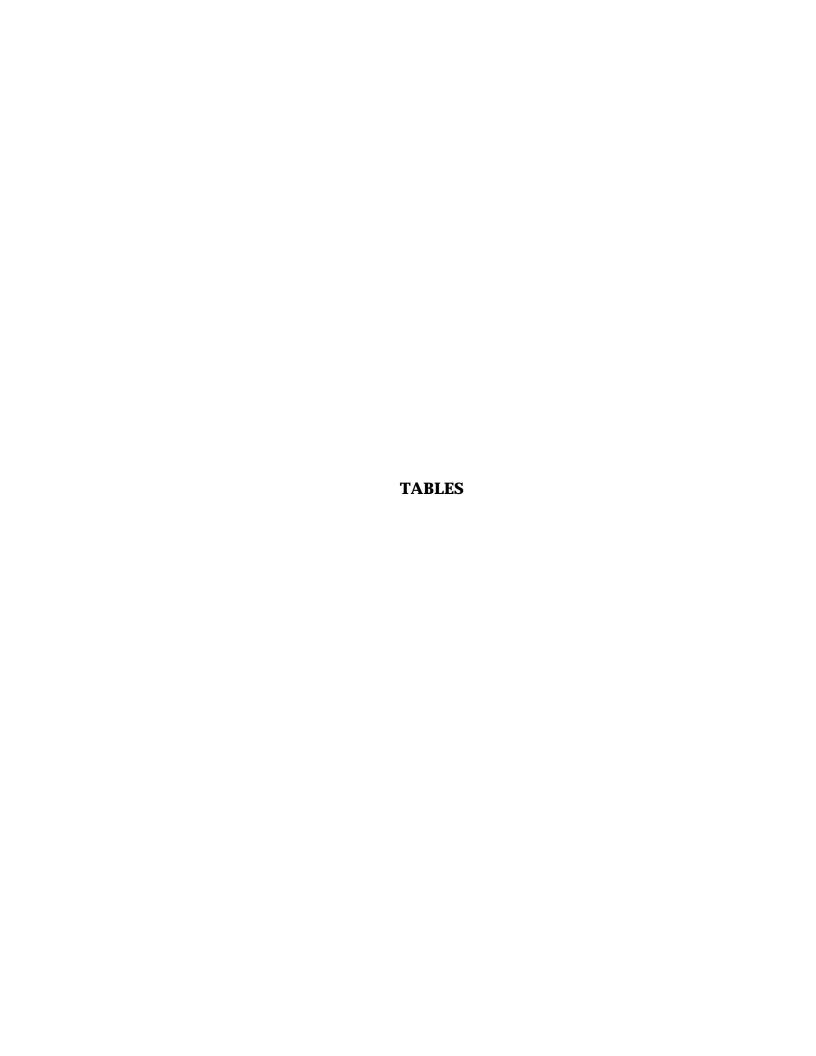


Table 2.1 102nd Street Site Gradients PCM Wells (Outside) vs. PZ Wells (Inside) Elevations

	Eleva	ations						
Wells	TOC	Bottom	Depth					Inward
	AMSL	AMSL	ft.	2/16/06	5/30/06	9/28/06	12/13/06	Gradients
PCM-01	578.24	549.05	29.19	567.39	568.34	566.39	567.88	
PZ-01	582.21	549.64	32.57	563.99	563.86	562.47	564.20	
Gradients				-3.40	-4.48	-3.92	-3.68	4
PCM-02	577.24	547.9	29.34	567.34	566.29	566.76	567.69	
PZ-02	577.92	548.43	29.49	562.42	563.40	562.12	562.61	
Gradients				-4.92	-2.89	-4.64	-5.08	4
PCM-03	576.81	545.15	31.66	562.92	564.79	563.74	563.29	
PZ-03	576.68	545.63	31.05	561.88	561.88	561.64	561.96	
Gradients			_	-1.04	-2.91	-2.10	-1.33	4
PCM-04	575.73	545.74	29.99	563.00	564.18	563.95	563.50	
PZ-04	576.96	545.63	31.33	562.46	562.55	562.25	562.63	
Gradients			_	-0.54	-1.63	-1.70	-0.87	4
PCM-05	575.93	550	25.93	564.63	564.18	564.41	564.81	
PZ-05	576.87	550.5	26.37	561.74	562.05	561.67	562.04	
Gradients				-2.89	-2.13	-2.74	-2.77	4
PCM-06	580.25	566.5	13.75	568.31	568.63	569.60	568.91	
PZ-06	584.66	564.05	20.61	564.90	564.86	564.75	564.98	
Gradients				-3.41	-3.77	-4.85	-3.93	4
PCM-07	578.8	557.63	21.17	566.30	566.42	566.84	560.05	
PZ-07	579.1	564.8	14.3	566.37	566.70	566.59	567.74	
Gradients				0.07	0.28	-0.25	7.69	1
PCM-08	579.32	564.43	14.89	570.01	567.83	570.64	570.13	
PZ-08	580.99	565.38	15.61	565.97	565.98	566.19	566.06	
Gradients				-4.04	-1.85	-4.45	-4.07	4
PCM-09	578.99	567.87	11.12	571.48	569.92	572.92	571.13	
PZ-09	580.67	566.28	14.39	566.34	566.35	566.56	566.42	
Gradients				-5.14	-3.57	-6.36	-4.71	4
PCM-10	579.4	556.39	23.01	567.58	566.52	567.24	567.93	
PZ-10	581.65	561.56	20.09	566.05	565.92	564.95	566.31	
Gradients				-1.53	-0.60	-2.29	-1.62	4

TOC: Top of Casing

Bottom: Elevation at bottom of Well

Dry: No water level detected in well, depth elevation used in place of absent elevation.

Flooded: Water level detected to TOC in well, TOC elevation used in place of absent elevation.

Negative number indicates an inward gradients.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well	PCBM-01	PCBM-01	PCBM-01
			Sample ID:	PCBM-01-606	PCM-12-606	PCBM-01-1206
			Date:	6/26/2006	6/26/2006	12/14/2006
	NYSDEC				Duplicate	
Parameter	Class GA	Survey	Unit			
	GW Criteria	Level				
Volatiles						
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	0.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	0.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	0.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.5 U	0.5 U	.5 U
2-Chlorotoluene	5	5	μg/L	0.5 U	0.5 U	.22 J
Benzene	1	5	μg/L	0.5 U	0.5 U	.5 U
Chlorobenzene	5	5	μg/L	0.5 U	0.5 U	.5 U
Semi-Volatiles						
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U	10 U
Pesticides						
alpha-BHC	0.01	10	μg/L	0.013 U	0.013 U	.039 J
beta-BHC	0.04	10	μg/L	0.025 U	0.025 U	.05 U
delta-BHC	0.04	10	μg/L	0.013 U	0.013 U	.014 J
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	0.013 U	.022 J
Metals						
Arsenic	25	50	μg/L	10 U	10 U	10 U

- Not Applicable

BHC Benzene Hexachlororide

U Non-Detected at associated value.

J Estimated

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well	PCBM-02	PCBM-02	PCBM-02
			Sample ID:	PCBM-02-706	PCBM-02-1206	PCM-12-1206
			Date:	7/5/2006	12/13/2006	12/13/2006
	NYSDEC					Duplicate
Parameter	Class GA	Survey	Unit			
	GW Criteria	Level				
Volatiles						
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U	.5 U
2-Chlorotoluene	5	5	μg/L	0.5 U	.5 U	.5 U
Benzene	1	5	μg/L	0.5 U	.5 U	.5 U
Chlorobenzene	5	5	μg/L	0.5 U	.5 U	.5 U
Semi-Volatiles						
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U	10 U
Pesticides						
alpha-BHC	0.01	10	μg/L	0.013 U	.05 U	.05 U
beta-BHC	0.04	10	μg/L μg/L	0.013 U 0.025 U	.05 U	.05 U
delta-BHC	0.04	10	μg/L μg/L	0.023 U	.05 U	.05 U
	0.05	10	_	0.013 U	.05 U	.05 U
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 U	.05 U
Metals						
Arsenic	25	50	μg/L	10 U	10 U	10 U

- Not Applicable

BHC Benzene Hexachlororide

U Non-Detected at associated value.

J Estimated

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID: Date:	PCBM-03 PCBM-03-706 7/6/2006	PCBM-03 PCBM-03-1206 12/12/2006
Parameter	NYSDEC Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
2-Chlorotoluene	5	5	μg/L	0.5 U	.5 U
Benzene	1	5	μg/L	0.5 U	.5 U
Chlorobenzene	5	5	μg/L	0.5 U	.5 U
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.013 U	.05 U
beta-BHC	0.04	10	μg/L	0.016 J	.05 U
delta-BHC	0.04	10	μg/L	0.013 U	.05 U
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 U
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID: Date:	PCM-01 PCM-01-706 7/7/2006	PCM-01 PCM-01-1206 12/12/2006
Parameter	NYSDEC Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.12 J	.5 U
2-Chlorotoluene	5	5	μg/L	0.5 U	.5 U
Benzene	1	5	μg/L	0.5 U	.5 U
Chlorobenzene	5	5	μg/L	0.5 U	.5 U
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.013 U	.05 UJ
beta-BHC	0.04	10	μg/L	0.025 U	.05 UJ
delta-BHC	0.04	10	μg/L	0.013 U	.05 UJ
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 UJ
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID: Date:	PCM-02 PCM-02-706 7/7/2006	PCM-02 PCM-02-1206 12/12/2006
Parameter	NYSDEC Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.26 J	.2 J
2-Chlorotoluene	5	5	μg/L	0.5 U	.5 U
Benzene	1	5	μg/L	0.15 J	.5 U
Chlorobenzene	5	5	μg/L	0.22 J	.19 J
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.0047 J	.05 UJ
beta-BHC	0.04	10	μg/L	0.025 U	.05 UJ
delta-BHC	0.04	10	μg/L	0.008 J	.05 UJ
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 UJ
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID: Date:	PCM-03 PCM-03-606 6/26/2006	PCM-03 PCM-03-1206 12/14/2006
Parameter	NYSDEC Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	25 U	25 U
1,2,4-Trichlorobenzene	5	10	μg/L	25 U	25 U
1,2-Dichlorobenzene	3	10	μg/L	11 J	66
1,4-Dichlorobenzene	3	10	μg/L	47	260
2-Chlorotoluene	5	5	μg/L	25 U	8.5 J
Benzene	1	5	μg/L	8.9 J	47
Chlorobenzene	5	5	μg/L	680	2700
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	3.5 J	8 J
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	8.3 J	12
4-Chlorophenol	1	10	μg/L	10 U	26
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.019	.25 U
beta-BHC	0.04	10	μg/L	0.29	.25 U
delta-BHC	0.04	10	μg/L	0.65	.73
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.25 U
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID:	PCM-04 PCM-04-606	PCM-04 PCM-04-1206
			Date:	6/26/2006	12/14/2006
	NYSDEC				
Parameter	Class GA	Survey	Unit		
	GW Criteria	Level			
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	250 U	250 U
1,2,4-Trichlorobenzene	5	10	μg/L	250 U	250 U
1,2-Dichlorobenzene	3	10	μg/L	250 U	250 U
1,4-Dichlorobenzene	3	10	μg/L	330	260
2-Chlorotoluene	5	5	μg/L	250 U	250 U
Benzene	1	5	μg/L	69 J	65 J
Chlorobenzene	5	5	μg/L	10000	7100
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	4.3 J	1.4 J
2,5-Dichlorophenol	1	10	μg/L	10 U	1.5 J
2-Chlorophenol	1	10	μg/L	14	14
4-Chlorophenol	1	10	μg/L	34	28
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.013 U	.05 UJ
beta-BHC	0.04	10	μg/L	0.025 U	.05 UJ
delta-BHC	0.04	10	μg/L	0.032	.057 J
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 UJ
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

	NYSDEC		Well Sample ID: Date:	PCM-05 PCM-05-706 7/5/2006	PCM-05 PCM-05-1206 12/13/2006
Parameter	Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	13 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	13 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	13 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	13 U	.79 J
2-Chlorotoluene	5	5	μg/L	13 U	.5 U
Benzene	1	5	μg/L	13 U	3.4
Chlorobenzene	5	5	μg/L	87	91
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	1.4 J	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.013 U	.05 U
beta-BHC	0.04	10	μg/L	0.025 U	.05 U
delta-BHC	0.04	10	μg/L	0.013 U	.05 U
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 U
Metals					
Arsenic	25	50	μg/L	10 UJ	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well	PCM-06	PCM-06
			Sample ID:	Dry	Dry
			Date:	Jul-2006	Dec-2006
	NYSDEC				
Parameter	Class GA	Survey	Unit		
	GW Criteria	Level			
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	-	-
1,2,4-Trichlorobenzene	5	10	μg/L	-	-
1,2-Dichlorobenzene	3	10	μg/L	-	-
1,4-Dichlorobenzene	3	10	μg/L	-	-
2-Chlorotoluene	5	5	μg/L	-	-
Benzene	1	5	μg/L	-	-
Chlorobenzene	5	5	μg/L	-	-
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	-	-
2,4,5-Trichlorophenol	1	50	μg/L	-	-
2,4-Dichlorophenol	1	10	μg/L	-	-
2,5-Dichlorophenol	1	10	μg/L	-	-
2-Chlorophenol	1	10	μg/L	-	-
4-Chlorophenol	1	10	μg/L	-	-
Phenol	1	10	μg/L	-	-
Pesticides					
alpha-BHC	0.01	10	μg/L	-	-
beta-BHC	0.04	10	μg/L	-	-
delta-BHC	0.04	10	μg/L	-	-
gamma-BHC (Lindane)	0.05	10	μg/L	-	-
Metals					
Arsenic	25	50	μg/L	-	-

- Not Applicable

BHC Benzene Hexachlororide

U Non-Detected at associated value.

J Estimated

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

	NYSDEC		Well Sample ID: Date:	PCM-07 PCM-07-706 7/5/2006	PCM-07 PCM-07-1206 12/13/2006
Parameter	Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.5 U	.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.5 U	.5 U
2-Chlorotoluene	5	5	μg/L	0.5 U	.5 U
Benzene	1	5	μg/L	0.5 U	.5 U
Chlorobenzene	5	5	μg/L	0.5 U	.5 U
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.013 U	.05 U
beta-BHC	0.04	10	μg/L	0.025 U	.05 U
delta-BHC	0.04	10	μg/L	0.013 U	.05 U
gamma-BHC (Lindane)	0.05	10	μg/L	0.013 U	.05 U
Metals					
Arsenic	25	50	μg/L	10 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well	PCM-08	PCM-08
			Sample ID:	Dry	Dry
			Date:	Jul-2006	Dec-2006
	NYSDEC				
Parameter	Class GA	Survey	Unit		
	GW Criteria	Level			
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	-	-
1,2,4-Trichlorobenzene	5	10	μg/L	-	-
1,2-Dichlorobenzene	3	10	μg/L	-	-
1,4-Dichlorobenzene	3	10	μg/L	-	-
2-Chlorotoluene	5	5	μg/L	-	-
Benzene	1	5	μg/L	-	-
Chlorobenzene	5	5	μg/L	-	-
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	-	-
2,4,5-Trichlorophenol	1	50	μg/L	-	-
2,4-Dichlorophenol	1	10	μg/L	-	-
2,5-Dichlorophenol	1	10	μg/L	-	-
2-Chlorophenol	1	10	μg/L	-	-
4-Chlorophenol	1	10	μg/L	-	-
Phenol	1	10	μg/L	-	-
Pesticides					
alpha-BHC	0.01	10	μg/L	-	-
beta-BHC	0.04	10	μg/L	-	-
delta-BHC	0.04	10	μg/L	-	-
gamma-BHC (Lindane)	0.05	10	μg/L	-	-
Metals					
Arsenic	25	50	μg/L	-	-

- Not Applicable

- J Estimated
- U Non-Detected at associated value.

Table 2.2 102nd Street Site Historical Analytical Results Bedrock (PCBM) and Overburden (PCM)

			Well	PCM-09	PCM-09
			Sample ID:	Dry	Dry
			Date:	7/1/2006	Dec-2006
	NYSDEC				
Parameter	Class GA	Survey	Unit		
	GW Criteria	Level			
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	-	-
1,2,4-Trichlorobenzene	5	10	μg/L	-	-
1,2-Dichlorobenzene	3	10	μg/L	-	-
1,4-Dichlorobenzene	3	10	μg/L	-	-
2-Chlorotoluene	5	5	μg/L	-	-
Benzene	1	5	μg/L	-	-
Chlorobenzene	5	5	μg/L	-	-
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	-	-
2,4,5-Trichlorophenol	1	50	μg/L	-	-
2,4-Dichlorophenol	1	10	μg/L	-	-
2,5-Dichlorophenol	1	10	μg/L	-	-
2-Chlorophenol	1	10	μg/L	-	-
4-Chlorophenol	1	10	μg/L	-	-
Phenol	1	10	μg/L	-	-
Pesticides					
alpha-BHC	0.01	10	μg/L	-	-
beta-BHC	0.04	10	μg/L	-	-
delta-BHC	0.04	10	μg/L	-	-
gamma-BHC (Lindane)	0.05	10	μg/L	-	-
Metals					
Arsenic	25	50	μg/L	-	-

Notes:

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.

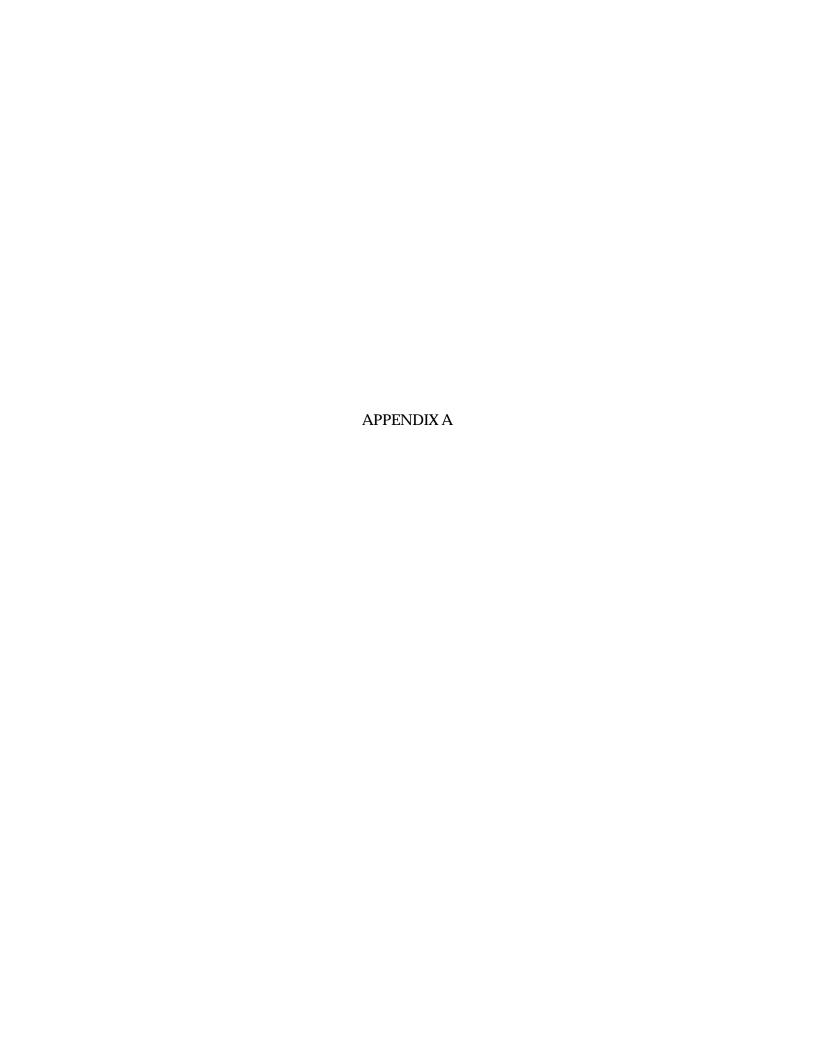
Table 2.2
102nd Street Site
Historical Analytical Results
Bedrock (PCBM) and Overburden (PCM)

			Well Sample ID: Date:	PCM-10 PCM-10-605 6/23/2005	PCM-10 PCM-10-706 7/6/2006
Parameter	NYSDEC Class GA GW Criteria	Survey Level	Unit		
Volatiles					
1,2,3-Trichlorobenzene	5	10	μg/L	0.50 U	0.5 U
1,2,4-Trichlorobenzene	5	10	μg/L	0.50 U	0.5 U
1,2-Dichlorobenzene	3	10	μg/L	0.50 U	0.5 U
1,4-Dichlorobenzene	3	10	μg/L	0.50 U	0.5 U
2-Chlorotoluene	5	5	μg/L	0.17 J	0.5 U
Benzene	1	5	μg/L	0.50 U	0.5 U
Chlorobenzene	5	5	μg/L	0.50 U	0.5 U
Semi-Volatiles					
1,2,4,5-Tetrachlorobenzene	5	10	μg/L	10 U	10 U
2,4,5-Trichlorophenol	1	50	μg/L	10 U	10 U
2,4-Dichlorophenol	1	10	μg/L	10 U	10 U
2,5-Dichlorophenol	1	10	μg/L	10 U	10 U
2-Chlorophenol	1	10	μg/L	10 U	10 U
4-Chlorophenol	1	10	μg/L	10 U	10 U
Phenol	1	10	μg/L	10 U	10 U
Pesticides					
alpha-BHC	0.01	10	μg/L	0.038	0.026
beta-BHC	0.04	10	μg/L	0.078	0.06
delta-BHC	0.04	10	μg/L	0.0062 J	0.0062 J
gamma-BHC (Lindane)	0.05	10	μg/L	0.0092 J	0.013 U
Metals					
Arsenic	25	50	μg/L	10.0 U	10 U

⁻ Not Applicable

J Estimated

U Non-Detected at associated value.



102ND STREET LANDFILL SITE NIAGARA FALLS, NEW YORK

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MONITORING - Water Level Measurements

Month	Day	Inspector	PCM-01	PZ-01	PCM-02	PZ-02	PCM-03	PZ-03
1st Qtr.	2/16/2006	T. Blackmon	567.39	563.99	567.34	562.42	562.92	561.88
2nd Qtr.	5/30/2006	T. Blackmon	568.34	563.86	566.29	563.40	564.79	561.88
3rd Qtr.	9/28/2006	T. Blackmon	566.39	562.47	566.76	562.12	563.74	561.64
4th Qtr.	12/13/2006	T. Blackmon	567.88	564.20	567.69	562.61	563.29	561.96

Month	Day	Inspector	PCM-04	PZ-04	PCM-05	PZ-05	PCM-06	PZ-06
1st Qtr.	2/16/2006	T. Blackmon	563.00	562.46	564.63	561.74	568.31	564.90
2nd Qtr.	5/30/2006	T. Blackmon	564.18	562.55	564.18	562.05	568.63	564.86
3rd Qtr.	9/28/2006	T. Blackmon	563.95	562.25	564.41	561.67	569.60	564.75
4th Qtr.	12/13/2006	T. Blackmon	563.50	562.63	564.81	562.04	568.91	564.98

Month	Day	Inspector	PCM-07	PZ-07	PCM-08	PZ-08	PCM-09	PZ-09
1st Qtr.	2/16/2006	T. Blackmon	566.30	566.37	570.01	565.97	571.48	566.34
2nd Qtr.	5/30/2006	T. Blackmon	566.42	566.70	567.83	565.98	569.92	566.35
3rd Qtr.	9/28/2006	T. Blackmon	566.84	566.59	570.64	566.19	572.92	566.56
4th Qtr.	12/13/2006	T. Blackmon	560.05	567.74	570.13	566.06	571.13	566.42

Month	Day	Inspector	PCM-10	PZ-10
1st Qtr.	2/16/2006	T. Blackmon	567.58	566.05
2nd Qtr.	5/30/2006	T. Blackmon	566.52	565.92
3rd Qtr.	9/28/2006	T. Blackmon	567.24	564.95
4th Qtr.	12/13/2006	T. Blackmon	567.93	566.31

FORM 1

102ND STREET LANDFILL SITE NIAGARA FALLS, NEW YORK

		NIA	AGARA FALLS, 1	NEW YORK				
YEAR:	2006							
GROUNDW	ATER - Quali	ty Monitoring						
	D-4- C1-	T						
Quarter	Date Sample Taken	Inspector			Comm	ents		
1st								
	June 26, July 05,							
2nd	06, 07	T. Blackmon	Semi-annu	al sampling	event.			
3rd 4th	Ded 12, 13, 14	T. Blackmon	Somi annu	al sampling	ovont			
		l	Senn-annu	ai samping	event.			
Results of an	alyses are atta	ched.						
NADI DDES	ENCE - Monit	toring.						
NAI L I KES	ENCE - MOIII	ormg	NR-	-01	NR	-02	NR	-03
			Depth of	Gallons	Depth of	Gallons	Depth of	Gallons
	Date	Inspector	NAPL (ft)		NAPL (ft)		NAPL (ft)	
1st Quarter	2/16/2006	T. Blackmon	2.13	0	2.03	0	0.33	(
2nd Quarter		T. Blackmon	1.14	0	0.88	3411	0.23	10
		T. Blackmon	1.28	30	0.65	2840	0.23	(
4th Quarter	12/13/2006	T. Blackmon	0.73	0	0.53	2487	0.28	C
	•	•	NR-	-04	NR	-05	NR	2-07
			Depth of	Gallons	Depth of		Depth of	Gallons
	Date	Inspector	NAPL (ft)		NAPL (ft)		NAPL (ft)	
lst Quarter		T. Blackmon	0.33	0	2.45	0	0	
2nd Quarter		T. Blackmon	0	0	1.7	10	0	(
3rd Quarter		T. Blackmon	0.23	0	1.7	0	1.8	(
4th Quarter	11/3/2005	T. Blackmon	0	0	2.7	0	0	(
		T	NR-		NR	_		
			Depth of	Gallons	Depth of			
	Date	Inspector	NAPL (ft)		NAPL (ft)			
lst Quarter		T. Blackmon	1.33		0	-		
2nd Quarter		T. Blackmon T. Blackmon	2.78 3.08	8	1.24	0		
3rd Quarter 4th Quarter		T. Blackmon	2.28	0	0			
4tii Quartei	11/3/2003	1. Diackinon	2.20	0	0	0		
						•		

MSRM 1431 (78) A-2

FORM 1

102ND STREET LANDFILL SITE NIAGARA FALLS, NEW YORK

YEAR:	2006			
OPERATI	ON			
APL COLI	LECTION AND DISC	HARGE SYSTEM		
	APL Flow for Previous Year (gallons)	APL Flow for Current Year (gallons)		
	408,329	343,727		
NAPL REI	MOVAL SYSTEM	NADI Ramasi I		
	NAPL Removed for Previous Year (gallons)	NAPL Removed for Current Year (gallons)		
NR-01	0	30		
NR-02	18153	8738		
NR-03	0	10		
NR-04	0	0		
NR-05	0	10		
NR-07	0	0		
NR-08	0	8		
NR-10	0	0		
Total	18153	8796		
Where was	s NAPL treated/dispo	sed?		
Facility C	lean Harbors , Deer P	ark, Texas	Date	6/1/2006
Facility C	lean Harbors , Deer P	ark, Texas	Date	8/1/2006
Facility C	lean Harbors , Deer P	ark, Texas	Date _	10/11/06
Facility C	Clean Harbors , Deer P	ark, Texas	Date	12/04/06
Facility			Date	
Facility			D 1	

102ND STREET LANDFILL SITE NIAGARA FALLS, NEW YORK

YEAR: 2006		
INSPECTION AND MAIN	ITENANCE	
Scheduled inspections perfo	ormed:	
Date	Inspectors	
May 31	B. Downie (MSRMI), D. McLeod (GSHI), S. Parkhill (MSRMI), J. —Thornton (CRA),	Konsella (DEC), B. Sadowski (DEC),

Was maintenance required?		
Yes	No	
May X		
Wiles and a second	wins 12 Farmer manaitr	
What maintenance was requ	uired? Fence repair.	Data Barfarana 1
Maintenance Required	and a second and at	Date Performed
Repair lateral fence along st	orm sewer outlet.	08/04/06
-		
	<u> </u>	
-		
		
Attach additional sheets as a	necessary.	
	•	
Describe any maintenance a	activity that required an activity specific work plan and	health and safety plan.
-		_
Form Completed By:		
Brian Downie	Brian Downie	02/01/06
NAME	SIGNATURE	DATE
FORM 1		

102ND STREET LANDFILL SITE NIAGARA FALLS, NEW YORK

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Send completed copies of this form to the following for review:

Don McLeod Glenn Springs Holdings, Inc. 2480 Fortune Drive, Suite 300 Lexington, KY 40509

and

Lorraine Miller Olin Corporation P.O. Box 248 1186 Lower River Road Charleston, TN 37310

and

Mike Bellotti Olin Corporation P.O. Box 248 1186 Lower River Road Charleston, TN 37310

After review is complete, send 5 copies to the following:

Chief-New York Remedial Branch Emergency and Remedial Response Divison U.S. Environmental Protection Agency - Region II 290 Broadway, 20th Floor New York, NY 10007-1866 Attn: 102nd Street Landfill Superfund Site Manager

and

Director, Division of Environmental Remediation New York State Dept. of Environmental Conservation 625 Broadway 8th Floor Albany, NY 12233-7252

and

Regional Remediation Engineer New York State Dept. of Environmental Conservation 270 Michigan Avenue Buffalo, NY 14203-2999

FORM 1

Groundwater Levels Well Pair 1

