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April 30, 2012 Reference No. 001069

Ms. Gloria M. Sosa
USEPA
Region II, Site Investigation & Compliance Branch
290 Broadway, 20th Floor
New York, NY 10007-1866

Mr. Brian P. Sadowski
NYSDEC
270 Michigan Avenue
Buffalo, NY 14203-2999

Dear Ms. Sosa and Mr. Sadowski:

Re: **Five Year Site Remedial Performance Report – 2006 - 2011**
Hyde Park Remedial Program
Bedrock and Overburden Monitoring Programs

In accordance with the July 2006 "Performance Monitoring Plan (PMP)," the following is the Five-Year Site Remedial Performance Report (Five-Year Report) for the period January 1, 2006 through December 31, 2011 for the Hyde Park Landfill Site (Site) located in Niagara Falls, New York.

As per Section 2.6 of the PMP, "*The Five-Year report will present a review of the Site conditions and a statistical evaluation of the analytical data collected over the preceding five years. The sampling parameters, frequency, and locations will be reassessed. The need to sample the Inner piezometers (piezometer within or near the current or historical NAPL Plume boundaries) will be reviewed. The Five-Year Report will recommend any appropriate modifications to the PMP for the following five years*".

Site Conditions

Operations and monitoring at the Site are conducted in both the overburden and bedrock. There are three active remediation systems installed in the overburden:

- The Source Control (SC) System
- The Existing Barrier Collection System (EBCS) installed in 1978
- The Overburden Barrier Collection System (OBCS) installed in 1992

The overburden monitoring consists of groundwater level monitoring, non-aqueous phase liquid (NAPL) presence monitoring, and groundwater quality monitoring.

There are two active remediation systems in the Lockport bedrock:

- The NAPL Plume Containment System
- The Aqueous Phase Liquid (APL) Containment System

The containment systems are comprised of a combination of monitoring wells and purge wells. The bedrock monitoring programs consists of water level monitoring, NAPL presence monitoring, and groundwater quality monitoring. Fifth-year monitoring of the Bloody Run Creek monitoring wells is also conducted as part of the bedrock monitoring.

Community Monitoring is conducted at the Site, and includes:

- The Gorge Face Seep Inspection
- APL Flux Monitoring
- Community Well Monitoring

The "Annual Site Remedial Performance Evaluation Report" for the period of January 1, 2011 to December 31, 2011 was submitted by GSH on March 29, 2012, and contains the most current Site overburden and bedrock hydraulic and groundwater quality monitoring data. A review of the 2011 data demonstrates that:

1. The overburden monitoring systems are operating properly with overburden containment being achieved.
2. The bedrock monitoring systems are operating properly, and containment is being maintained in each of the flow zones.

Tables 1 through 3 present the Five-Year groundwater sampling data collected in 2011, as per Section 7.0 of the PMP. These tables are also presented in the "Annual Site Remedial Performance Evaluation Report".

In July 2011, the New York State Department of Environmental Conservation (NYSDEC) reclassified the Site on the Registry of Inactive Hazardous Waste Disposal Sites (Registry) to a Class 4 site, indicating that it no longer presents a significant threat to public health and/or the environment for the following reasons (quoted from the NYSDEC "Public Notice - State Superfund Program, Hooker-Hyde Park Landfill" dated July 12, 2011):

1. The Site is a 15-acre parcel that was used for the disposal of chlorinated organic chemicals. Subsequent capping and other remedial activities have increased the footprint of the landfill to nearly 20 acres.
2. A series of remedies to address source area contamination, surface soil contamination, overburden and bedrock groundwater contamination, and a contaminated creek have addressed exposure concerns.
3. A deed restriction is on file, and the site management activities, including community groundwater monitoring and daily site inspections, are ongoing.

In September 2011, the United States Environmental Protection Agency issued their "Fourth Five-Year Review Report" and concluded that "the remedy is functioning as intended by the Site's decision documents. There have been no changes in the physical conditions of the Site that would affect the protectiveness of the remedy. The hydraulic containment stipulated in the RRT has been achieved. There have been no changes in the toxicity factors for the contaminants of concern and

there has been no change to the standardized risk assessment methodology that could affect the protectiveness of the remedy."

Statistical Evaluation

A statistical evaluation of the data from 2006 through 2011 was performed, and the results of this evaluation are presented in Attachment 1 "Statistical Evaluation of the Groundwater Monitoring Data – 5-Year Evaluation (2006-2011) Report".

Based upon the statistical evaluation conducted on the available data from 2006 through 2011, no recommendations can be made at this time regarding modifications to the current monitoring program. The statistical evaluation demonstrates that there is currently insufficient data either to perform pertinent statistical analyses or to reliably reach statistical conclusions for the analyses that could be performed. It is anticipated that an update to the present statistical analysis in the next Five-Year Report will result in stronger conclusions, with the addition of five more years of monitoring data to improve the relevancy of the statistical analyses performed.

At this time, there are no proposals to modify the current monitoring program at the Site. Monitoring will continue as per the PMP for an additional five years. The next Five-Year Report is due on April 30, 2017.

If you have any questions, please feel free to contact me at 231-670-6809 or by email at joseph_branch@oxy.com.

Very truly yours,

GLENN SPRINGS HOLDINGS, INC.

JBranch

Joe Branch
Project Manager
231-670-6809 Cell

JB/cs/5

Encl.

c.c.: M. Anderson, GSH (1)
C. Babcock, GSH (1)
M. Forcucci, NYSDOH (1)
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J. Polovich, CRA (1)
B. Sadowski, NYSDEC
G. Sosa, USEPA (4)

TABLES

TABLE 1

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR APL AND NAPL PURGE WELL SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*APW-1*	*APW-1*	*APW-2*	*PW-1L*	*PW-2L*	*PW-5UR*	*PW-7U*	*PW-8M*	*PW-8U*	*PW-9U*	*PW-10U*
Sample ID:			*APW-1-0911*	*APW-5-0911*	*APW-2-0911*	*PW-1L-0911*	*PW-2L-0911*	*PW-5UR-0911*	*PW-7U-0911*	*PW-8M-0911*	*PW-8U-0911*	*PW-9U-0911*	*PW-10U-0911*
Sample Date:			*9/15/2011*	*9/15/2011 (Duplicate)*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	*Units*	*Screening Level*											
Volatile Organic Compounds													
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	0.30 J	23 J	370	0.51 J	17 J	10 U	14 J	19 J
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	50 U	47 J	1.0 U	20 U	10 U	50 U	30 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	6.7	580	98 J	4.0	240	69	780	160
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	2.2	88	66 J	1.0 U	41	15	81	39
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	0.34 J	11 J	10 U	50 U	14 J
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	0.96 J	50 U	30 U
1,3-Dichlorobenzene	µg/L	180	0.19 J	0.18 J	0.20 J	20	42 J	200 U	1.3	19 J	23	17 J	20 J
1,4-Dichlorobenzene	µg/L	75	0.21 J	0.21 J	0.21 J	7.6	100	48 J	1.3	43	16	85	43
2-Chlorotoluene	µg/L	120	0.58 J	0.58 J	1.0 U	23	980	720	0.33 J	430	150	970	410
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	4.0	750	510	0.37 J	360	120	830	330
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	2.3	41 J	1700	1.0 U	66	120	31 J	68
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Bromomethane (Methyl Bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	15 J	200 U	1.0 U	12 J	10 U	50 U	15 J
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	50 U	32 J	1.0 U	20 U	10 U	50 U	30 U
Chlorobenzene	µg/L	100	7.9	7.9	1.0 U	29	490	1200	1.0	300	190	350	330
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	62	2100	1.6 U	92	19	87	130
Chloromethane (Methyl Chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
cis-1,2-Dichloroethene	µg/L	70	0.49 J	0.53 J	1.0 U	4.2	680	1000	3.8	350	61	110	480
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.2	190	200	1.0 U	92	32	190	89
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	25 J	290	1.0 U	15 J	11	40 J	20 J
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	0.12 J	2.1	97	57 J	4.1	41	14	100	37
o-Monochlorobenzotrifluoride	µg/L	50	0.14 J	0.18 J	0.47 J	4.3	210	240	6.6	88	30	220	78
p-Monochlorobenzotrifluoride	µg/L	50	0.39 J	0.37 J	1.3	6.9	350	280	13	130	43	320	110
Styrene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	0.20 J	26 J	46 J	2.9	45	10 U	460	30 U
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.1	450	2500	1.0 U	370	180	590	450
trans-1,2-Dichloroethene	µg/L	100	0.55 J	0.46 J	1.0 U	0.50 J	50 U	42 J	0.22 J	20 U	10 U	50 U	30 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	0.70 J	80	1800	2.1	72	17	240	64

TABLE 1

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR APL AND NAPL PURGE WELL SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*APW-1*	*APW-1*	*APW-2*	*PW-1L*	*PW-2L*	*PW-5UR*	*PW-7U*	*PW-8M*	*PW-8U*	*PW-9U*	*PW-10U*
Sample ID:			*APW-1-0911*	*APW-5-0911*	*APW-2-0911*	*PW-1L-0911*	*PW-2L-0911*	*PW-5UR-0911*	*PW-7U-0911*	*PW-8M-0911*	*PW-8U-0911*	*PW-9U-0911*	*PW-10U-0911*
Sample Date:			*9/15/2011*	*9/15/2011 (Duplicate)*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	*Units*	*Screening Level*											
Volatile Organics (Cont'd.)													
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Vinyl acetate	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	50 U	200 U	1.0 U	20 U	10 U	50 U	30 U
Vinyl chloride	µg/L	2	0.57 J	0.64 J	1.0 U	1.6	18 J	480	0.69 J	24	16	50 U	23 J
Xylene (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.8	960	990	3.0 U	440	160	1000	450
Semi-Volatile Organic Compounds													
2,4,6-Trichlorophenol	µg/L	6.1	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
2,4-Dichlorophenol	µg/L	110	9.6 U	9.6 U	9.6 U	1.4 J	64 J	130 J	9.6 U	39 J	37 J	48 J	51 J
2,4-Dimethylphenol	µg/L	730	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
2,4-Dinitrophenol	µg/L	73	48 U	48 U	48 U	49 U	2400 U	4900 U	48 U	750 U	720 U	1400 U	980 U
2-Chloronaphthalene	µg/L	490	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
2-Chlorophenol	µg/L	30	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
2-Nitrophenol	µg/L	50	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	48 U	48 U	48 U	49 U	2400 U	4900 U	48 U	750 U	720 U	1400 U	980 U
4-Chloro-3-methylphenol	µg/L	50	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	0.81 J	150 U	140 U	290 U	200 U
4-Nitrophenol	µg/L	50	48 U	48 U	48 U	49 U	2400 U	4900 U	48 U	750 U	720 U	1400 U	980 U
Acenaphthene	µg/L	370	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Acenaphthylene	µg/L	310	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Anthracene	µg/L	1800	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Benzo(a)anthracene	µg/L	0.092	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Benzo(a)pyrene	µg/L	0.2	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Benzo(b)fluoranthene	µg/L	0.092	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Benzo(g,h,i)perylene	µg/L	310	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
bis(2-Chloroethoxy)methane	µg/L	5	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
bis(2-Ethylhexyl)phthalate	µg/L	6	19 U	19 U	19 U	19 U	960 U	2000 U	19 U	300 U	290 U	580 U	390 U
Butyl benzylphthalate	µg/L	7300	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Chrysene	µg/L	9.2	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Diethyl phthalate	µg/L	29000	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Dimethyl phthalate	µg/L	370000	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Di-n-butylphthalate	µg/L	3700	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Di-n-octyl phthalate	µg/L	1500	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Fluoranthene	µg/L	1500	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Fluorene	µg/L	240	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Hexachlorobenzene	µg/L	1	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	44 J	200 U
Hexachlorobutadiene	µg/L	0.86	9.6 U	9.6 U	9.6 U	9.7 U	43 J	980 U	0.67 J	6.6 J	140 U	58 J	200 U

TABLE 1

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR APL AND NAPL PURGE WELL SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*APW-1*	*APW-1*	*APW-2*	*PW-1L*	*PW-2L*	*PW-5UR*	*PW-7U*	*PW-8M*	*PW-8U*	*PW-9U*	*PW-10U*
Sample ID:			*APW-1-0911*	*APW-5-0911*	*APW-2-0911*	*PW-1L-0911*	*PW-2L-0911*	*PW-5UR-0911*	*PW-7U-0911*	*PW-8M-0911*	*PW-8U-0911*	*PW-9U-0911*	*PW-10U-0911*
Sample Date:			*9/15/2011*	*9/15/2011 (Duplicate)*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	***Units***	***Screening Level***											
Semi-Volatiles (Cont'd.)													
Hexachlorocyclopentadiene	µg/L	50	48 U	48 U	48 U	49 U	2400 U	4900 U	48 U	750 U	720 U	1400 U	980 U
Hexachloroethane	µg/L	4.8	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Isophorone	µg/L	70	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Naphthalene	µg/L	6.5	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Octachlorocyclopentene	µg/L	NA	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Pentachlorophenol	µg/L	1	48 U	48 U	48 U	49 U	2400 U	4900 U	48 U	750 U	720 U	1400 U	980 U
Phenanthrene	µg/L	310	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Phenol	µg/L	11000	9.6 U	9.6 U	9.6 U	9.7 U	290 J	3900	9.6 U	150 U	1500	82 J	540
Pyrene	µg/L	180	9.6 U	9.6 U	9.6 U	9.7 U	480 U	980 U	9.6 U	150 U	140 U	290 U	200 U
Organic Acids													
2-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U	0.18	12	0.03 U	1.6	1.4	0.52 J	1.7
3-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U	0.11	3.2	0.03 U	0.50 J	0.94 J	0.24 J	0.47
4-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U	0.32	3.3	0.01 J	0.86 J	1.2	0.52 J	0.93
Benzoic acid	mg/L	150	0.10 U	0.10 U	0.10 U	0.10 U	0.15	13	0.10 U	1.2	2.1	0.71 J	1.4
Chlorendic acid	mg/L	0.05	0.19 J	0.22 J	0.17 J	0.22 J	1.3	2.6	0.92	7	21	2.9	2.0
General Chemistry													
Sulfate	mg/L		1200	1200	350	1200	1400	98	290	400	220	660	400

Notes:

APL	Aqueous phase liquid.
J	Estimated.
U	Non-detect at associated value.
NA	Not available.
NAPL	Non-aqueous phase liquid.
µg/L	micrograms per liter.
mg/L	milligrams per liter.
3.2	Value exceeds associated screening level.

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*ABP-1-09*	*ABP-7-09*	*AFW-1L-11*	*AFW-2U-04*	*AFW-2U-04*	*AFW-2U-05*	*AGW-1M-07*	*AGW-1M-09*	*AGW-1U-05*	*AGW-1U-05*	*AGW-1U-06*	*B2L-11*
Sample ID:			*ABP-1-09-0811*	*ABP-7-09-0811*	*AFW-1L-11-0811*	*AFW-2U-04-0811*	*Z7-10-0811*	*AFW-2U-05-0811*	*AGW-1M-07-0811*	*AGW-1M-09-0811*	*AGW-1U-05-0811*	*Y7-10-0811*	*AGW-1U-06-0811*	*B2L-11-0811*
Sample Date:			*8/30/2011*	*8/17/2011*	*8/30/2011*	*8/30/2011*	*8/30/2011 (Duplicate)*	*8/30/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011 (Duplicate)*	*8/31/2011*	*8/31/2011*
Parameters	*Units*	*Screening Level*												
Volatile Organic Compounds														
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.36 J	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.94 J	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.43 J	2.7	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U	1.1	5.3	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	0.68 J	1.0 U	1.0 U	1.0 U	1.0 U	0.76 J	3.0	1.0 U	1.0 U	1.0 U	0.23 J
2-Chlorotoluene	µg/L	120	1.0 U	2.2	1.7	1.0 U	1.0 U	1.0 U	4.0	30	1.0 U	1.0 U	1.0 U	2.1
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.12 J	1.0 U	1.0 U	1.0 U	38
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	4.7	1.0 U	1.0 U	1.0 U	1.0 U	7.7	37	1.0 U	1.0 U	1.0 U	9.7
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	0.26 J	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	0.46 J	0.56 J	1.3	1.3	2.0	0.65 J
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	4.3	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.18 J	1.0 U	1.0 U	1.0 U	1.0 U	1.5	8.6	1.0 U	1.0 U	1.0 U	0.23 J
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.62 J	1.0 U	1.0 U	1.0 U	1.0 U	3.2	12	1.0 U	1.0 U	1.0 U	0.42 J
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.57 J	0.57 J	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.16 J	0.56 J	1.0 U	1.0 U	1.0 U	0.25 J
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	1.0 U	1.0 U	1.0 U	0.36 J
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	0.92 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.18 J	0.17 J	1.0 U	0.29 J
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.80 J	1.2	1.0 U	0.28 J	7.7	1.0 U
Xylene (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	1.4 J	3.0 U	3.0 U	3.0 U	3.0 U
Semi-volatile Organic Compounds														
2,4,6-Trichlorophenol	µg/L	6.1	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
2,4-Dichlorophenol	µg/L	110	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	2.7 J	9.6 U	10 U	9.6 U	1.3 J
2,4-Dimethylphenol	µg/L	730	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
2,4-Dinitrophenol	µg/L	73	48 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	51 U	48 U	49 U
2-Chloronaphthalene	µg/L	490	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
2-Chlorophenol	µg/L	30	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
2-Nitrophenol	µg/L	50	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	48 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	51 U	48 U	49 U
4-Chloro-3-methylphenol	µg/L	50	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
4-Nitrophenol	µg/L	50	48 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	51 U	48 U	49 U
Acenaphthene	µg/L	370	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Acenaphthylene	µg/L	310	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Anthracene	µg/L	1800	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Benzo(a)anthracene	µg/L	0.092	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.2 J
Benzo(a)pyrene	µg/L	0.2	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	0.90 J

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*ABP-1-09*	*ABP-7-09*	*AFW-1L-11*	*AFW-2U-04*	*AFW-2U-04*	*AFW-2U-05*	*AGW-1M-07*	*AGW-1M-09*	*AGW-1U-05*	*AGW-1U-05*	*AGW-1U-06*	*B2L-11*
Sample ID:			*ABP-1-09-0811*	*ABP-7-09-0811*	*AFW-1L-11-0811*	*AFW-2U-04-0811*	*Z7-10-0811*	*AFW-2U-05-0811*	*AGW-1M-07-0811*	*AGW-1M-09-0811*	*AGW-1U-05-0811*	*Y7-10-0811*	*AGW-1U-06-0811*	*B2L-11-0811*
Sample Date:			*8/30/2011*	*8/17/2011*	*8/30/2011*	*8/30/2011*	*8/30/2011*	*8/30/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/31/2011*	*8/31/2011*
							(Duplicate)					*(Duplicate)*		
Parameters	***Units***	***Screening Level***												
Benzo(b)fluoranthene	µg/L	0.092	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.2 J
Benzo(g,h,i)perylene	µg/L	310	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.2 J
bis(2-Chloroethoxy)methane	µg/L	5	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	20 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Chrysene	µg/L	9.2	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.6 J
Dibenz(a,h)anthracene	µg/L	0.0092	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.3 J
Diethyl phthalate	µg/L	29000	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Dimethyl phthalate	µg/L	370000	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Fluoranthene	µg/L	1500	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Semi-Volatile Organic Compounds - Cont'd.														
Fluorene	µg/L	240	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Hexachlorobenzene	µg/L	1	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Hexachlorobutadiene	µg/L	0.86	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Hexachlorocyclopentadiene	µg/L	50	48 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	51 U	48 U	49 U
Hexachloroethane	µg/L	4.8	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	1.1 J
Isophorone	µg/L	70	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Naphthalene	µg/L	6.5	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Octachlorocyclopentene	µg/L	NA	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Pentachlorophenol	µg/L	1	48 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	51 U	48 U	49 U
Phenanthrene	µg/L	310	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Phenol	µg/L	11000	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Pyrene	µg/L	180	9.6 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.6 U	9.6 U	10 U	9.6 U	9.7 U
Acid														
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	14 J
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	250 U	250 U	250 U	180 J	250 U	250 U	250 U	180 J	270
General Chemistry														
Sulfate	mg/L	NA	1600	210	180	81	83	220	1500	1600	270	260	400	1500

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
R	Data rejected.
mg/L	milligrams per liter.
µg/L	micrograms per liter.
5	Value exceeds associated screening level.

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*C3-07*	*C3-09*	*D1L-11*	*D1M-09*	*D1U-04*	*D1U-05*	*D2M-09*	*D2U-04*	*D2U-05*	*E6-04*	*E6-05*	*E6-06*
Sample ID:			*C3-07-0811*	*C3-09-0811*	*D1L-11-0811*	*D1M-09-0811*	*D1U-04-0811*	*D1U-05-0811*	*D2M-09-0811*	*D2U-04-0811*	*D2U-05-0811*	*E6-04-0811*	*E6-05-0811*	*E6-06-0811*
Sample Date:			*8/17/2011*	*8/17/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*9/2/2011*	*9/2/2011*	*8/23/2011*
Parameters	***Units***	***Screening Level***												
Volatile Organic Compounds														
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	5.0 U	0.25 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	5.0 U	2.2	1.0 U	1.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	5.0 U	0.57 J	1.0 U	1.0 U	0.27 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	5.0 U	3.4	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	5.0 U	0.57 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	110	14	1.0 U	1.0 U	0.15 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	5.0 U	1.2	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	0.27 J	0.99 J	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.1	0.26 J	5.0 U	14	1.0 U	1.0 U	5.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	0.28 J	5.0 U	0.31 J	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	1.0 U	2.7
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.7 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	3.0 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	5.0 U	0.26 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	5.0 U	0.46 J	1.0 U	1.0 U	0.18 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	5.0 U	0.83 J	1.0 U	1.0 U	0.40 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	0.11 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	2.4 J	0.36 J	1.0 U	1.0 U	0.15 J	0.18 J	1.0 U	1.0 U	0.18 J	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	5.0 U	1.2	1.0 U	1.0 U	0.22 J	1.0 U	1.0 U	1.0 U	1.0 U	0.67 J
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	5.0 U	0.37 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.48 J
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	10000	3.0 U	3.0 U	21	0.60 J	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Semi-volatile Organic Compounds														
2,4,6-Trichlorophenol	µg/L	6.1	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
2,4-Dichlorophenol	µg/L	110	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
2,4-Dimethylphenol	µg/L	730	9.5 U	9.5 U	1.3 J	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
2,4-Dinitrophenol	µg/L	73	48 U	48 U	47 U	48 U	48 U	48 U	50 U	48 U	48 U	49 U	48 U	49 U
2-Chloronaphthalene	µg/L	490	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
2-Chlorophenol	µg/L	30	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
2-Nitrophenol	µg/L	50	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	48 U	48 U	47 U	48 U	48 U	48 U	50 U	48 U	48 U	49 U	48 U	49 U
4-Chloro-3-methylphenol	µg/L	50	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
4-Nitrophenol	µg/L	50	48 U	48 U	47 U	48 U	48 U	48 U	50 U	48 U	48 U	49 U	48 U	49 U
Acenaphthene	µg/L	370	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Acenaphthylene	µg/L	310	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Anthracene	µg/L	1800	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Benzo(a)anthracene	µg/L	0.092	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Benzo(a)pyrene	µg/L	0.2	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*C3-07*	*C3-09*	*D1L-11*	*D1M-09*	*D1U-04*	*D1U-05*	*D2M-09*	*D2U-04*	*D2U-05*	*E6-04*	*E6-05*	*E6-06*
Sample ID:			*C3-07-0811*	*C3-09-0811*	*D1L-11-0811*	*D1M-09-0811*	*D1U-04-0811*	*D1U-05-0811*	*D2M-09-0811*	*D2U-04-0811*	*D2U-05-0811*	*E6-04-0811*	*E6-05-0811*	*E6-06-0811*
Sample Date:			*8/17/2011*	*8/17/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*9/2/2011*	*9/2/2011*	*8/23/2011*
Parameters	***Units***	***Screening Level***												
Benzo(b)fluoranthene	µg/L	0.092	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Benzo(g,h,i)perylene	µg/L	310	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
bis(2-Chloroethoxy)methane	µg/L	5	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	19 U	19 U	19 U	19 U	19 U	19 U	20 U	19 U	19 U	13 J	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Chrysene	µg/L	9.2	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Diethyl phthalate	µg/L	29000	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Dimethyl phthalate	µg/L	370000	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Fluoranthene	µg/L	1500	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Semi-Volatile Organic Compounds - Cont'd.														
Fluorene	µg/L	240	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Hexachlorobenzene	µg/L	1	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Hexachlorobutadiene	µg/L	0.86	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Hexachlorocyclopentadiene	µg/L	50	48 U	48 U	47 U	48 U	48 U	48 U	50 U	48 U	48 U	49 U	48 U	49 U
Hexachloroethane	µg/L	4.8	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Isophorone	µg/L	70	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Naphthalene	µg/L	6.5	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Octachlorocyclopentene	µg/L	NA	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Pentachlorophenol	µg/L	1	48 U	48 U	47 U	48 U	48 U	48 U	50 U	48 U	48 U	49 U	48 U	49 U
Phenanthrene	µg/L	310	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Phenol	µg/L	11000	9.5 U	9.5 U	12	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Pyrene	µg/L	180	9.5 U	9.5 U	9.4 U	9.6 U	9.6 U	9.6 U	10 U	9.6 U	9.6 U	9.8 U	9.6 U	9.7 U
Acid														
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	15 J	74 J	30 U	30 U	30 U	30 U	30 U	30 U	41	11 J
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 UJ	30 U	30 U	30 U	30 U	30 U	30 U	30 U	8.2 J	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 UJ	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 UJ	100 U	100 U	100 U	100 U	100 U	100 U	100 U	19 J	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 UJ	350	250 U	68 J	87 J	250 U	250 U	250 U	250 U	250 U
General Chemistry														
Sulfate	mg/L	NA	160	150	1100	1600	120	230	910	100	99	550	1900	1600

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
R	Data rejected.
mg/L	milligrams per liter.
µg/L	micrograms per liter.
5	Value exceeds associated screening level.

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*E6-09*	*E6-11*	*F2L-11*	*F2M-09*	*F2U-02*	*F2U-04*	*F6-04*	*F6-06*	*F6-11*	*G1L-11*	*G1M-06*	*G1U-01*
Sample ID:			*E6-09-0811*	*E6-11-0811*	*F2L-11-0811*	*F2M-09-0811*	*F2U-02-0811*	*F2U-04-0811*	*F6-04-0811*	*F6-06-0811*	*F6-11-0811*	*G1L-11-0811*	*G1M-06-0811*	*G1U-01-0811*
Sample Date:			*8/23/2011*	*8/23/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*
Parameters	***Units***	***Screening Level***												
Volatile Organic Compounds														
1,1,1-Trichloroethane	µg/L	200	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	5.0 U	1.0 U	1.0 U	1.0 U	0.17 J	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.42 J	5.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Benzene	µg/L	5	100	52	15	0.91 J	1.0 U	1.0 U	1.0 U	0.18 J	29	92	1.0 U	0.14 J
Bromodichloromethane	µg/L	80	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	3.0 J	1.0 U	0.47 J	1.0 U	1.0 U	1.0 U	0.42 J	0.63 J	0.87 J	1.7 J	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.17 J	1.0 U	5.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	5.0 U	1.0 U	5.3	2.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	5.0 U	1.0 U	1.0 U	0.87 J	1.0 U	0.27 J	1.0 U	2.3	1.0 U	1.2 J	1.0 U	6.1
cis-1,3-Dichloropropene	µg/L	0.44	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	2.3 J	1.9	0.41 J	0.41 J	1.0 U	1.0 U	1.0 U	1.0 U	2.3	4.7 J	1.0 U	1.0 U
Methylene chloride	µg/L	30	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	0.13 J	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	0.35 J	1.0 U
Styrene	µg/L	NA	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.18 J	1.0 U	5.0 U	0.23 J	0.24 J
Toluene	µg/L	1000	50	25	7.1	0.19 J	0.21 J	1.0 U	0.33 J	0.27 J	0.34 J	3.9 J	1.0 U	0.18 J
trans-1,2-Dichloroethene	µg/L	100	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	5.0 U	1.0 U	0.75 J
trans-1,3-Dichloropropene	µg/L	0.44	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.34 J	1.0 U	5.0 U	0.53 J	5.1
Trichlorofluoromethane (CFC-11)	µg/L	NA	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.93 J	1.0 U	5.0 U	1.0 U	1.0 U
Xylene (total)	µg/L	10000	61	26	5.4	1.2 J	3.0 U	3.0 U	3.0 U	1.1 J	4.1	35	3.0 U	3.0 U
Semi-volatile Organic Compounds														
2,4,6-Trichlorophenol	µg/L	6.1	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
2,4-Dichlorophenol	µg/L	110	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
2,4-Dimethylphenol	µg/L	730	2.7 J	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
2,4-Dinitrophenol	µg/L	73	47 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	47 U	48 U	47 U
2-Chloronaphthalene	µg/L	490	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
2-Chlorophenol	µg/L	30	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
2-Nitrophenol	µg/L	50	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	47 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	47 U	48 U	47 U
4-Chloro-3-methylphenol	µg/L	50	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
4-Nitrophenol	µg/L	50	47 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	47 U	48 U	47 U
Acenaphthene	µg/L	370	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Acenaphthylene	µg/L	310	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Anthracene	µg/L	1800	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Benzo(a)anthracene	µg/L	0.092	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Benzo(a)pyrene	µg/L	0.2	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*E6-09*	*E6-11*	*F2L-11*	*F2M-09*	*F2U-02*	*F2U-04*	*F6-04*	*F6-06*	*F6-11*	*G1L-11*	*G1M-06*	*G1U-01*
Sample ID:			*E6-09-0811*	*E6-11-0811*	*F2L-11-0811*	*F2M-09-0811*	*F2U-02-0811*	*F2U-04-0811*	*F6-04-0811*	*F6-06-0811*	*F6-11-0811*	*G1L-11-0811*	*G1M-06-0811*	*G1U-01-0811*
Sample Date:			*8/23/2011*	*8/23/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/24/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*
Parameters	***Units***	***Screening Level***												
Benzo(b)fluoranthene	µg/L	0.092	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Benzo(g,h,i)perylene	µg/L	310	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
bis(2-Chloroethoxy)methane	µg/L	5	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Chrysene	µg/L	9.2	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Diethyl phthalate	µg/L	29000	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Dimethyl phthalate	µg/L	370000	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Fluoranthene	µg/L	1500	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Semi-Volatile Organic Compounds - Cont'd.														
Fluorene	µg/L	240	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Hexachlorobenzene	µg/L	1	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Hexachlorobutadiene	µg/L	0.86	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Hexachlorocyclopentadiene	µg/L	50	47 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	47 U	48 U	47 U
Hexachloroethane	µg/L	4.8	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Isophorone	µg/L	70	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Naphthalene	µg/L	6.5	1.1 J	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Octachlorocyclopentene	µg/L	NA	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Pentachlorophenol	µg/L	1	47 U	47 U	48 U	48 U	48 U	48 U	48 U	48 U	48 U	47 U	48 U	47 U
Phenanthrene	µg/L	310	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Phenol	µg/L	11000	12	2.4 J	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Pyrene	µg/L	180	9.4 U	9.4 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U	9.5 U	9.4 U	9.5 U	9.4 U
Acid														
2-Chlorobenzoic acid	µg/L	7300	27 J	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	7.5 J	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	250 U	140 J	360	250 U	250 U	250 U	250 U	250 U	250 U
General Chemistry														
Sulfate	mg/L	NA	1100	1600	55	1500	110	170	450	1500	1900	1800	1300	120

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
R	Data rejected.
mg/L	milligrams per liter.
µg/L	micrograms per liter.
5	Value exceeds associated screening level.

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*G6-01*	*G6-02*	*G6-04*	*G6-05*	*G6-06*	*G6-07*	*G6-11*	*H2M-06*	*H2M-09*	*H2U-01*	*H2U-02*	*H5-02*	*H5-04*
Sample ID:			*G6-01-0811*	*G6-02-0811*	*G6-04-0811*	*G6-05-0811*	*G6-06-0811*	*G6-07-0811*	*G6-11-0811*	*H2M-06-0811*	*H2M-09-0811*	*H2U-01-0811*	*H2U-02-0811*	*H5-02-0811*	*H5-04-0811*
Sample Date:			*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/31/2011*	*8/31/2011*	*8/31/2011*	*8/31/2011*	*8/30/2011*	*9/2/2011*
Parameters	***Units***	***Screening Level***													
Volatile Organic Compounds															
1,1,1-Trichloroethane	µg/L	200	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	13	8.8	6.2	78	1.0 U	1.0 U	5.0 U	0.57 J	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	5.0 U	5.0 U	4.0 U	6.3	0.22 J	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	5.0 U	5.0 U	4.0 U	2.5 J	0.26 J	0.28 J	5.0 U	0.76 J	2.0 U	1.0 U	2.9	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	5.0 U	5.0 U	1.2 J	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	3.9	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.4	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.6	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.1	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	0.60 J	29	1.0 U	1.0 U	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	0.35 J	0.69 J	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	5.0 U	0.61 J	6.3	99	1.0 U	1.0 U	88	1.9	51	1.0 U	3.4	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	5.0 U	5.0 U	4.0 U	2.2 J	0.39 J	1.0 U	5.0 U	6.0	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.5 J	1.4 J	1.6 J	4.8 J	1.0 U	1.0 U	5.0 U	2.2	22	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	µg/L	3.6	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	5.0 U	5.0 U	4.0 U	98	1.0 U	1.0 U	5.0 U	2.1	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl chloride)	µg/L	190	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.7	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	51	83	70	75	1.4	1.0 U	4.2 J	18	0.85 J	1.0 U	0.64 J	1.0 U	1.0 U
cis-1,3-Dichloropropene	µg/L	0.44	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	4.8 J	0.83 J	2.0	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.3 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	5.0 U	5.0 U	0.52 J	5.0 U	1.0 U	1.0 U	5.0 U	0.23 J	4.0	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	0.89 J	0.63 J	0.97 J	5.0 U	1.0 U	1.0 U	5.0 U	0.70 J	11	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	3.3 J	2.4 J	2.8 J	5.0 U	0.30 J	0.19 J	1.4 J	0.86 J	16	1.0 U	1.0 U	1.0 U	1.0 U
Styrene	µg/L	NA	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	12	9.9	7.3	5.0 U	0.30 J	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	5.0 U	5.0 U	4.0 U	4.8 J	1.0 U	1.0 U	22	1.4	0.85 J	1.0 U	0.20 J	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	3.8 J	6.7	8.4	25	1.0 U	1.0 U	3.0 J	21	2.0	1.0 U	0.65 J	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	49	74	42	40	1.9	0.45 J	2.5 J	6.7	2.5	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	5.0 U	5.0 U	4.0 U	5.0 U	1.0 U	1.0 U	5.0 U	1.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	12	20	20	35	1.0 U	1.0 U	1.6 J	2.6	0.87 J	1.0 U	7.8	1.0 U	1.0 U
Xylene (total)	µg/L	10000	15 U	15 U	12 U	15 U	3.0 U	3.0 U	24	2.4 J	5.6 J	3.0 U	3.0 U	3.0 U	3.0 U
Semi-volatile Organic Compounds															
2,4,6-Trichlorophenol	µg/L	6.1	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	110	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	3.0 J	9.6 U	9.6 U	9.6 U	9.6 U
2,4-Dimethylphenol	µg/L	730	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2,4-Dinitrophenol	µg/L	73	48 U	48 U	47 U	95 U	48 U	47 U	47 U	49 U	48 U	48 U	48 U	48 U	48 U
2-Chloronaphthalene	µg/L	490	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	30	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
2-Nitrophenol	µg/L	50	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	48 U	48 U	47 U	95 U	48 U	47 U	47 U	49 U	48 U	48 U	48 U	48 U	48 U
4-Chloro-3-methylphenol	µg/L	50	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
4-Nitrophenol	µg/L	50	48 U	48 U	47 U	95 U	48 U	47 U	47 U	49 U	48 U	48 U	48 U	48 U	48 U
Acenaphthene	µg/L	370	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Acenaphthylene	µg/L	310	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Anthracene	µg/L	1800	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Benzo(a)anthracene	µg/L	0.092	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Benzo(a)pyrene	µg/L	0.2	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*G6-01*	*G6-02*	*G6-04*	*G6-05*	*G6-06*	*G6-07*	*G6-11*	*H2M-06*	*H2M-09*	*H2U-01*	*H2U-02*	*H5-02*	*H5-04*
Sample ID:			*G6-01-0811*	*G6-02-0811*	*G6-04-0811*	*G6-05-0811*	*G6-06-0811*	*G6-07-0811*	*G6-11-0811*	*H2M-06-0811*	*H2M-09-0811*	*H2U-01-0811*	*H2U-02-0811*	*H5-02-0811*	*H5-04-0811*
Sample Date:			*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/17/2011*	*8/31/2011*	*8/31/2011*	*8/31/2011*	*8/31/2011*	*8/30/2011*	*9/2/2011*
Parameters	***Units***	***Screening Level***													
Benzo(b)fluoranthene	µg/L	0.092	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Benzo(g,h,i)perylene	µg/L	310	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
bis(2-Chloroethoxy)methane	µg/L	5	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	19 U	19 U	19 U	38 U	19 U	19 U	19 U	31	19 U	19 U	19 U	19 U	19 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Chrysene	µg/L	9.2	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Diethyl phthalate	µg/L	29000	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Dimethyl phthalate	µg/L	370000	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Fluoranthene	µg/L	1500	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Semi-Volatile Organic Compounds - Cont'd.															
Fluorene	µg/L	240	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Hexachlorobenzene	µg/L	1	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Hexachlorobutadiene	µg/L	0.86	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Hexachlorocyclopentadiene	µg/L	50	48 U	48 U	47 U	95 U	48 U	47 U	47 U	49 U	48 U	48 U	48 U	48 U	48 U
Hexachloroethane	µg/L	4.8	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Isophorone	µg/L	70	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Naphthalene	µg/L	6.5	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	2.4 J	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Octachlorocyclopentene	µg/L	NA	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Pentachlorophenol	µg/L	1	48 U	48 U	47 U	95 U	48 U	47 U	47 U	49 U	48 U	48 U	48 U	48 U	48 U
Phenanthrene	µg/L	310	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Phenol	µg/L	11000	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Pyrene	µg/L	180	9.5 U	9.5 U	9.4 U	19 U	9.5 U	9.4 U	9.4 U	9.7 U	9.6 U	9.6 U	9.6 U	9.6 U	9.6 U
Acid															
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	880	5700	30 U	30 U	30 U	130	20 J	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	200	1200	30 U	30 U	30 U	25 J	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	290	1800	20 J	30 U	9.6 J	160	30 U	30 U	30 U	30 U	30 U
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U	94 J	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	250 U	270	250 U	250 U	250 U	250 U	36 J	250 U	100 J	250 U	250 U
General Chemistry															
Sulfate	mg/L	NA	120	97	140	1000	310	320	1500	1400	1500	110	170	150	1100

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
R	Data rejected.
mg/L	milligrams per liter.
µg/L	micrograms per liter.
5	Value exceeds associated screening level.

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*H5-05*	*H5-07*	*H5-09*	*I1-01*	*I1-02*	*I1-04*	*I1-07*	*J6-02*	*J6-04*	*J6-05*	*J6-07*	*J6-07*	*J6-11*
Sample ID:			*H5-05-0811*	*H5-07-0811*	*H5-09-0811*	*I1-01-0811*	*I1-02-0811*	*I1-04-0811*	*I1-07-0811*	*J6-02-0811*	*J6-04-0811*	*J6-05-0811*	*J6-07-0811*	*X7-10-0811*	*J6-11-0811*
Sample Date:			*8/30/2011*	*8/30/2011*	*8/30/2011*	*9/2/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011 (Duplicate)*	*8/18/2011*
Parameters	***Units***	***Screening Level***													
Volatile Organic Compounds															
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.22 J	5.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	0.45 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.4	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.29 J	0.31 J	5.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	4.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.38 J	0.36 J	5.0 U
2-Chlorotoluene	µg/L	120	1.0 U	1.0 U	17	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	3.8	3.5	5.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.49 J	0.60 J	5.0 U
Benzene	µg/L	5	1.0 U	0.59 J	19	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	63
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Bromomethane (Methyl bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Carbon disulfide	µg/L	1000	1.0 U	3.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chlorobenzene	µg/L	100	1.0 U	1.0 U	19	1.0 U	1.0 U	1.0 U	1.1	1.0 U	1.0 U	1.0 U	9.7	10	5.0 U
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.62 J	5.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Chloromethane (Methyl chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
cis-1,2-Dichloroethene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.91 J	0.83 J	5.0 U
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	0.75 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3 J
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	2.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.37 J	0.40 J	5.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	6.2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.72 J	0.70 J	5.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	7.5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.3	1.3	5.0 U
Styrene	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	3.6	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.24 J	0.25 J	0.76 J
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.20 J	5.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Trichloroethene	µg/L	5	1.0 U	0.21 J	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Vinyl acetate	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	5.0 U
Vinyl chloride	µg/L	2	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.1	1.0 U	5.0 U
Xylene (total)	µg/L	10000	3.0 U	0.78 J	4.2	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U	3.3 J
Semi-volatile Organic Compounds															
2,4,6-Trichlorophenol	µg/L	6.1	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
2,4-Dichlorophenol	µg/L	110	9.7 U	9.6 U	1.4 J	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
2,4-Dimethylphenol	µg/L	730	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
2,4-Dinitrophenol	µg/L	73	49 U	48 U	48 U	49 U	48 U	50 U	48 U	48 U	48 U	47 U	49 U	48 U	94 U
2-Chloronaphthalene	µg/L	490	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
2-Chlorophenol	µg/L	30	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
2-Nitrophenol	µg/L	50	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
4,6-Dinitro-2-methylphenol	µg/L	3.7	49 U	48 U	48 U	49 U	48 U	50 U	48 U	48 U	48 U	47 U	49 U	48 U	94 U
4-Chloro-3-methylphenol	µg/L	50	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
4-Nitrophenol	µg/L	50	49 U	48 U	48 U	49 U	48 U	50 U	48 U	48 U	48 U	47 U	49 U	48 U	94 U
Acenaphthene	µg/L	370	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Acenaphthylene	µg/L	310	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Anthracene	µg/L	1800	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Benzo(a)anthracene	µg/L	0.092	9.7 UJ	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Benzo(a)pyrene	µg/L	0.2	9.7 UJ	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U

TABLE 2

2011 ANALYTICAL RESULTS SUMMARY
FIFTH QUARTER GROUP A BEDROCK PIEZOMETER SAMPLING
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Sample Location:			*H5-05*	*H5-07*	*H5-09*	*I1-01*	*I1-02*	*I1-04*	*I1-07*	*J6-02*	*J6-04*	*J6-05*	*J6-07*	*J6-07*	*J6-11*
Sample ID:			*H5-05-0811*	*H5-07-0811*	*H5-09-0811*	*I1-01-0811*	*I1-02-0811*	*I1-04-0811*	*I1-07-0811*	*J6-02-0811*	*J6-04-0811*	*J6-05-0811*	*J6-07-0811*	*X7-10-0811*	*J6-11-0811*
Sample Date:			*8/30/2011*	*8/30/2011*	*8/30/2011*	*9/2/2011*	*8/23/2011*	*8/23/2011*	*8/23/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011*	*8/18/2011 (Duplicate)*	*8/18/2011*
Parameters	***Units***	***Screening Level***													
Benzo(b)fluoranthene	µg/L	0.092	9.7 UJ	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Benzo(g,h,i)perylene	µg/L	310	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
bis(2-Chloroethoxy)methane	µg/L	5	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	6	19 U	19 U	19 U	19 U	19 U	20 U	19 U	19 U	19 U	19 U	19 U	19 U	38 U
Butyl benzylphthalate (BBP)	µg/L	NA	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Chrysene	µg/L	9.2	9.7 UJ	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Dibenz(a,h)anthracene	µg/L	0.0092	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Diethyl phthalate	µg/L	29000	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Dimethyl phthalate	µg/L	370000	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Di-n-butylphthalate (DBP)	µg/L	3700	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Di-n-octyl phthalate (DnOP)	µg/L	1500	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Fluoranthene	µg/L	1500	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Semi-Volatile Organic Compounds - Cont'd.															
Fluorene	µg/L	240	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Hexachlorobenzene	µg/L	1	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Hexachlorobutadiene	µg/L	0.86	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Hexachlorocyclopentadiene	µg/L	50	R	48 U	48 U	49 U	48 U	50 U	48 U	48 U	48 U	47 U	49 U	48 U	94 UJ
Hexachloroethane	µg/L	4.8	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Isophorone	µg/L	70	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Naphthalene	µg/L	6.5	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Octachlorocyclopentene	µg/L	NA	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Pentachlorophenol	µg/L	1	49 U	48 U	48 U	49 U	48 U	50 U	48 U	48 U	48 U	47 U	49 U	48 U	94 U
Phenanthrene	µg/L	310	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Phenol	µg/L	11000	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Pyrene	µg/L	180	9.7 U	9.6 U	9.6 U	9.7 U	9.6 U	9.9 U	9.5 U	9.5 U	9.5 U	9.4 U	9.7 U	9.6 U	19 U
Acid															
2-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
3-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U
4-Chlorobenzoic acid	µg/L	7300	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	30 U	9.6 J	7.7 J	7.7 J
Benzoic acid	µg/L	150000	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U
Chlorendic acid	µg/L	50	250 U	250 U	74 J	250 U	250 U	250 U	250 U	250 U	250 U	250 U	100 J	100 J	250 U
General Chemistry															
Sulfate	mg/L	NA	1200	1700	1500	390	370	350	1500	120	130	160	1500	1500	1600

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
UJ	The analyte was not detected above the sample quantitation limit. The reported quantitation limit is an estimated quantity.
R	Data rejected.
mg/L	milligrams per liter.
µg/L	micrograms per liter.
5	Value exceeds associated screening level.

TABLE 3

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR BLOODY RUN MW SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

		Sample Location:	*BR-1*	*BR-2*	*BR-3*	*BR-4*
		Sample ID:	*BR-1-0911*	*BR-2-0911*	*BR-3-0911*	*BR-4-0911*
		Sample Date:	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	***Units***	***Screening Level***				
Volatile Organic Compounds						
1,1,1-Trichloroethane	µg/L	200	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	µg/L	0.053	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	µg/L	800	1.0 U	11	1.0 U	1.0 U
1,1-Dichloroethene	µg/L	7	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	µg/L	70	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	µg/L	600	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	µg/L	180	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	µg/L	75	1.0 U	1.0 U	1.0 U	1.0 U
2-Chlorotoluene	µg/L	120	1.0 U	0.23 J	1.0 U	1.0 U
3-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U
4-Chlorotoluene	µg/L	120	1.0 U	1.0 U	1.0 U	1.0 U
Benzene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U
Bromoform	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane (Methyl Bromide)	µg/L	8.5	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	µg/L	100	1.0 U	0.14 J	1.0 U	0.39 J
Chloroethane	µg/L	3.6	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform (Trichloromethane)	µg/L	80	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane (Methyl Chloride)	µg/L	190	1.0 U	1.0 U	1.0 U	1.0 U
cis-1,2-Dichloroethene	µg/L	70	1.9	0.70 J	1.0 U	0.26 J
cis-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane (CFC-12)	µg/L	350	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	µg/L	700	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	µg/L	30	1.0 U	1.0 U	1.0 U	1.0 U
m-Monochlorobenzotrifluoride	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
o-Monochlorobenzotrifluoride	µg/L	50	1.0 U	1.0 U	1.0 U	1.0 U
p-Monochlorobenzotrifluoride	µg/L	50	1.0 U	0.13 J	1.0 U	1.0 U
Styrene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	µg/L	1000	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,2-Dichloroethene	µg/L	100	1.0 U	1.0 U	1.0 U	1.0 U
trans-1,3-Dichloropropene	µg/L	0.44	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	µg/L	5	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane (CFC-11)	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl acetate	µg/L	NA	1.0 U	1.0 U	1.0 U	1.0 U
Vinyl chloride	µg/L	2	0.75 J	0.58 J	1.0 U	1.0 U
Xylene (total)	µg/L	10000	3.0 U	3.0 U	3.0 U	3.0 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR BLOODY RUN MW SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

			Sample Location:	*BR-1*	*BR-2*	*BR-3*	*BR-4*
			Sample ID:	*BR-1-0911*	*BR-2-0911*	*BR-3-0911*	*BR-4-0911*
			Sample Date:	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	***Units***	***Screening Level***					
Semi-Volatile Organic Compounds							
2,4,6-Trichlorophenol	µg/L	6.1		9.7 U	9.9 U	9.6 U	9.6 U
2,4-Dichlorophenol	µg/L	110		9.7 U	9.9 U	9.6 U	9.6 U
2,4-Dimethylphenol	µg/L	730		9.7 U	9.9 U	9.6 U	9.6 U
2,4-Dinitrophenol	µg/L	73		49 U	50 U	48 U	48 U
2-Chloronaphthalene	µg/L	490		9.7 U	9.9 U	9.6 U	9.6 U
2-Chlorophenol	µg/L	30		9.7 U	9.9 U	9.6 U	9.6 U
2-Nitrophenol	µg/L	50		9.7 U	9.9 U	9.6 U	9.6 U
4,6-Dinitro-2-methylphenol	µg/L	3.7		49 U	50 U	48 U	48 U
4-Chloro-3-methylphenol	µg/L	50		9.7 U	9.9 U	9.6 U	9.6 U
4-Nitrophenol	µg/L	50		49 U	50 U	48 U	48 U
Acenaphthene	µg/L	370		9.7 U	9.9 U	9.6 U	9.6 U
Acenaphthylene	µg/L	310		9.7 U	9.9 U	9.6 U	9.6 U
Anthracene	µg/L	1800		9.7 U	9.9 U	9.6 U	9.6 U
Benzo(a)anthracene	µg/L	0.092		9.7 U	9.9 U	9.6 U	9.6 U
Benzo(a)pyrene	µg/L	0.2		9.7 U	9.9 U	9.6 U	9.6 U
Benzo(b)fluoranthene	µg/L	0.092		9.7 U	9.9 U	9.6 U	0.28 J
Benzo(g,h,i)perylene	µg/L	310		9.7 U	9.9 U	9.6 U	9.6 U
bis(2-Chloroethoxy)methane	µg/L	5		9.7 U	9.9 U	9.6 U	9.6 U
bis(2-Ethylhexyl)phthalate	µg/L	6		19 U	20 U	19 U	19 U
Butyl benzylphthalate	µg/L	7300		9.7 U	9.9 U	9.6 U	9.6 U
Chrysene	µg/L	9.2		9.7 U	9.9 U	9.6 U	9.6 U
Dibenz(a,h)anthracene	µg/L	0.0092		9.7 U	9.9 U	9.6 U	9.6 U
Diethyl phthalate	µg/L	29000		1.6 J	9.9 U	9.6 U	9.6 U
Dimethyl phthalate	µg/L	370000		9.7 U	9.9 U	9.6 U	9.6 U
Di-n-butylphthalate	µg/L	3700		9.7 U	9.9 U	9.6 U	9.6 U
Di-n-octyl phthalate	µg/L	1500		9.7 U	9.9 U	9.6 U	9.6 U
Fluoranthene	µg/L	1500		9.7 U	9.9 U	9.6 U	9.6 U
Fluorene	µg/L	240		9.7 U	9.9 U	9.6 U	9.6 U
Hexachlorobenzene	µg/L	1		9.7 U	9.9 U	9.6 U	9.6 U
Hexachlorobutadiene	µg/L	0.86		9.7 U	9.9 U	9.6 U	9.6 U
Hexachlorocyclopentadiene	µg/L	50		49 U	50 U	48 U	48 U
Hexachloroethane	µg/L	4.8		9.7 U	9.9 U	9.6 U	9.6 U
Indeno(1,2,3-cd)pyrene	µg/L	0.092		9.7 U	9.9 U	9.6 U	9.6 U
Isophorone	µg/L	70		9.7 U	9.9 U	9.6 U	9.6 U
Naphthalene	µg/L	6.5		9.7 U	9.9 U	9.6 U	9.6 U
Octachlorocyclopentene	µg/L	NA		9.7 U	9.9 U	9.6 U	9.6 U
Pentachlorophenol	µg/L	1		49 U	50 U	48 U	48 U
Phenanthrene	µg/L	310		9.7 U	9.9 U	9.6 U	9.6 U
Phenol	µg/L	11000		9.7 U	9.9 U	9.6 U	9.6 U
Pyrene	µg/L	180		9.7 U	9.9 U	9.6 U	9.6 U

TABLE 3

ANALYTICAL RESULTS SUMMARY
FIVE-YEAR BLOODY RUN MW SAMPLING
SEPTEMBER 2011
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

		Sample Location:	*BR-1*	*BR-2*	*BR-3*	*BR-4*
		Sample ID:	*BR-1-0911*	*BR-2-0911*	*BR-3-0911*	*BR-4-0911*
		Sample Date:	*9/15/2011*	*9/15/2011*	*9/15/2011*	*9/15/2011*
Parameters	*Units*	*Screening Level*				
Organic Acids						
2-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U
3-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U
4-Chlorobenzoic acid	mg/L	7.3	0.03 U	0.03 U	0.03 U	0.03 U
Benzoic acid	mg/L	150	0.1 U	0.1 U	0.1 U	0.1 U
Chlorendic acid	mg/L	0.05	0.25 U	0.34	0.18 J	0.27

Notes:

J	Estimated.
NA	Not available.
U	Non-detect at associated value.
2	Value exceeds associated screening level.
mg/L	milligrams per liter.
µg/L	micrograms per liter.

ATTACHMENT 1

STATISTICAL EVALUATION OF THE GROUNDWATER MONITORING DATA
5-YEAR EVALUATION (2006-2011) REPORT

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM
PRIVILEGED AND CONFIDENTIAL

TO: Jane Polovich REF. NO.: 001069

FROM: Daniela Araujo/Wesley Dyck/kf/34 DATE: April 25, 2012

RE: Statistical Evaluation of the Groundwater Monitoring Data
5-Year Evaluation (2006-2011) Report
Hyde Park Landfill Site
Town of Niagara, New York

1.0 INTRODUCTION

This memorandum presents a statistical evaluation of the chemistry data generated from groundwater quality monitoring efforts over the past five years (2006-2011) at the Hyde Park Landfill Site (Site), located in the Town of Niagara, New York. This memorandum is part of the first 5-Year Report for the Site, and focuses on evaluating sampling parameters, frequencies and locations.

In order to assess the performance of the Site's groundwater monitoring program regarding sampling parameters, frequency and locations, a series of statistical tests were carried out. The following groups of tests/assessments were carried out:

1) The tabulation of summary statistics, including sampling frequencies, detection frequencies, the range of observations obtained, etc., was carried out for all parameters on a per-well basis.
2) Statistical trend tests of parameter concentration vs. time were carried out on a per-well, per-parameter basis.
3) Considering a group of nine site organic indicator parameters and sulfate, wells within each flow zone group were subjected to a hierarchical cluster analysis. This procedure was used to identify wells and/or parameters that exhibit similar concentration patterns, which identifies areas in the monitoring program where efforts may be duplicated (e.g., multiple wells monitoring similar groundwater).

The present evaluation focused on groundwater samples collected from Bedrock Monitoring Program wells, specifically those in the Lockport Bedrock APL plume containment system, the NAPL plume containment system and the Bloody Run Creek monitoring program.

2.0 STATISTICAL TESTS

The statistical tests used during this evaluation are described below.

2.1 PARAMETER SUMMARY STATISTICS BY WELL

In order to assess current conditions in the Site regarding sampling parameters, frequency and locations, a general account of number of parameters analysed and detected by well and number of wells where each parameter was analysed and detected was carried out. The various summary statistics produced were generated via spreadsheet calculations of the original data.

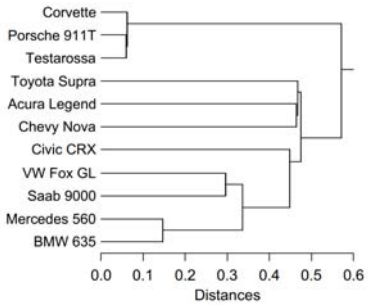
2.2 TREND TESTS

In order to look for evidence of changes (increases or decreases) in parameter concentrations over time, statistical trend tests were performed on a per parameter, per well basis. Statistical procedures for evaluating trends are discussed in United States Environmental Protection Agency (USEPA) and United States Geological Survey (USGS) guidance documents (USEPA, 2006, 2009; USGS, 2002). The Mann-Kendall trend test is a recommended general trend test procedure for detection of *monotonic* (single-direction) trends. This test does not make any distributional assumptions (e.g., does not require data to be normally or lognormally distributed) or assumptions of trend shape (e.g., does not require a linear or exponential trend), and is well suited for evaluating environmental data. This procedure is non-parametric (rank-based) and is relatively unaffected by individual outlying observations. The use of the Mann-Kendall test is therefore appropriate for evaluating temporal trends in chemical concentrations in groundwater at the Site. However, the Mann-Kendall test loses sensitivity with increasing presence of non-detect results (e.g., above 50 percent non-detects in a given data set), and is not recommended for such data (e.g., see Table 13.3 of USGS, 2002). The Mann-Kendall test was therefore used to evaluate data sets containing up to 50 percent non-detects. Additionally, data sets having fewer than four observations were deemed unsuitable for trend evaluation (i.e., having too few data to run the Mann-Kendall test with a reasonable expectation/power of detecting any underlying trends) and were not subjected to statistical testing.

Mann-Kendall testing was carried out using a proprietary validated spreadsheet add-in.

2.3 CLUSTER ANALYSIS

Cluster analysis is multivariate statistical procedure used to determine natural groupings in data. This analysis uses a correlation matrix, which is a symmetrical table of correlation coefficients for each variable (e.g., well or parameter in this case) with all other variables (Sokal and Rohlf, 1997). Cluster analysis, as performed in the present evaluation, sequentially "joins" together observations (in this case, groundwater samples) such that more similar observations are joined first, and less similar observation are joined last. By looking at patterns in the "tree" produced in the cluster analysis output, different branches may be identified that represent groupings. For example, in the following example output (taken from the SYSTAT software manual), cars with more similar performance characteristics fall into different logical groups based on clustering of the input data (acceleration, stopping distance, etc.).



Cluster analyses were performed for each flow zone group of wells considering the last five years of monitoring data for each of nine site organic indicators (see Section 3 below for a list) and sulfate. Since cluster analysis does require that the data used are normally distributed (or at least reasonably symmetrically distributed), the concentration data used was log-transformed prior to the analysis, reflecting the observed log-distribution of data sets with sufficient detected values to test. Any non-detects were assigned a value equal to one-half of the most-common detection limit, to avoid variation in detection limits unduly influencing the results. Cluster analysis was carried out using SYSTAT version 10, a commercial statistics package.

3.0 SCOPE OF DATA

The Bedrock Monitoring Program consists of groundwater monitoring in two systems: the Lockport bedrock and the Bloody Run Creek monitoring systems, which are described below.

A) The Lockport Bedrock Monitoring System:

There are two active remediation systems in the Lockport bedrock:

i) The APL Plume Containment System: 62 piezometers sampled and analyzed for VOCs, SVOCs, Organic Acids, and Sulfate. Included in the system are piezometers located beyond the limits of the NAPL plume boundaries, which are designated as Outer piezometers. Only piezometers yielding sufficient water are included in the sampling program. The piezometers are distributed along eleven bedding-parallel groundwater flow zones. Monitoring of these locations generally consists of annual analysis of VOCs, SVOCs and sulfate, along with quarterly analysis of organic acids.

ii) The NAPL Plume Containment System: 19 purge wells sampled and analyzed for VOCs, SVOCs, Organic Acids, and Sulfate. These wells are generally sampled once in 2006 and sometimes once in 2011.

B) The Bloody Run Creek Monitoring System:

Four monitoring wells are monitored along the Bloody Run Creek. Samples collected are analyzed for VOCs, SVOCs, and Organic Acids. Sampling at these wells occurred once in 2006 and once in 2011.

From the full target compound list of chemicals sampled (VOCs, SVOCs, and Organic Acids), nine Site Organic Indicators (SOIs) were identified in the Site's Performance Monitoring Plan, based on comparisons of the Site data to screening levels. The basis for identifying the SOIs was that these parameters exceeded a screening level in more than one Outer piezometer. The nine SOIs are:

Site Organic Indicator (SOI)	*Comment*
Chlorendic Acid	Site-related organic acid
Benzene	Common petroleum hydrocarbon
1,1,2,2-Tetrachloroethane (1,1,2,2-PCA)	Common industrial solvent
Tetrachloroethene (PCE)	Common industrial solvent
Trichloroethene (TCE)	Common industrial solvent
cis-1,2-Dichloroethene (cis-1,2-DCE)	Degradation product of PCE and TCE
Vinyl chloride	Degradation product of PCE and TCE
bis(2-Ethylhexyl)phthalate (BEHP)	Common laboratory contaminant
Methylene chloride	Common laboratory contaminant

An additional inorganic parameter included in the monitoring program, and considered in the statistical analyses, is sulfate. The Site's Performance Monitoring Plan indicates that sulfate concentrations are an important component of the monitoring program, providing information on relative age of the groundwater.

Groundwater samples collected during the last five years (2006-2011) at different sampling frequencies were used for this evaluation. Considering the three types of statistical evaluations performed, the following parameters were considered:

i) Statistical summaries were produced for the entire list of acids, VOCs, SVOCs and sulfate in all wells included in the Lockport Bedrock and Bloody Run Creek Monitoring Systems.

ii) Similarly, for the trend tests, the entire list of acids, VOCs, SVOCs and sulfate were considered for all wells in the Lockport Bedrock and Bloody Run Creek Monitoring Systems.

iii) The cluster analyses considered only the nine SOIs and sulfate. Cluster analyses were performed for the purge wells and wells in eight bedrock flow zone groups where monitoring is carried out. Cluster analysis was not conducted using monitoring data from the Bloody Run Creek wells due to fewer sampling events and low detection frequencies for monitored parameters.

4.0 RESULTS

The results from the statistical tests are summarized below.

4.1 STATISTICAL DATA SUMMARY

The data sets considered, along with the summary statistics produced, are listed in Table 1. A total of 7474 data sets (approximately 90 chemicals analyzed at least once in the past five years in groundwater samples from the 85 wells) were evaluated. Of these 7474 data sets, only 1386 (nineteen percent) include at least one detected concentration during the past 5 years. A breakdown by monitoring system is shown in the following table.

	Lockport Bedrock Monitoring System		
	APL Plume Containment System	***NAPL Plume Containment System***	***Bloody Run Creek Monitoring System***
Number of data sets	5408	1710	356
Number with detects	781	584	21
Percentage with detects	14%	34%	6%

Of the 90 parameters included in monitoring, 18 were not detected in any wells over the past five years. Another 63 parameters were rarely detected (i.e., in fewer than 10 wells), and more infrequently (in more than 10, but fewer than half of the monitoring wells). There were nine parameters that were detected relatively frequently, in more than 50 percent of the wells included in the monitoring program. These included:

Sulfate (79 of 79 wells sampled)	*cis*-1,2-DCE (55 of 83 wells)	2-Chlorotoluene (47 of 83)
Carbon disulfide (56 of 83 wells)	Chlorendic acid (52 of 84 wells)	Xylenes, total (45 of 83)
Toluene (56 of 83 wells)	Benzene (51 of 83 wells)	Chlorobenzene (44 of 83)

The breakdown of percentage of detected parameters by groups (acids, SVOCs and VOCs) and by monitoring system is:

- APL Plume Containment System (62 piezometers):
  - Acids were detected in 25 percent of samples collected from the piezometers. The most frequently detected acid was chlorendic acid (176 detections in 625 samples).
  - SVOCs were detected in 6 percent of the samples collected from the piezometers. The most frequently detected SVOC was BEHP (43 detections in 295 samples).
  - VOCs were detected in 20 percent of the samples collected from the piezometers. The most frequently detected VOCs were: benzene (116 detections in 292 samples), cis-1,2-DCE (115 detections in 292 samples), toluene (102 detections in 292 samples), xylenes (total) (89 detections in 292 samples), and carbon disulfide (83 detections in 292 samples).

- NAPL Plume Containment System (19 wells):
  - Acids were detected in 77 percent of the samples collected from the wells. The most frequently detected acid was chlorendic acid (33 detections in 35 samples).
  - SVOCs were detected in 11 percent of the samples collected from the wells. The most frequently detected SVOCs were phenol (25 detections in 33 samples), 2,4-dichlorophenol (21 detections in 33 samples), and hexachlorobutadiene (20 detections in 34 samples).
  - VOCs were detected in 51 percent of the samples collected from the wells. The most frequently detected VOCs were: 2-chlorotoluene (33 detections in 34 samples), chlorobenzene (33 detections in 34 samples), *o*-monochlorobenzotrifluoride (32 detections in 34 samples), and *p*-monochlorobenzotrifluoride (32 detections in 34 samples).

- Blood Run Creek Monitoring System (4 wells):
  - Acids: only chlorendic acid was detected in 3 of the 4 wells. Chlorendic acid was detected in 4 out of 8 samples.
  - SVOCs were detected in 4 percent of the samples collected from the wells. BEHP was the most frequently detected, being observed in 3 out of the 4 wells (3 detections in 8 samples).

– VOCs were detected in 7 percent of samples collected from the wells. The most frequent detected VOCs were: cis-1,2-DCE (4 detections in 8 samples), chlorobenzene (4 detections in 8 samples), and vinyl chloride (3 detections in 8 samples).

4.2 TREND TESTS

Table 2 presents the results for the Mann-Kendall trend tests performed on the SOIs data and for sulfate. Of the 1198 data sets evaluated, 1043 were not suitable for trend analysis due to insufficient detected data (i.e., fewer than 50 percent detected observations). Out of the remaining 155 data sets tested, 146 had no statistically significant trend, six had statistically significantly (above 95 percent confidence) decreasing trends, and three had increasing trends in parameter concentrations over time. The data sets with statistically significant trends are summarized below.

Well	*Monitoring Program*	*Parameter*	*Trend Test Conclusion*
F2U-02	LB - APL (flow zone 2)	chlorendic acid	Decreasing
G6-04	LB - APL (flow zone 4)	sulfate	Decreasing
G6-06	LB - APL (flow zone 6)	cis-1,2-DCE	Decreasing
G6-11	LB - APL (flow zone 11)	cis-1,2-DCE	Decreasing
G6-11	LB - APL (flow zone 11)	TCE	Decreasing
H5-07	LB - APL (flow zone 7)	TCE	Decreasing
AGW-1M-07	LB - APL (flow zone 7)	chlorendic acid	Increasing
B2L-11	LB - APL (flow zone 11)	chlorendic acid	Increasing
G6-05	LB - APL (flow zone 5)	cis-1,2-DCE	Increasing

Note: LB – APL: the Lockport Bedrock Monitoring System – APL plume containment system.

An additional ten statistically significant decreasing trends and five increasing trends were identified among the non-SOI parameters (not shown in Table 2). Increasing trends were identified for: 2-chlorobenzoic acid at B2L-11, 2,4-dimethylphenol at D1L-11, 4- chlorobenzoic acid at G6-04, benzoic acid and carbon disulfide at H2M-06.

It is noted that many of the data sets tested included only 5 annual sample results over the past five years. Although this number of samples is sufficient to perform the Mann-Kendall trend test, the power of the test to detect trends, if present, will be much better in the next 5-year report when 10 samples are available.

4.3 CLUSTER ANALYSIS

Hierarchical cluster analyses were performed grouping wells within a flow zone group considering the nine SOI parameters and sulfate. The results of the cluster analysis are shown in Figures 1-10. In these figures, the connecting lines to the right of the correlation matrices show which wells are more similar (lines connecting close to the matrix) and different (lines connecting further from the matrix) from one another. Similarly, the connecting lines at the bottom of the correlation matrices show which analytes are more similar or more different. Where wells or parameters are joined quickly together (i.e., are more similar), these may indicate overlap/duplication of monitoring efforts, and could be adjusted to optimize the monitoring program. Apparent groups with overlaps are summarized in the following table:

Well Group	*Similar wells*	*Similar parameters*
Flow Zone 1	I1-01, H5-01 and H2U-01	i) Benzene, BEHP and MC ii) PCE, 1,1,2,2-PCA and VC
Flow Zone 2	H2U-02, I1-02 and H5-02	i) VC, cis-1,2-DCE, TCE, 1,1,2,2-PCA and PCE ii) Benzene, MC, and BEHP
Flow Zone 4	All wells but F2U-04 and G6-04 (and to a lesser extent, H5-04)	cis-1,2-DCE, TCE, VC, benzene, 1,1,2,2-PCA and PCE
Flow Zone 5	i) H5-05 and E6-05 ii) D1U-05, AFW2U-05 and AGW-1U-05	i) MC and PCE ii) cis-1,2-DCE, TCE, 1,1,2,2-PCA, VC and benzene
Flow Zone 6	H2M-06 and G1M-06	All SOIs
Flow Zone 7	H5-07, J6-07 and I1-07	
Flow Zone 9	AGW-1M-09, E6-09, C3-09, D2M-09 and F2M-09	cis-1,2-DCE, TCE, MC, PCE, 1,1,2,2-PCA, VC and BEHP
Flow Zone 11	AFW-1L-11, F2L-11, F6-11, J6-11, D1L-11 and G1L-11	BEHP, MC, 1,1,2,2-PCA, PCE, VC, TCE, and cis-1,2-DCE
Purge Wells	i) APW-2, PW-1L and PW-7U ii) PW-2L and PW-10U iii) PW-3L, PW-1U and PW-6UR	*All are fairly distinct (although 1,1,2,2-PCA, PCE, TCE, benzene, VC and cis-1,2-DCE are the most similar)*

The cluster analysis results generated considering data from the APL containment system piezometers generally show that SOI concentrations are fairly similar within the same Flow Zone. This is particularly evident in Flow Zones 6, 7 and 11. Differences were observed in Flow Zone 1 piezometer G6-01, where variation in concentrations of benzene, BEHP and TCE are different compared to the other piezometers in the flow zone. Chlorendic acid in groundwater samples from Flow Zone 2 piezometer F2U-02 and benzene, BEHP and TCE at G6-02 are different compared to other SOIs in the same piezometer.

Variations in sulfate concentrations are generally different from other parameters for wells within the same flow zone. This is likely reflective of its high detection frequency relative to the SOIs at most wells.

The correlation matrix generated using purge wells at the NAPL containment system shows that variation in chlorendic acid concentrations is different at wells PW-2UR and PW-8U compared to the other wells. Wells PW-4M and PW-4U differ from the other wells considering PCE, 1,1,2,2-PCA and TCE concentrations.

5.0 CONCLUSIONS

Of the three monitoring systems analysed, the Bloody Run Creek system did not have enough data for a thorough statistical analysis. It was the system with the fewest samples and the lowest level of detected parameters (only 6 percent of all analyses resulted in a detected parameter concentration). Statistical analysis of the monitoring data for the Bloody Run Creek system may be possible in the future with the collection of additional groundwater samples.

For the Lockport Bedrock APL monitoring system wells, trend tests performed considering the SOIs and sulfate showed that the great majority of the data sets compiled were not suitable for analysis due to low detection frequencies. Of the remaining 155 data sets submitted to trend tests, only nine were identified having statistically significant trends (above 95 percent confidence). Decreasing trends over time were observed for six data sets, and increasing trends were found in three cases. Non-SOI parameters were also evaluated for trends over time and an additional ten statistically significant decreasing trends and five increasing trends were identified, as noted above in Section 4. The present trend testing does not yet have a high statistical power of detecting trends, if present, due to the availability of only five points in most data sets (i.e., all parameters but the acids). This power should increase in the next five-year report, when ten annual sample observations are available.

The cluster analyses performed (see summary above in Section 4) have identified certain wells within each flow zone that appear to have very similar SOI and sulfate concentrations, and therefore would appear to be duplicating monitoring efforts (i.e., multiple locations monitoring very similar groundwater). It is recommended that the spatial locations of wells within these similar groups be reviewed, in conjunction with observed groundwater flow directions, to see if some may be eliminated from monitoring (or monitored at a reduced frequency) as an effort in optimizing the monitoring program. Although clusters of similar SOI parameters have also been identified by the cluster analyses, it is not likely that changes to the analyte list would feasibly result in a more optimized program, due to the nature of organics analysis (i.e., all VOCs are analyzed in one sweep, as are all SVOCs, so if you retain one VOC, you may as well keep them all). Overall, it was noted that the groundwater monitoring data include more VOC detections than SVOC detections.

Overall, it is anticipated that an update to the present statistical analysis in the next five-year report will result in stronger conclusions, as the addition of another five years of monitoring data will improve the power of the statistical analyses performed.

6.0 REFERENCES

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TABLE 1

SUMMARY OF DETECTION FREQUENCY FOR CHEMICALS IN GROUNDWATER SAMPLES
BEDROCK MONITROING PROGRAM
HYDE PARK LANDFILL SITE

The Lockport Bedrock Monitoring Program

Piezometers - APL Plume Containment System

	Flow Zone 1					*Flow Zone 2*							*Flow Zone 4*								
	G1U-01	***G6-01***	***H2U-01***	***H5-01***	***I1-01***	***F2U-02***	***F2U-04***	***G6-02***	***H2U-02***	***H5-02***	***I1-02***	***J6-02***	***AFW-2U-04***	***D1U-04***	***D2U-04***	***E6-04***	***F6-04***	***G6-04***	***H5-04***	***I1-04***	***J6-04***
Acid																					
2-Chlorobenzoic acid									X									X			
3-Chlorobenzoic acid																		X			
4-Chlorobenzoic acid									X									X			
Benzoic acid									X									X			
Chlorendic acid		X				X	X	X	X					X	X			X			
SVOAs																					
2,4,6-Trichlorophenol																					
2,4-Dichlorophenol																					
2,4-Dimethylphenol																					
2,4-Dinitrophenol																					
2,4-Dinitrotoluene																					
2,6-Dinitrotoluene																					
2-Chloronaphthalene																					
2-Chlorophenol																					
2-Nitrophenol																					
4,6-Dinitro-2-methylphenol																					
4-Chloro-3-methylphenol																					
4-Nitrophenol																					
Acenaphthene																					
Acenaphthylene																					
Anthracene										X									X		
Benzo(a)anthracene										X									X		
Benzo(a)pyrene										X									X		
Benzo(b)fluoranthene										X									X		
Benzo(g,h,i)perylene										X									X		
bis(2-Chloroethoxy)methane																					
bis(2-Ethylhexyl)phthalate (DEHP)		X				X	X			X	X		X	X		X	X	X	X	X	
Butyl benzylphthalate (BBP)										X									X		
Chrysene										X									X		
Dibenz(a,h)anthracene										X									X		
Diethyl phthalate												X									
Dimethyl phthalate																					
Di-n-butylphthalate (DBP)										X									X		
Di-n-octyl phthalate (DnOP)										X									X		
Fluoranthene										X									X		
Fluorene																					
Hexachlorobenzene										X									X		
Hexachlorobutadiene																					
Hexachlorocyclopentadiene																					
Hexachloroethane																					
Indeno(1,2,3-cd)pyrene										X									X		
Isophorone																					
Naphthalene		X			X																
Octachlorocyclopentene																					
Pentachlorophenol																					
Phenanthrene										X									X		
Phenol																					
Pyrene										X									X		

	Flow Zone 5								*Flow Zone 6*						*Flow Zone 7*					
	AFW-2U-05	***AGW-1U-05***	***D1U-05***	***D2U-05***	***E6-05***	***G6-05***	***H5-05***	***J6-05***	***AGW-1U-06***	***E6-06***	***F6-06***	***G1M-06***	***G6-06***	***H2M-06***	***AGW-1M-07***	***C3-07***	***G6-07***	***H5-07***	***I1-07***	***J6-07***
Acid																				
2-Chlorobenzoic acid					X	X			X	X	X		X	X	X				X	
3-Chlorobenzoic acid					X	X			X				X	X			X			
4-Chlorobenzoic acid						X			X		X		X	X			X			X
Benzoic acid					X	X							X	X	X		X			X
Chlorendic acid			X	X		X			X	X			X		X	X			X	X
SVOAs																				
2,4,6-Trichlorophenol																				
2,4-Dichlorophenol																				
2,4-Dimethylphenol																				
2,4-Dinitrophenol																				
2,4-Dinitrotoluene																				
2,6-Dinitrotoluene																				
2-Chloronaphthalene																				
2-Chlorophenol																				
2-Nitrophenol																				
4,6-Dinitro-2-methylphenol																				
4-Chloro-3-methylphenol																				
4-Nitrophenol																				
Acenaphthene																				
Acenaphthylene																				
Anthracene																	X			
Benzo(a)anthracene																	X			
Benzo(a)pyrene																	X			
Benzo(b)fluoranthene																	X			
Benzo(g,h,i)perylene																	X			
bis(2-Chloroethoxy)methane																				
bis(2-Ethylhexyl)phthalate (DEHP)	X	X	X		X	X	X	X	X			X		X	X		X	X	X	X
Butyl benzylphthalate (BBP)			X													X	X			
Chrysene																	X			
Dibenz(a,h)anthracene																	X			
Diethyl phthalate								X			X					X				
Dimethyl phthalate																				
Di-n-butylphthalate (DBP)														X						
Di-n-octyl phthalate (DnOP)																	X			
Fluoranthene																	X			
Fluorene																				
Hexachlorobenzene																	X			
Hexachlorobutadiene											X									
Hexachlorocyclopentadiene																				
Hexachloroethane																				
Indeno(1,2,3-cd)pyrene																	X			
Isophorone																				
Naphthalene														X						
Octachlorocyclopentene																				
Pentachlorophenol																				
Phenanthrene																				
Phenol														X						
Pyrene																	X			

	Flow Zone 9												*Flow Zone 11*								
	ABP-1-09	***ABP-7-09***	***AGW-1M-09***	***B2M-09***	***C3-09***	***D1M-09***	***D2M-09***	***E6-09***	***F2M-09***	***F4M-09***	***H2M-09***	***H5-09***	***AFW-1L-11***	***B2L-11***	***D1L-11***	***E6-11***	***F2L-11***	***F6-11***	***G1L-11***	***G6-11***	***J6-11***
Acid																					
2-Chlorobenzoic acid				X		X		X	X		X	X		X	X						
3-Chlorobenzoic acid												X									
4-Chlorobenzoic acid												X								X	X
Benzoic acid																					
Chlorendic acid		X	X	X	X	X	X	X	X		X	X		X		X					
SVOAs																					
2,4,6-Trichlorophenol				NS						NS											
2,4-Dichlorophenol			X	NS		X				NS	X	X		X							
2,4-Dimethylphenol				NS				X		NS					X				X	X	
2,4-Dinitrophenol				NS						NS											
2,4-Dinitrotoluene	NS			NS						NS											
2,6-Dinitrotoluene	NS			NS						NS											
2-Chloronaphthalene				NS						NS											
2-Chlorophenol				NS						NS											
2-Nitrophenol				NS						NS											
4,6-Dinitro-2-methylphenol				NS						NS											
4-Chloro-3-methylphenol				NS						NS											
4-Nitrophenol				NS						NS											
Acenaphthene				NS						NS											
Acenaphthylene				NS						NS											
Anthracene				NS						NS											
Benzo(a)anthracene				NS					X	NS				X			X	X			
Benzo(a)pyrene				NS					X	NS				X			X	X			
Benzo(b)fluoranthene				NS					X	NS				X			X	X			
Benzo(g,h,i)perylene				NS					X	NS				X			X	X			
bis(2-Chloroethoxy)methane				NS						NS											
bis(2-Ethylhexyl)phthalate (DEHP)			X	NS		X			X	NS	X	X	X		X		X				
Butyl benzylphthalate (BBP)				NS						NS											
Chrysene				NS					X	NS				X			X	X			
Dibenz(a,h)anthracene				NS					X	NS				X			X	X			
Diethyl phthalate				NS						NS											X
Dimethyl phthalate				NS						NS											
Di-n-butylphthalate (DBP)				NS						NS											
Di-n-octyl phthalate (DnOP)				NS						NS											
Fluoranthene	X			NS						NS								X			
Fluorene				NS						NS											
Hexachlorobenzene				NS						NS											
Hexachlorobutadiene				NS						NS											
Hexachlorocyclopentadiene				NS						NS											
Hexachloroethane				NS						NS							X				
Indeno(1,2,3-cd)pyrene				NS					X	NS				X			X	X			
Isophorone				NS						NS											
Naphthalene				NS				X		NS					X					X	X
Octachlorocyclopentene				NS						NS											
Pentachlorophenol				NS						NS							X				
Phenanthrene				NS						NS											
Phenol				NS				X		NS					X	X	X				
Pyrene				NS						NS								X			

TABLE 1

SUMMARY OF DETECTION FREQUENCY FOR CHEMICALS IN GROUNDWATER SAMPLES
BEDROCK MONITROING PROGRAM
HYDE PARK LANDFILL SITE

The Lockport Bedrock Monitoring Program
Piezometers - APL Plume Containment System

	Flow Zone 1					*Flow Zone 2*						
	G1U-01	*G6-01*	*H2U-01*	*H5-01*	*I1-01*	*F2U-02*	*F2U-04*	*G6-02*	*H2U-02*	*H5-02*	*I1-02*	*J6-02*
VOAs												
1,1,1-Trichloroethane												
1,1,2,2-Tetrachloroethane	X	X						X				
1,1,2-Trichloroethane	X	X						X	X			
1,1-Dichloroethane						X			X			
1,1-Dichloroethene		X						X				
1,2,4-Trichlorobenzene												
1,2-Dichlorobenzene					X							
1,2-Dichloroethane									X			
1,2-Dichloropropane												
1,3-Dichlorobenzene												
1,4-Dichlorobenzene												
2-Chlorotoluene			X						X	X	X	X
3-Chlorotoluene												
4-Chlorotoluene									X			
Benzene	X	X		X				X	X			
Bromodichloromethane												
Bromoform												
Bromomethane (Methyl bromide)												
Carbon disulfide	X	X	X			X	X	X	X	X		
Carbon tetrachloride												
Chlorobenzene		X						X	X			
Chloroethane												
Chloroform (Trichloromethane)	X								X			
Chloromethane (Methyl chloride)												
cis-1,2-Dichloroethene	X	X				X	X	X	X			
cis-1,3-Dichloropropene												
Dichlorodifluoromethane (CFC-12)												
Ethylbenzene									X			
Methylene chloride		X						X				
m-Monochlorobenzotrifluoride		X							X			
o-Monochlorobenzotrifluoride	X	X						X	X			
p-Monochlorobenzotrifluoride	X	X						X	X			
Styrene												
Tetrachloroethene	X	X						X				
Toluene	X			X		X			X	X		
trans-1,2-Dichloroethene	X	X						X	X			
trans-1,3-Dichloropropene												
Trichloroethene	X	X						X	X			
Trichlorofluoromethane (CFC-11)												
Vinyl acetate												
Vinyl chloride		X						X	X			
Xylenes (total)	X			X					X			
General Chemistry												
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X
Number of parameters analysed	90	90	90	90	90	90	90	90	90	90	90	90
Number of parameters detected	14	19	3	4	3	7	5	16	24	20	3	3

	Flow Zone 4									*Flow Zone 5*							
	AFW-2U-04	*D1U-04*	*D2U-04*	*E6-04*	*F6-04*	*G6-04*	*H5-04*	*I1-04*	*J6-04*	*AFW-2U-05*	*AGW-1U-05*	*D1U-05*	*D2U-05*	*E6-05*	*G6-05*	*H5-05*	*J6-05*
VOAs																	
1,1,1-Trichloroethane																	
1,1,2,2-Tetrachloroethane						X									X		
1,1,2-Trichloroethane						X									X		
1,1-Dichloroethane															X		
1,1-Dichloroethene						X				X							
1,2,4-Trichlorobenzene				X								X					
1,2-Dichlorobenzene																	
1,2-Dichloroethane																	
1,2-Dichloropropane																	
1,3-Dichlorobenzene																	
1,4-Dichlorobenzene																	
2-Chlorotoluene								X	X							X	X
3-Chlorotoluene																	
4-Chlorotoluene																	
Benzene						X									X	X	
Bromodichloromethane																	
Bromoform																	
Bromomethane (Methyl bromide)																	
Carbon disulfide	X	X	X	X	X	X	X			X	X	X	X	X	X	X	
Carbon tetrachloride																	
Chlorobenzene						X						X			X		
Chloroethane																	
Chloroform (Trichloromethane)					X	X									X		
Chloromethane (Methyl chloride)								X			X						X
cis-1,2-Dichloroethene						X					X	X		X	X		
cis-1,3-Dichloropropene																	
Dichlorodifluoromethane (CFC-12)																	
Ethylbenzene																	
Methylene chloride						X				X					X		
m-Monochlorobenzotrifluoride						X											
o-Monochlorobenzotrifluoride						X											
p-Monochlorobenzotrifluoride						X											
Styrene												X					
Tetrachloroethene						X					X				X		
Toluene			X		X	X			X					X	X	X	X
trans-1,2-Dichloroethene						X									X		
trans-1,3-Dichloropropene																	
Trichloroethene						X					X				X		
Trichlorofluoromethane (CFC-11)																	
Vinyl acetate																	
Vinyl chloride						X					X				X		
Xylenes (total)					X											X	
General Chemistry																	
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Number of parameters analysed	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90
Number of parameters detected	3	4	4	4	6	24	18	4	3	5	8	9	3	8	21	7	6

	Flow Zone 6						*Flow Zone 7*					
	AGW-1U-06	*E6-06*	*F6-06*	*G1M-06*	*G6-06*	*H2M-06*	*AGW-1M-07*	*C3-07*	*G6-07*	*H5-07*	*I1-07*	*J6-07*
VOAs												
1,1,1-Trichloroethane					X				X			
1,1,2,2-Tetrachloroethane					X	X			X			
1,1,2-Trichloroethane					X				X			
1,1-Dichloroethane					X	X			X			X
1,1-Dichloroethene									X			
1,2,4-Trichlorobenzene												
1,2-Dichlorobenzene							X					X
1,2-Dichloroethane												
1,2-Dichloropropane												
1,3-Dichlorobenzene							X					
1,4-Dichlorobenzene							X					X
2-Chlorotoluene					X	X	X		X	X	X	X
3-Chlorotoluene												
4-Chlorotoluene						X	X		X			X
Benzene		X	X	X	X	X	X		X	X		
Bromodichloromethane												
Bromoform												
Bromomethane (Methyl bromide)												
Carbon disulfide		X	X	X	X	X	X	X	X	X		
Carbon tetrachloride												
Chlorobenzene		X	X		X	X	X	X	X		X	X
Chloroethane												X
Chloroform (Trichloromethane)				X	X	X			X			
Chloromethane (Methyl chloride)	X							X				
cis-1,2-Dichloroethene	X	X	X	X	X	X	X	X	X		X	X
cis-1,3-Dichloropropene												
Dichlorodifluoromethane (CFC-12)												
Ethylbenzene		X	X		X	X			X	X		
Methylene chloride			X			X						
m-Monochlorobenzotrifluoride					X	X	X		X			X
o-Monochlorobenzotrifluoride				X	X	X	X		X			X
p-Monochlorobenzotrifluoride				X	X	X	X		X			X
Styrene												
Tetrachloroethene			X	X	X				X			
Toluene		X	X		X	X	X		X	X	X	X
trans-1,2-Dichloroethene		X	X	X	X	X			X			X
trans-1,3-Dichloropropene												
Trichloroethene		X	X	X	X	X			X	X		
Trichlorofluoromethane (CFC-11)												
Vinyl acetate						X						
Vinyl chloride	X		X	X	X	X	X		X			X
Xylenes (total)		X	X		X	X	X		X	X		X
General Chemistry												
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X
Number of parameters analysed	90	90	90	90	90	90	90	90	90	90	90	90
Number of parameters detected	9	12	17	12	26	29	20	8	40	9	8	20

	Flow Zone 9												*Flow Zone 11*								
	ABP-1-09	*ABP-7-09*	*AGW-1M-09*	*B2M-09*	*C3-09*	*D1M-09*	*D2M-09*	*E6-09*	*F2M-09*	*F4M-09*	*H2M-09*	*H5-09*	*AFW-1L-11*	*B2L-11*	*D1L-11*	*E6-11*	*F2L-11*	*F6-11*	*G1L-11*	*G6-11*	*J6-11*
VOAs																					
1,1,1-Trichloroethane				NS						NS											
1,1,2,2-Tetrachloroethane				NS						NS										X	
1,1,2-Trichloroethane				NS						NS											
1,1-Dichloroethane			X	NS						NS		X									
1,1-Dichloroethene			X	NS						NS										X	
1,2,4-Trichlorobenzene			X	NS		X	X			NS	X	X									
1,2-Dichlorobenzene			X	NS		X	X			NS	X	X		X							
1,2-Dichloroethane			X	NS				X		NS											
1,2-Dichloropropane				NS						NS											
1,3-Dichlorobenzene		X	X	NS		X	X			NS	X	X									
1,4-Dichlorobenzene		X	X	NS		X	X			NS	X	X		X							
2-Chlorotoluene	X	X	X	NS		X	X			NS	X	X	X	X		X		X			
3-Chlorotoluene				NS		X				NS											
4-Chlorotoluene		X	X	NS		X	X			NS	X	X		X							
Benzene		X	X	NS		X	X	X	X	NS	X	X		X	X	X	X	X	X	X	X
Bromodichloromethane				NS						NS											
Bromoform				NS						NS											
Bromomethane (Methyl bromide)				NS						NS											
Carbon disulfide			X	NS	X	X	X	X	X	NS	X	X			X	X	X	X	X	X	
Carbon tetrachloride				NS						NS											
Chlorobenzene		X	X	NS	X	X	X			NS	X	X		X							
Chloroethane				NS						NS											
Chloroform (Trichloromethane)				NS						NS	X										
Chloromethane (Methyl chloride)				NS					X	NS	X	X		X	X		X		X	X	X
cis-1,2-Dichloroethene	X	X	X	NS	X	X	X		X	NS	X	X		X		X			X	X	
cis-1,3-Dichloropropene				NS						NS											
Dichlorodifluoromethane (CFC-12)				NS						NS											
Ethylbenzene				NS		X		X	X	NS	X	X		X	X	X	X	X	X	X	X
Methylene chloride				NS				X		NS	X	X			X		X	X	X	X	
m-Monochlorobenzotrifluoride		X	X	NS		X	X			NS	X	X		X							
o-Monochlorobenzotrifluoride		X	X	NS		X	X			NS	X	X		X						X	
p-Monochlorobenzotrifluoride		X	X	NS		X	X			NS	X	X		X						X	
Styrene				NS						NS											
Tetrachloroethene				NS						NS										X	
Toluene			X	NS	X	X	X	X	X	NS	X	X	X	X	X	X	X	X	X	X	X
trans-1,2-Dichloroethene			X	NS		X	X		X	NS	X			X		X				X	
trans-1,3-Dichloropropene				NS						NS						X					X
Trichloroethene	X			NS		X				NS	X			X		X			X	X	
Trichlorofluoromethane (CFC-11)				NS						NS											
Vinyl acetate				NS						NS											
Vinyl chloride			X	NS	X		X			NS	X			X						X	
Xylenes (total)			X	NS		X	X	X	X	NS	X	X		X	X	X	X	X	X	X	X
General Chemistry																					
Sulfate	X	X	X	NS	X	X	X	X	X	NS	X	X	X	X	X	X	X	X	X	X	X
Number of parameters analysed	88	90	90	5	90	90	90	90	90	5	90	90	90	90	90	90	90	90	90	90	90
Number of parameters detected	5	12	24	2	7	24	19	13	19	0	27	26	4	28	13	13	19	17	11	20	10

Notes:
X - the analyte was detected at least one time during the five years of sampling.
NS - Analyte not sampled.
Analytes listed in **boldface** are site organic indicators

TABLE 1

SUMMARY OF DETECTION FREQUENCY FOR CHEMICALS IN GROUNDWATER SAMPLES
BEDROCK MONITROING PROGRAM
HYDE PARK LANDFILL SITE

	The Lockport Bedrock Monitoring Program (cont.) *NAPL Purge Wells*																	*Bloody Run Creek Monitoring Program*				*Number of wells where parameter was sampled*	*Number of wells where parameter was detected*
	APW-1	*APW-2*	*PW-1L*	*PW-1U*	*PW-2L*	*PW-2M*	*PW-2UR*	*PW-3L*	*PW-3M*	*PW-4M*	*PW-4U*	*PW-5UR*	*PW-6MR*	*PW-6UR*	*PW-7U*	*PW-8M*	*PW-8U*	*PW-9U*	*PW-10U*	*BR-1*	*BR-2*	*BR-3*	*BR-4*		
Acid																								
2-Chlorobenzoic acid				X	X		X	X	X	X	X	X	X	X		X	X	X	X					85	33
3-Chlorobenzoic acid				X	X		X	X	X	X	X	X				X	X	X	X					85	20
4-Chlorobenzoic acid				X	X		X	X	X	X	X	X	X	X	X	X	X	X	X					85	27
Benzoic acid				X	X		X	X	X	X	X	X	X			X	X	X	X					84	22
Chlorendic acid	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	84	**52**
SVOAs																									
2,4,6-Trichlorophenol																			X					83	1
2,4-Dichlorophenol			X	X	X	X	X	X	X	X		X	X	X		X	X	X	X					83	20
2,4-Dimethylphenol																								83	4
2,4-Dinitrophenol																								83	0
2,4-Dinitrotoluene																								82	0
2,6-Dinitrotoluene																								82	0
2-Chloronaphthalene																								83	0
2-Chlorophenol																								83	0
2-Nitrophenol										X														83	1
4,6-Dinitro-2-methylphenol																								83	0
4-Chloro-3-methylphenol				X		X							X		X									83	4
4-Nitrophenol																								83	0
Acenaphthene																								83	0
Acenaphthylene																								83	0
Anthracene																								83	3
Benzo(a)anthracene																								83	7
Benzo(a)pyrene																								83	7
Benzo(b)fluoranthene																							X	83	8
Benzo(g,h,i)perylene																								83	7
bis(2-Chloroethoxy)methane									X															83	1
bis(2-Ethylhexyl)phthalate (DEHP)												X				X					X	X	X	83	**40**
Butyl benzylphthalate (BBP)																						X		83	6
Chrysene																								83	7
Dibenz(a,h)anthracene																								83	7
Diethyl phthalate																				X				83	6
Dimethyl phthalate																								83	0
Di-n-butylphthalate (DBP)																								83	3
Di-n-octyl phthalate (DnOP)																								83	3
Fluoranthene																								83	5
Fluorene																								83	0
Hexachlorobenzene				X	X		X		X	X	X			X				X						83	11
Hexachlorobutadiene				X	X		X	X	X	X	X		X	X	X	X	X	X	X					83	15
Hexachlorocyclopentadiene										X	X					X	X							83	4
Hexachloroethane				X			X	X	X	X	X		X	X		X	X		X					83	12
Indeno(1,2,3-cd)pyrene																								83	7
Isophorone																								83	0
Naphthalene							X	X		X			X			X			X					83	13
Octachlorocyclopentene										X	X			X										83	3
Pentachlorophenol																X			X					83	3
Phenanthrene							X																	83	3
Phenol			X	X	X		X	X	X	X	X	X	X	X		X	X	X	X		X			83	21
Pyrene																								83	4

TABLE 1

SUMMARY OF DETECTION FREQUENCY FOR CHEMICALS IN GROUNDWATER SAMPLES
BEDROCK MONITROING PROGRAM
HYDE PARK LANDFILL SITE

	The Lockport Bedrock Monitoring Program (cont.)																			*Bloody Run Creek Monitoring Program*					*Number of wells where parameter was sampled*	*Number of wells where parameter was detected*
	NAPL Purge Wells																									
	APW-1	*APW-2*	*PW-1L*	*PW-1U*	*PW-2L*	*PW-2M*	*PW-2UR*	*PW-3L*	*PW-3M*	*PW-4M*	*PW-4U*	*PW-5UR*	*PW-6MR*	*PW-6UR*	*PW-7U*	*PW-8M*	*PW-8U*	*PW-9U*	*PW-10U*		*BR-1*	*BR-2*	*BR-3*	*BR-4*			
VOAs																										
1,1,1-Trichloroethane																									83	2
1,1,2,2-Tetrachloroethane			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X							83	**25**
1,1,2-Trichloroethane						X	X	X		X	X	X		X			X								83	16
1,1-Dichloroethane																					X				83	10
1,1-Dichloroethene																									83	7
1,2,4-Trichlorobenzene			X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X						83	23
1,2-Dichlorobenzene	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	27
1,2-Dichloroethane						X	X	X							X	X	X		X						83	10
1,2-Dichloropropane																	X								83	1
1,3-Dichlorobenzene	X	X	X	X	X	X		X	X				X		X	X	X	X	X						83	21
1,4-Dichlorobenzene	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X						83	27
2-Chlorotoluene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				83	47
3-Chlorotoluene				X									X						X						83	4
4-Chlorotoluene	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	30
Benzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X				83	**51**
Bromodichloromethane																									83	0
Bromoform																									83	0
Bromomethane (Methyl bromide)																									83	0
Carbon disulfide					X	X	X		X	X	X				X	X	X	X	X						83	56
Carbon tetrachloride							X		X	X	X	X	X	X		X	X		X						83	10
Chlorobenzene	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X		X		83	44
Chloroethane																									83	1
Chloroform (Trichloromethane)				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	26
Chloromethane (Methyl chloride)							X			X															83	16
cis-1,2-Dichloroethene	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	83	**55**
cis-1,3-Dichloropropene																									83	0
Dichlorodifluoromethane (CFC-12)																									83	0
Ethylbenzene			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	37
Methylene chloride					X		X		X	X		X				X	X	X	X						83	**24**
m-Monochlorobenzotrifluoride		X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X						83	32
o-Monochlorobenzotrifluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	38
p-Monochlorobenzotrifluoride	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				83	39
Styrene																									83	1
Tetrachloroethene			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	**28**
Toluene			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	56
trans-1,2-Dichloroethene	X		X					X		X		X	X	X	X										83	29
trans-1,3-Dichloropropene																									83	2
Trichloroethene			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	**38**
Trichlorofluoromethane (CFC-11)																									83	0
Vinyl acetate																									83	1
Vinyl chloride	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X		X		X	X			83	**38**
Xylenes (total)			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						83	45
General Chemistry																										
Sulfate	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		NS	NS	NS	NS	79	**79**
Number of parameters analysed	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90		89	89	89	89		
Number of parameters detected	14	10	24	33	32	26	36	34	35	38	33	32	34	32	27	37	38	31	38		4	9	3	5		

Notes:
X - the analyte was detected at least on
NS - Analyte not sampled.
Analytes listed in **boldface** are site org

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 1									
G1U-01	Chlorendic acid	µg/L	22	100%	250 U	250 U	--	--	100% ND
G1U-01	Benzene	µg/L	5	60%	0.14 J	5.0 U	--	--	>50% ND
G1U-01	1,1,2,2-Tetrachloroethane	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
G1U-01	Tetrachloroethene	µg/L	5	40%	0.19 J	5.0 U	-3	0.613	No trend identified
G1U-01	Trichloroethene	µg/L	5	0%	0.22 J	14	-4	0.462	No trend identified
G1U-01	cis-1,2-Dichloroethene	µg/L	5	40%	0.80 J	9.9	-3	0.613	No trend identified
G1U-01	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G1U-01	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
G1U-01	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G1U-01	Sulfate	mg/L	5	0%	86.6	160	-2	0.806	No trend identified
G6-01	Chlorendic acid	µg/L	21	86%	23 J	250 U	--	--	>50% ND
G6-01	Benzene	µg/L	5	60%	0.76 J	5.0 U	--	--	>50% ND
G6-01	1,1,2,2-Tetrachloroethane	µg/L	5	0%	10	30	-8	0.086	No trend identified
G6-01	Tetrachloroethene	µg/L	5	0%	12	22	-8	0.086	No trend identified
G6-01	Trichloroethene	µg/L	5	0%	49	150	-8	0.086	No trend identified
G6-01	cis-1,2-Dichloroethene	µg/L	5	0%	51	150	-8	0.086	No trend identified
G6-01	Vinyl chloride	µg/L	5	0%	12	68	-6	0.221	No trend identified
G6-01	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.2 J	19 U	--	--	>50% ND
G6-01	Methylene chloride	µg/L	5	80%	2.6 J	5.0 U	--	--	>50% ND
G6-01	Sulfate	mg/L	5	0%	72.1	120	-2	0.806	No trend identified
H2U-01	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H2U-01	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
H2U-01	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-01	Sulfate	mg/L	5	0%	96	120	-1	1.000	No trend identified
H5-01	Chlorendic acid	µg/L	1	100%	ND(250)	ND(250)	--	--	Insufficient data
H5-01	Benzene	µg/L	1	0%	0.16	0.16	--	--	Insufficient data
H5-01	1,1,2,2-Tetrachloroethane	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	Tetrachloroethene	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	Trichloroethene	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	cis-1,2-Dichloroethene	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	Vinyl chloride	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	ND(9.4)	ND(9.4)	--	--	Insufficient data
H5-01	Methylene chloride	µg/L	1	100%	ND(1)	ND(1)	--	--	Insufficient data
H5-01	Sulfate	mg/L	1	0%	103.5	103.5	--	--	Insufficient data
I1-01	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
I1-01	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
I1-01	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-01	Sulfate	mg/L	5	0%	100	390	4	0.462	No trend identified
Flow Zone 2									
F2U-02	Chlorendic acid	µg/L	22	0%	140 J	440	-126	3.9E-04	**Decreasing Trend**
F2U-02	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	cis-1,2-Dichloroethene	µg/L	5	40%	0.24 J	5.0 U	-3	0.613	No trend identified
F2U-02	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	9.4 U	110	--	--	>50% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 2 (cont...)									
F2U-02	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-02	Sulfate	mg/L	5	0%	110	146	-6	0.221	No trend identified
G6-02	Chlorendic acid	µg/L	5	80%	38 J	250 U	--	--	>50% ND
G6-02	Benzene	µg/L	5	40%	0.61 J	5.0 U	1	1.000	No trend identified
G6-02	1,1,2,2-Tetrachloroethane	µg/L	5	0%	5.8	23	-8	0.180	No trend identified
G6-02	Tetrachloroethene	µg/L	5	0%	9.9	14.5	-8	0.180	No trend identified
G6-02	Trichloroethene	µg/L	5	0%	74	140	-7	0.241	No trend identified
G6-02	cis-1,2-Dichloroethene	µg/L	5	0%	83	145	-8	0.180	No trend identified
G6-02	Vinyl chloride	µg/L	5	0%	20	50	-6	0.338	No trend identified
G6-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
G6-02	Methylene chloride	µg/L	5	80%	2.5 J	ND(6.5)	--	--	>50% ND
G6-02	Sulfate	mg/L	5	0%	69.9	105	-3	0.696	No trend identified
H2U-02	Chlorendic acid	µg/L	22	68%	61 J	250 U	--	--	>50% ND
H2U-02	Benzene	µg/L	5	20%	1.0 U	3.9	4	0.462	No trend identified
H2U-02	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-02	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-02	Trichloroethene	µg/L	5	40%	1.0 U	2.9	-3	0.613	No trend identified
H2U-02	cis-1,2-Dichloroethene	µg/L	5	40%	0.64 J	56	1	1.000	No trend identified
H2U-02	Vinyl chloride	µg/L	5	40%	1.0 U	21	1	1.000	No trend identified
H2U-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
H2U-02	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2U-02	Sulfate	mg/L	5	0%	170	220	-4	0.462	No trend identified
H5-02	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H5-02	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.6 J	19 U	--	--	>50% ND
H5-02	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-02	Sulfate	mg/L	5	0%	134	150	1	1.000	No trend identified
I1-02	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
I1-02	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	6.2 J	19 U	--	--	>50% ND
I1-02	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-02	Sulfate	mg/L	5	0%	144	370	0	1.000	No trend identified
J6-02	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
J6-02	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
J6-02	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-02	Sulfate	mg/L	5	0%	86.8	196	4	0.565	No trend identified
Flow Zone 4									
AFW-2U-04	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
AFW-2U-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	7.7 J	ND(19)	--	--	>50% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 4 (cont…)									
AFW-2U-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-04	Sulfate	mg/L	5	0%	67.5	92	-2	0.851	No trend identified
D1U-04	Chlorendic acid	µg/L	22	77%	32 J	250 U	--	--	>50% ND
D1U-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.2 J	19 U	--	--	>50% ND
D1U-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-04	Sulfate	mg/L	5	0%	108	144	-7	0.130	No trend identified
D2U-04	Chlorendic acid	µg/L	5	80%	32 J	250 U	--	--	>50% ND
D2U-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
D2U-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-04	Sulfate	mg/L	5	0%	80	128	-2	0.806	No trend identified
E6-04	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
E6-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	4.5 J	13 J	--	--	>50% ND
E6-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-04	Sulfate	mg/L	5	0%	354	624	0	1.000	No trend identified
F2U-04	Chlorendic acid	µg/L	22	14%	250 U	500	14	0.746	No trend identified
F2U-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	cis-1,2-Dichloroethene	µg/L	5	40%	0.22 J	5.0 U	5	0.312	No trend identified
F2U-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	4.1 J	19 U	--	--	>50% ND
F2U-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2U-04	Sulfate	mg/L	5	0%	145	184	2	0.806	No trend identified
F6-04	Chlorendic acid	µg/L	5	100%	ND(250)	ND(250)	--	--	100% ND
F6-04	Benzene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	Tetrachloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	Trichloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	cis-1,2-Dichloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	Vinyl chloride	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.1	19 U	--	--	>50% ND
F6-04	Methylene chloride	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
F6-04	Sulfate	mg/L	5	0%	302.5	519	0	1.000	No trend identified
G6-04	Chlorendic acid	µg/L	21	71%	26 J	250 U	--	--	>50% ND
G6-04	Benzene	µg/L	5	0%	5.4	17	-6	0.221	No trend identified
G6-04	1,1,2,2-Tetrachloroethane	µg/L	5	0%	4.8	9.6	-6	0.221	No trend identified
G6-04	Tetrachloroethene	µg/L	5	0%	3.7 J	7.3	8	0.086	No trend identified
G6-04	Trichloroethene	µg/L	5	0%	27	54	2	0.806	No trend identified
G6-04	cis-1,2-Dichloroethene	µg/L	5	0%	41	84	2	0.806	No trend identified
G6-04	Vinyl chloride	µg/L	5	0%	17	66	-2	0.806	No trend identified
G6-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	5.7 J	19 U	--	--	>50% ND
G6-04	Methylene chloride	µg/L	5	80%	2.0 U	5.0 U	--	--	>50% ND
G6-04	Sulfate	mg/L	5	0%	140	312	-10	0.027	**Decreasing Trend**

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 4 (cont…)									
H5-04	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H5-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	1.2 J	20	--	--	>50% ND
H5-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-04	Sulfate	mg/L	5	0%	412	1350	-4	0.462	No trend identified
I1-04	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
I1-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	2.3 J	20 U	--	--	>50% ND
I1-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-04	Sulfate	mg/L	5	0%	350	951	-6	0.221	No trend identified
J6-04	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
J6-04	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
J6-04	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-04	Sulfate	mg/L	5	0%	89.9	186	2	0.806	No trend identified
Flow Zone 5									
AFW-2U-05	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
AFW-2U-05	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-2U-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	6.6 J	19 U	--	--	>50% ND
AFW-2U-05	Methylene chloride	µg/L	5	80%	0.37 J	5.0 U	--	--	>50% ND
AFW-2U-05	Sulfate	mg/L	5	0%	210	268	-6	0.221	No trend identified
AGW-1U-05	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
AGW-1U-05	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-05	Tetrachloroethene	µg/L	5	20%	0.57	5.0 U	-5	0.444	No trend identified
AGW-1U-05	Trichloroethene	µg/L	5	20%	0.175	5.0 U	-4	0.573	No trend identified
AGW-1U-05	cis-1,2-Dichloroethene	µg/L	5	20%	0.85 J	5.0 U	2	0.848	No trend identified
AGW-1U-05	Vinyl chloride	µg/L	5	80%	0.28	5.0 U	--	--	>50% ND
AGW-1U-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	3.7 J	ND(19.5)	--	--	>50% ND
AGW-1U-05	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-05	Sulfate	mg/L	5	0%	170	290	2	0.851	No trend identified
D1U-05	Chlorendic acid	µg/L	22	68%	30 J	250 U	--	--	>50% ND
D1U-05	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	cis-1,2-Dichloroethene	µg/L	5	80%	0.11 J	5.0 U	--	--	>50% ND
D1U-05	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	9.4 U	19 U	--	--	>50% ND
D1U-05	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D1U-05	Sulfate	mg/L	5	0%	202	394	-7	0.130	No trend identified

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 5 (cont...)									
D2U-05	Chlorendic acid	µg/L	5	80%	190 J	250 U	--	--	>50% ND
D2U-05	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
D2U-05	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
D2U-05	Sulfate	mg/L	5	0%	84.25	430	-4	0.565	No trend identified
E6-05	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
E6-05	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	cis-1,2-Dichloroethene	µg/L	5	60%	0.25 J	5.0 U	--	--	>50% ND
E6-05	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.1 J	19 U	--	--	>50% ND
E6-05	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-05	Sulfate	mg/L	5	0%	1400	1900	4	0.462	No trend identified
G6-05	Chlorendic acid	µg/L	5	0%	260	640	-6	0.221	No trend identified
G6-05	Benzene	µg/L	5	0%	52	99	6	0.221	No trend identified
G6-05	1,1,2,2-Tetrachloroethane	µg/L	5	0%	20	86	2	0.806	No trend identified
G6-05	Tetrachloroethene	µg/L	5	60%	0.95 J	5.0 U	--	--	>50% ND
G6-05	Trichloroethene	µg/L	5	0%	12	92	4	0.462	No trend identified
G6-05	cis-1,2-Dichloroethene	µg/L	5	0%	7.9	75	10	0.027	**Increasing Trend**
G6-05	Vinyl chloride	µg/L	5	0%	13	38	6	0.221	No trend identified
G6-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	5.7 J	38 U	--	--	>50% ND
G6-05	Methylene chloride	µg/L	5	80%	1.7 J	8.0 U	--	--	>50% ND
G6-05	Sulfate	mg/L	5	0%	900	1000	-2	0.806	No trend identified
H5-05	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H5-05	Benzene	µg/L	5	40%	0.12 J	5.0 U	-5	0.312	No trend identified
H5-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	1.1 J	19 U	--	--	>50% ND
H5-05	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-05	Sulfate	mg/L	5	0%	1200	1650	-8	0.086	No trend identified
J6-05	Chlorendic acid	µg/L	5	100%	ND(250)	ND(250)	--	--	100% ND
J6-05	Benzene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	1,1,2,2-Tetrachloroethane	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	Tetrachloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	Trichloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	cis-1,2-Dichloroethene	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	Vinyl chloride	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	7.4	19 U	--	--	>50% ND
J6-05	Methylene chloride	µg/L	5	100%	ND(1)	5.0 U	--	--	100% ND
J6-05	Sulfate	mg/L	5	0%	78	193.5	-6	0.338	No trend identified
Flow Zone 6									
AGW-1U-06	Chlorendic acid	µg/L	15	27%	30 J	290	15	0.483	No trend identified
AGW-1U-06	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-06	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-06	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-06	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1U-06	cis-1,2-Dichloroethene	µg/L	5	0%	1.5	6.5	-8	0.086	No trend identified
AGW-1U-06	Vinyl chloride	µg/L	5	0%	4	9.2	4	0.462	No trend identified
AGW-1U-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	3.2 J	19 U	--	--	>50% ND
AGW-1U-06	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 6 (cont…)									
AGW-1U-06	Sulfate	mg/L	5	0%	400	530	-4	0.462	No trend identified
E6-06	Chlorendic acid	µg/L	5	80%	30 J	250 U	--	--	>50% ND
E6-06	Benzene	µg/L	5	80%	1.0 U	29	--	--	>50% ND
E6-06	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-06	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-06	Trichloroethene	µg/L	5	40%	0.48 J	5.0 U	1	1.000	No trend identified
E6-06	cis-1,2-Dichloroethene	µg/L	5	20%	2.0 U	3.4	2	0.806	No trend identified
E6-06	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
E6-06	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-06	Sulfate	mg/L	5	0%	1330	1740	-2	0.806	No trend identified
F6-06	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
F6-06	Benzene	µg/L	5	40%	0.13 J	5.0 U	1	1.000	No trend identified
F6-06	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-06	Tetrachloroethene	µg/L	5	60%	0.18 J	5.0 U	--	--	>50% ND
F6-06	Trichloroethene	µg/L	5	20%	0.30 J	5.0 U	2	0.806	No trend identified
F6-06	cis-1,2-Dichloroethene	µg/L	5	0%	1.3 J	2.3	5	0.312	No trend identified
F6-06	Vinyl chloride	µg/L	5	80%	0.93 J	5.0 U	--	--	>50% ND
F6-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
F6-06	Methylene chloride	µg/L	5	80%	0.22 J	5.0 U	--	--	>50% ND
F6-06	Sulfate	mg/L	5	0%	1370	1570	1	1.000	No trend identified
G1M-06	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
G1M-06	Benzene	µg/L	5	80%	0.48 J	5.0 U	--	--	>50% ND
G1M-06	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G1M-06	Tetrachloroethene	µg/L	5	20%	0.20 J	5.0 U	0	1.000	No trend identified
G1M-06	Trichloroethene	µg/L	5	20%	0.49 J	5.0 U	0	1.000	No trend identified
G1M-06	cis-1,2-Dichloroethene	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
G1M-06	Vinyl chloride	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
G1M-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.3 J	19 U	--	--	>50% ND
G1M-06	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G1M-06	Sulfate	mg/L	5	0%	1100	1300	3	0.613	No trend identified
G6-06	Chlorendic acid	µg/L	21	90%	250 U	600	--	--	>50% ND
G6-06	Benzene	µg/L	5	60%	1.0 U	7.8	--	--	>50% ND
G6-06	1,1,2,2-Tetrachloroethane	µg/L	5	60%	1.0 U	9	--	--	>50% ND
G6-06	Tetrachloroethene	µg/L	5	20%	0.30 J	5.0 U	-4	0.462	No trend identified
G6-06	Trichloroethene	µg/L	5	0%	1.9	14	-8	0.086	No trend identified
G6-06	cis-1,2-Dichloroethene	µg/L	5	0%	1.4	12	-10	0.027	**Decreasing Trend**
G6-06	Vinyl chloride	µg/L	5	60%	1.0 U	5.0 U	--	--	>50% ND
G6-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
G6-06	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G6-06	Sulfate	mg/L	5	0%	251	1280	-6	0.221	No trend identified
H2M-06	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H2M-06	Benzene	µg/L	5	0%	1.6	1.9	5	0.267	No trend identified
H2M-06	1,1,2,2-Tetrachloroethane	µg/L	5	20%	0.39 J	5.0 U	-2	0.806	No trend identified
H2M-06	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H2M-06	Trichloroethene	µg/L	5	0%	5.8	6.8	3	0.613	No trend identified
H2M-06	cis-1,2-Dichloroethene	µg/L	5	0%	15	19	-3	0.613	No trend identified
H2M-06	Vinyl chloride	µg/L	5	40%	1.0 U	6.1	1	1.000	No trend identified
H2M-06	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	9.5 U	31	--	--	>50% ND
H2M-06	Methylene chloride	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
H2M-06	Sulfate	mg/L	5	0%	1150	1500	4	0.462	No trend identified
Flow Zone 7									
AGW-1M-07	Chlorendic acid	µg/L	22	45%	28 J	300	104	0.011	**Increasing Trend**
AGW-1M-07	Benzene	µg/L	5	80%	0.33 J	5.0 U	--	--	>50% ND
AGW-1M-07	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-07	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-07	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-07	cis-1,2-Dichloroethene	µg/L	5	40%	0.12 J	5.0 U	7	0.130	No trend identified
AGW-1M-07	Vinyl chloride	µg/L	5	60%	0.76 J	5.0 U	--	--	>50% ND
AGW-1M-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	8	88%	6.6 J	19 U	--	--	>50% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 7 (cont...)									
AGW-1M-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-07	Sulfate	mg/L	5	0%	1230	1500	6	0.221	No trend identified
C3-07	Chlorendic acid	µg/L	22	82%	23 J	250 U	--	--	>50% ND
C3-07	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	cis-1,2-Dichloroethene	µg/L	5	80%	0.21 J	5.0 U	--	--	>50% ND
C3-07	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
C3-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
C3-07	Sulfate	mg/L	5	0%	152.5	210	0	1.000	No trend identified
G6-07	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
G6-07	Benzene	µg/L	5	60%	0.81 J	26	--	--	>50% ND
G6-07	1,1,2,2-Tetrachloroethane	µg/L	5	60%	1.0 U	31	--	--	>50% ND
G6-07	Tetrachloroethene	µg/L	5	60%	1.0 U	5.0 U	--	--	>50% ND
G6-07	Trichloroethene	µg/L	5	20%	0.29 J	50	-4	0.462	No trend identified
G6-07	cis-1,2-Dichloroethene	µg/L	5	40%	0.26 J	110	-7	0.130	No trend identified
G6-07	Vinyl chloride	µg/L	5	80%	1.0 U	32	--	--	>50% ND
G6-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.3 J	19 U	--	--	>50% ND
G6-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
G6-07	Sulfate	mg/L	5	0%	120	1040	2	0.806	No trend identified
H5-07	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
H5-07	Benzene	µg/L	5	0%	0.59 J	1.9	-8	0.086	No trend identified
H5-07	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-07	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-07	Trichloroethene	µg/L	5	0%	0.21 J	4.2	-10	0.027	**Decreasing Trend**
H5-07	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-07	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	3.0 J	19 U	--	--	>50% ND
H5-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-07	Sulfate	mg/L	5	0%	1530	1700	4	0.448	No trend identified
I1-07	Chlorendic acid	µg/L	5	60%	80 J	250 U	--	--	>50% ND
I1-07	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	cis-1,2-Dichloroethene	µg/L	5	80%	0.13 J	5.0 U	--	--	>50% ND
I1-07	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.9 J	19 U	--	--	>50% ND
I1-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
I1-07	Sulfate	mg/L	5	0%	1400	1610	2	0.806	No trend identified
J6-07	Chlorendic acid	µg/L	5	40%	51 J	250 U	6	0.339	No trend identified
J6-07	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-07	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-07	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-07	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-07	cis-1,2-Dichloroethene	µg/L	5	20%	0.62 J	5.0 U	2	0.851	No trend identified
J6-07	Vinyl chloride	µg/L	5	40%	0.54 J	5.0 U	6	0.314	No trend identified
J6-07	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	3.6 J	ND(19)	--	--	>50% ND
J6-07	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
J6-07	Sulfate	mg/L	5	0%	170	1580	4	0.566	No trend identified
Flow Zone 9									
ABP-1-09	Chlorendic acid	µg/L	2	100%	250 U	250 U	--	--	Insufficient data
ABP-1-09	Benzene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
ABP-1-09	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
ABP-1-09	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
ABP-1-09	Trichloroethene	µg/L	2	50%	0.92 J	1.0 U	--	--	Insufficient data
ABP-1-09	cis-1,2-Dichloroethene	µg/L	2	50%	0.26 J	1.0 U	--	--	Insufficient data
ABP-1-09	Vinyl chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 9 (cont...)									
ABP-1-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	11 U	19 U	--	--	Insufficient data
ABP-1-09	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
ABP-1-09	Sulfate	mg/L	2	0%	1600	1700	--	--	Insufficient data
ABP-7-09	Chlorendic acid	µg/L	22	82%	28 J	250 U	--	--	>50% ND
ABP-7-09	Benzene	µg/L	5	60%	0.21 J	5.0 U	--	--	>50% ND
ABP-7-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
ABP-7-09	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
ABP-7-09	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
ABP-7-09	cis-1,2-Dichloroethene	µg/L	5	60%	0.26	5.0 U	--	--	>50% ND
ABP-7-09	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
ABP-7-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
ABP-7-09	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
ABP-7-09	Sulfate	mg/L	5	0%	209	309	3	0.696	No trend identified
AGW-1M-09	Chlorendic acid	µg/L	22	59%	36 J	250 U	--	--	>50% ND
AGW-1M-09	Benzene	µg/L	5	20%	0.12 J	7.6	-8	0.086	No trend identified
AGW-1M-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-09	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-09	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-09	cis-1,2-Dichloroethene	µg/L	5	40%	0.37 J	5.0 U	5	0.312	No trend identified
AGW-1M-09	Vinyl chloride	µg/L	5	60%	1.2	5.0 U	--	--	>50% ND
AGW-1M-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	6.1 J	19 U	--	--	>50% ND
AGW-1M-09	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AGW-1M-09	Sulfate	mg/L	5	0%	1350	1600	4	0.462	No trend identified
B2M-09	Chlorendic acid	µg/L	3	33%	32 J	250 U	--	--	Insufficient data
C3-09	Chlorendic acid	µg/L	22	86%	27 J	250 U	--	--	>50% ND
C3-09	Benzene	µg/L	5	100%	1.0 U	ND(5)	--	--	100% ND
C3-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	ND(5)	--	--	100% ND
C3-09	Tetrachloroethene	µg/L	5	100%	1.0 U	ND(5)	--	--	100% ND
C3-09	Trichloroethene	µg/L	5	100%	1.0 U	ND(5)	--	--	100% ND
C3-09	cis-1,2-Dichloroethene	µg/L	5	20%	0.28 J	ND(5)	-4	0.558	No trend identified
C3-09	Vinyl chloride	µg/L	5	60%	0.14 J	ND(5)	--	--	>50% ND
C3-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
C3-09	Methylene chloride	µg/L	5	100%	1.0 U	ND(5)	--	--	100% ND
C3-09	Sulfate	mg/L	5	0%	126	175	-6	0.329	No trend identified
D1M-09	Chlorendic acid	µg/L	22	32%	47.5	1300	-16	0.706	No trend identified
D1M-09	Benzene	µg/L	5	20%	2.9	33	-2	0.845	No trend identified
D1M-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	10 U	--	--	100% ND
D1M-09	Tetrachloroethene	µg/L	5	100%	1.0 U	10 U	--	--	100% ND
D1M-09	Trichloroethene	µg/L	5	80%	0.37 J	10 U	--	--	>50% ND
D1M-09	cis-1,2-Dichloroethene	µg/L	5	40%	0.31 J	10 U	1	1.000	No trend identified
D1M-09	Vinyl chloride	µg/L	5	100%	1.0 U	10 U	--	--	100% ND
D1M-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.9 J	19 U	--	--	>50% ND
D1M-09	Methylene chloride	µg/L	5	100%	1.0 U	10 U	--	--	100% ND
D1M-09	Sulfate	mg/L	5	0%	1100	1600	4	0.558	No trend identified
D2M-09	Chlorendic acid	µg/L	4	50%	87 J	250 U	3	0.542	No trend identified
D2M-09	Benzene	µg/L	4	25%	0.15 J	5.0 U	-4	0.334	No trend identified
D2M-09	1,1,2,2-Tetrachloroethane	µg/L	4	100%	1.0 U	5.0 U	--	--	100% ND
D2M-09	Tetrachloroethene	µg/L	4	100%	1.0 U	5.0 U	--	--	100% ND
D2M-09	Trichloroethene	µg/L	4	100%	1.0 U	5.0 U	--	--	100% ND
D2M-09	cis-1,2-Dichloroethene	µg/L	4	0%	1.1 J	1.5	-3	0.542	No trend identified
D2M-09	Vinyl chloride	µg/L	4	75%	1.0 U	5.0 U	--	--	>50% ND
D2M-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	4	100%	9.4 U	20 U	--	--	100% ND
D2M-09	Methylene chloride	µg/L	4	100%	1.0 U	5.0 U	--	--	100% ND
D2M-09	Sulfate	mg/L	4	0%	790	980	-4	0.334	No trend identified
E6-09	Chlorendic acid	µg/L	5	80%	28 J	250 U	--	--	>50% ND
E6-09	Benzene	µg/L	5	0%	77	110	4	0.462	No trend identified
E6-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	5.0 U	5.0 U	--	--	100% ND
E6-09	Tetrachloroethene	µg/L	5	100%	5.0 U	5.0 U	--	--	100% ND
E6-09	Trichloroethene	µg/L	5	100%	5.0 U	5.0 U	--	--	100% ND
E6-09	cis-1,2-Dichloroethene	µg/L	5	100%	5.0 U	5.0 U	--	--	100% ND
E6-09	Vinyl chloride	µg/L	5	100%	5.0 U	5.0 U	--	--	100% ND
E6-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
E6-09	Methylene chloride	µg/L	5	80%	3.0 J	5.0 U	--	--	>50% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 9 (cont…)									
E6-09	Sulfate	mg/L	5	0%	367	1100	-2	0.806	No trend identified
F2M-09	Chlorendic acid	µg/L	21	90%	32 J	380	--	--	>50% ND
F2M-09	Benzene	µg/L	5	20%	0.50 J	5.0 U	3	0.613	No trend identified
F2M-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2M-09	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2M-09	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2M-09	cis-1,2-Dichloroethene	µg/L	5	0%	0.84 J	1.1 J	-3	0.613	No trend identified
F2M-09	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2M-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	1.5 J	19 U	--	--	>50% ND
F2M-09	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2M-09	Sulfate	mg/L	5	0%	804	1580	-3	0.613	No trend identified
F4M-09	Chlorendic acid	µg/L	1	100%	250 U	250 U	--	--	Insufficient data
H2M-09	Chlorendic acid	µg/L	5	40%	36 J	250 U	3	0.613	No trend identified
H2M-09	Benzene	µg/L	5	0%	28	51	6	0.221	No trend identified
H2M-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	2.0 U	5.0 U	--	--	100% ND
H2M-09	Tetrachloroethene	µg/L	5	100%	2.0 U	5.0 U	--	--	100% ND
H2M-09	Trichloroethene	µg/L	5	0%	1.8 J	3.3	1	1.000	No trend identified
H2M-09	cis-1,2-Dichloroethene	µg/L	5	20%	0.85 J	5.0 U	-4	0.462	No trend identified
H2M-09	Vinyl chloride	µg/L	5	80%	0.87 J	5.0 U	--	--	>50% ND
H2M-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	3.3 J	19 U	--	--	>50% ND
H2M-09	Methylene chloride	µg/L	5	80%	2.0 U	5.0 U	--	--	>50% ND
H2M-09	Sulfate	mg/L	5	0%	1310	1740	-1	1.000	No trend identified
H5-09	Chlorendic acid	µg/L	22	59%	25 J	250 U	--	--	>50% ND
H5-09	Benzene	µg/L	5	0%	12	20	5	0.312	No trend identified
H5-09	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-09	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-09	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-09	cis-1,2-Dichloroethene	µg/L	5	80%	0.27 J	5.0 U	--	--	>50% ND
H5-09	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
H5-09	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	60%	3.2 J	19 U	--	--	>50% ND
H5-09	Methylene chloride	µg/L	5	80%	0.89 J	5.0 U	--	--	>50% ND
H5-09	Sulfate	mg/L	5	0%	1230	1500	8	0.086	No trend identified
Flow Zone 11									
AFW-1L-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
AFW-1L-11	Benzene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	8.9 J	19 U	--	--	>50% ND
AFW-1L-11	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
AFW-1L-11	Sulfate	mg/L	5	0%	151	190	2	0.806	No trend identified
B2L-11	Chlorendic acid	µg/L	22	41%	87 J	340	120	0.000	**Increasing Trend**
B2L-11	Benzene	µg/L	5	0%	14	70	2	0.806	No trend identified
B2L-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
B2L-11	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
B2L-11	Trichloroethene	µg/L	5	20%	0.29 J	5.0 U	-6	0.221	No trend identified
B2L-11	cis-1,2-Dichloroethene	µg/L	5	20%	0.65 J	5.0 U	-6	0.221	No trend identified
B2L-11	Vinyl chloride	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
B2L-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
B2L-11	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
B2L-11	Sulfate	mg/L	5	0%	1280	1650	2	0.806	No trend identified
D1L-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
D1L-11	Benzene	µg/L	5	0%	72	110	-2	0.806	No trend identified
D1L-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
D1L-11	Tetrachloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
D1L-11	Trichloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
D1L-11	cis-1,2-Dichloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
D1L-11	Vinyl chloride	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
Piezometers - APL Plume Containment System									
Flow Zone 11 (cont...)									
D1L-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	2.3 J	19 U	--	--	>50% ND
D1L-11	Methylene chloride	µg/L	5	60%	1.6 J	5.0 U	--	--	>50% ND
D1L-11	Sulfate	mg/L	5	0%	790	1120	2	0.806	No trend identified
E6-11	Chlorendic acid	µg/L	5	80%	36 J	250 U	--	--	>50% ND
E6-11	Benzene	µg/L	5	20%	1.0 U	52	6	0.221	No trend identified
E6-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-11	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-11	Trichloroethene	µg/L	5	80%	0.82 J	5.0 U	--	--	>50% ND
E6-11	cis-1,2-Dichloroethene	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
E6-11	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
E6-11	Methylene chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
E6-11	Sulfate	mg/L	5	0%	1100	1740	0	1.000	No trend identified
F2L-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
F2L-11	Benzene	µg/L	5	0%	15	52	-8	0.086	No trend identified
F2L-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2L-11	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2L-11	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2L-11	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2L-11	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F2L-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	80%	1.5 J	19 U	--	--	>50% ND
F2L-11	Methylene chloride	µg/L	5	80%	1.0 U	5.0 U	--	--	>50% ND
F2L-11	Sulfate	mg/L	5	0%	55	656	-8	0.086	No trend identified
F6-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
F6-11	Benzene	µg/L	5	0%	6.7	31 J	0	1.000	No trend identified
F6-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-11	Tetrachloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-11	Trichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-11	cis-1,2-Dichloroethene	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-11	Vinyl chloride	µg/L	5	100%	1.0 U	5.0 U	--	--	100% ND
F6-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
F6-11	Methylene chloride	µg/L	5	80%	0.47 J	5.0 U	--	--	>50% ND
F6-11	Sulfate	mg/L	5	0%	1580	2060	5	0.312	No trend identified
G1L-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
G1L-11	Benzene	µg/L	5	0%	75	120	1	1.000	No trend identified
G1L-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
G1L-11	Tetrachloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
G1L-11	Trichloroethene	µg/L	5	80%	1.2 J	5.0 U	--	--	>50% ND
G1L-11	cis-1,2-Dichloroethene	µg/L	5	60%	1.2 J	5.0 U	--	--	>50% ND
G1L-11	Vinyl chloride	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
G1L-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
G1L-11	Methylene chloride	µg/L	5	80%	3.1 J	5.0 U	--	--	>50% ND
G1L-11	Sulfate	mg/L	5	0%	1100	1800	4	0.462	No trend identified
G6-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
G6-11	Benzene	µg/L	5	0%	71	130	-2	0.806	No trend identified
G6-11	1,1,2,2-Tetrachloroethane	µg/L	5	60%	1.6 J	5.0 U	--	--	>50% ND
G6-11	Tetrachloroethene	µg/L	5	40%	1.2 J	5.0 U	-7	0.130	No trend identified
G6-11	Trichloroethene	µg/L	5	0%	2.5 J	40	-10	0.027	**Decreasing Trend**
G6-11	cis-1,2-Dichloroethene	µg/L	5	0%	4.2 J	55	-10	0.027	**Decreasing Trend**
G6-11	Vinyl chloride	µg/L	5	0%	1.6 J	16	-4	0.462	No trend identified
G6-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	19 U	--	--	100% ND
G6-11	Methylene chloride	µg/L	5	80%	1.7 J	5.0 U	--	--	>50% ND
G6-11	Sulfate	mg/L	5	0%	991	1550	-2	0.806	No trend identified
J6-11	Chlorendic acid	µg/L	5	100%	250 U	250 U	--	--	100% ND
J6-11	Benzene	µg/L	5	0%	63	130	-5	0.312	No trend identified
J6-11	1,1,2,2-Tetrachloroethane	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	Tetrachloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	Trichloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	cis-1,2-Dichloroethene	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	Vinyl chloride	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	bis(2-Ethylhexyl)phthalate (DEH	µg/L	5	100%	9.4 U	38 U	--	--	100% ND
J6-11	Methylene chloride	µg/L	5	100%	4.0 U	5.0 U	--	--	100% ND
J6-11	Sulfate	mg/L	5	0%	1200	1600	4	0.462	No trend identified

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
NAPL Purge wells									
APW-1	Chlorendic acid	µg/L	2	50%	205	250 U	--	--	Insufficient data
APW-1	Benzene	µg/L	2	50%	0.34 J	ND(1)	--	--	Insufficient data
APW-1	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-1	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-1	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-1	cis-1,2-Dichloroethene	µg/L	2	0%	0.29 J	0.51	--	--	Insufficient data
APW-1	Vinyl chloride	µg/L	2	0%	0.27 J	0.605	--	--	Insufficient data
APW-1	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	10 U	ND(19)	--	--	Insufficient data
APW-1	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-1	Sulfate	mg/L	2	0%	706	1200	--	--	Insufficient data
APW-2	Chlorendic acid	µg/L	2	50%	170 J	250 U	--	--	Insufficient data
APW-2	Benzene	µg/L	2	50%	0.14 J	1.0 U	--	--	Insufficient data
APW-2	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	cis-1,2-Dichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	Vinyl chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	10 U	19 U	--	--	Insufficient data
APW-2	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
APW-2	Sulfate	mg/L	2	0%	350	594	--	--	Insufficient data
PW-1L	Chlorendic acid	µg/L	2	0%	220 J	600	--	--	Insufficient data
PW-1L	Benzene	µg/L	2	0%	2.3	6.6	--	--	Insufficient data
PW-1L	1,1,2,2-Tetrachloroethane	µg/L	2	50%	0.30 J	2.5 U	--	--	Insufficient data
PW-1L	Tetrachloroethene	µg/L	2	50%	0.20 J	2.5 U	--	--	Insufficient data
PW-1L	Trichloroethene	µg/L	2	50%	0.70 J	2.5 U	--	--	Insufficient data
PW-1L	cis-1,2-Dichloroethene	µg/L	2	0%	0.85 J	4.2	--	--	Insufficient data
PW-1L	Vinyl chloride	µg/L	2	50%	1.6	2.5 U	--	--	Insufficient data
PW-1L	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	9.5 U	19 U	--	--	Insufficient data
PW-1L	Methylene chloride	µg/L	2	100%	1.0 U	2.5 U	--	--	Insufficient data
PW-1L	Sulfate	mg/L	2	0%	1200	1260	--	--	Insufficient data
PW-1U	Chlorendic acid	µg/L	1	0%	14000	14000	--	--	Insufficient data
PW-1U	Benzene	µg/L	1	0%	39 J	39 J	--	--	Insufficient data
PW-1U	1,1,2,2-Tetrachloroethane	µg/L	1	0%	23 J	23 J	--	--	Insufficient data
PW-1U	Tetrachloroethene	µg/L	1	0%	500	500	--	--	Insufficient data
PW-1U	Trichloroethene	µg/L	1	0%	590	590	--	--	Insufficient data
PW-1U	cis-1,2-Dichloroethene	µg/L	1	0%	500	500	--	--	Insufficient data
PW-1U	Vinyl chloride	µg/L	1	0%	35 J	35 J	--	--	Insufficient data
PW-1U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	48 U	48 U	--	--	Insufficient data
PW-1U	Methylene chloride	µg/L	1	100%	50 U	50 U	--	--	Insufficient data
PW-1U	Sulfate	mg/L	1	0%	254	254	--	--	Insufficient data
PW-2L	Chlorendic acid	µg/L	2	0%	1300	5400	--	--	Insufficient data
PW-2L	Benzene	µg/L	2	0%	41 J	370	--	--	Insufficient data
PW-2L	1,1,2,2-Tetrachloroethane	µg/L	2	0%	23 J	370	--	--	Insufficient data
PW-2L	Tetrachloroethene	µg/L	2	0%	26 J	760	--	--	Insufficient data
PW-2L	Trichloroethene	µg/L	2	0%	80	1300	--	--	Insufficient data
PW-2L	cis-1,2-Dichloroethene	µg/L	2	0%	680	1200	--	--	Insufficient data
PW-2L	Vinyl chloride	µg/L	2	0%	18 J	38 J	--	--	Insufficient data
PW-2L	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	190 U	960 U	--	--	Insufficient data
PW-2L	Methylene chloride	µg/L	2	50%	25 J	150 U	--	--	Insufficient data
PW-2L	Sulfate	mg/L	2	0%	1400	1460	--	--	Insufficient data
PW-2M	Chlorendic acid	µg/L	1	0%	500	500	--	--	Insufficient data
PW-2M	Benzene	µg/L	1	0%	12	12	--	--	Insufficient data
PW-2M	1,1,2,2-Tetrachloroethane	µg/L	1	100%	3.0 U	3.0 U	--	--	Insufficient data
PW-2M	Tetrachloroethene	µg/L	1	0%	17	17	--	--	Insufficient data
PW-2M	Trichloroethene	µg/L	1	0%	49	49	--	--	Insufficient data
PW-2M	cis-1,2-Dichloroethene	µg/L	1	0%	4.9	4.9	--	--	Insufficient data
PW-2M	Vinyl chloride	µg/L	1	0%	1.7 J	1.7 J	--	--	Insufficient data
PW-2M	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	9.4 U	9.4 U	--	--	Insufficient data
PW-2M	Methylene chloride	µg/L	1	100%	3.0 U	3.0 U	--	--	Insufficient data
PW-2M	Sulfate	mg/L	1	0%	1260	1260	--	--	Insufficient data
PW-2UR	Chlorendic acid	µg/L	1	0%	52000	52000	--	--	Insufficient data
PW-2UR	Benzene	µg/L	1	0%	1600	1600	--	--	Insufficient data
PW-2UR	1,1,2,2-Tetrachloroethane	µg/L	1	0%	710	710	--	--	Insufficient data
PW-2UR	Tetrachloroethene	µg/L	1	0%	3500	3500	--	--	Insufficient data

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
NAPL Purge wells									
PW-2UR	Trichloroethene	µg/L	1	0%	3200	3200	--	--	Insufficient data
PW-2UR	cis-1,2-Dichloroethene	µg/L	1	100%	500 U	500 U	--	--	Insufficient data
PW-2UR	Vinyl chloride	µg/L	1	100%	500 U	500 U	--	--	Insufficient data
PW-2UR	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	1900 U	1900 U	--	--	Insufficient data
PW-2UR	Methylene chloride	µg/L	1	0%	520	520	--	--	Insufficient data
PW-2UR	Sulfate	mg/L	1	0%	332	332	--	--	Insufficient data
PW-3L	Chlorendic acid	µg/L	1	0%	800	800	--	--	Insufficient data
PW-3L	Benzene	µg/L	1	0%	76	76	--	--	Insufficient data
PW-3L	1,1,2,2-Tetrachloroethane	µg/L	1	0%	80	80	--	--	Insufficient data
PW-3L	Tetrachloroethene	µg/L	1	0%	26	26	--	--	Insufficient data
PW-3L	Trichloroethene	µg/L	1	0%	95	95	--	--	Insufficient data
PW-3L	cis-1,2-Dichloroethene	µg/L	1	0%	360	360	--	--	Insufficient data
PW-3L	Vinyl chloride	µg/L	1	0%	81	81	--	--	Insufficient data
PW-3L	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	9.4 U	9.4 U	--	--	Insufficient data
PW-3L	Methylene chloride	µg/L	1	100%	20 U	20 U	--	--	Insufficient data
PW-3L	Sulfate	mg/L	1	0%	1320	1320	--	--	Insufficient data
PW-3M	Chlorendic acid	µg/L	1	0%	1900	1900	--	--	Insufficient data
PW-3M	Benzene	µg/L	1	0%	1200	1200	--	--	Insufficient data
PW-3M	1,1,2,2-Tetrachloroethane	µg/L	1	0%	850	850	--	--	Insufficient data
PW-3M	Tetrachloroethene	µg/L	1	0%	2500	2500	--	--	Insufficient data
PW-3M	Trichloroethene	µg/L	1	0%	14000	14000	--	--	Insufficient data
PW-3M	cis-1,2-Dichloroethene	µg/L	1	0%	710	710	--	--	Insufficient data
PW-3M	Vinyl chloride	µg/L	1	0%	230 J	230 J	--	--	Insufficient data
PW-3M	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	190 U	190 U	--	--	Insufficient data
PW-3M	Methylene chloride	µg/L	1	0%	230 J	230 J	--	--	Insufficient data
PW-3M	Sulfate	mg/L	1	0%	664	664	--	--	Insufficient data
PW-4M	Chlorendic acid	µg/L	1	0%	6400	6400	--	--	Insufficient data
PW-4M	Benzene	µg/L	1	0%	320 J	320 J	--	--	Insufficient data
PW-4M	1,1,2,2-Tetrachloroethane	µg/L	1	0%	12000	12000	--	--	Insufficient data
PW-4M	Tetrachloroethene	µg/L	1	0%	9700	9700	--	--	Insufficient data
PW-4M	Trichloroethene	µg/L	1	0%	5600	5600	--	--	Insufficient data
PW-4M	cis-1,2-Dichloroethene	µg/L	1	0%	2200	2200	--	--	Insufficient data
PW-4M	Vinyl chloride	µg/L	1	0%	380 J	380 J	--	--	Insufficient data
PW-4M	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	190 U	190 U	--	--	Insufficient data
PW-4M	Methylene chloride	µg/L	1	0%	240 J	240 J	--	--	Insufficient data
PW-4M	Sulfate	mg/L	1	0%	970	970	--	--	Insufficient data
PW-4U	Chlorendic acid	µg/L	1	0%	3200	3200	--	--	Insufficient data
PW-4U	Benzene	µg/L	1	0%	330 J	330 J	--	--	Insufficient data
PW-4U	1,1,2,2-Tetrachloroethane	µg/L	1	0%	11000	11000	--	--	Insufficient data
PW-4U	Tetrachloroethene	µg/L	1	0%	15000	15000	--	--	Insufficient data
PW-4U	Trichloroethene	µg/L	1	0%	8500	8500	--	--	Insufficient data
PW-4U	cis-1,2-Dichloroethene	µg/L	1	0%	3500	3500	--	--	Insufficient data
PW-4U	Vinyl chloride	µg/L	1	0%	650 J	650 J	--	--	Insufficient data
PW-4U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	1900 U	1900 U	--	--	Insufficient data
PW-4U	Methylene chloride	µg/L	1	100%	1000 U	1000 U	--	--	Insufficient data
PW-4U	Sulfate	mg/L	1	0%	983	983	--	--	Insufficient data
PW-5UR	Chlorendic acid	µg/L	2	0%	2100	2600	--	--	Insufficient data
PW-5UR	Benzene	µg/L	2	0%	1700	2400	--	--	Insufficient data
PW-5UR	1,1,2,2-Tetrachloroethane	µg/L	2	50%	370	2000 U	--	--	Insufficient data
PW-5UR	Tetrachloroethene	µg/L	2	0%	46 J	500 J	--	--	Insufficient data
PW-5UR	Trichloroethene	µg/L	2	0%	1800	59000	--	--	Insufficient data
PW-5UR	cis-1,2-Dichloroethene	µg/L	2	0%	820 J	1000	--	--	Insufficient data
PW-5UR	Vinyl chloride	µg/L	2	0%	430 J	480	--	--	Insufficient data
PW-5UR	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	50%	2000 U	4000	--	--	Insufficient data
PW-5UR	Methylene chloride	µg/L	2	50%	290	2000 U	--	--	Insufficient data
PW-5UR	Sulfate	mg/L	2	0%	98	142	--	--	Insufficient data
PW-6MR	Chlorendic acid	µg/L	1	0%	800	800	--	--	Insufficient data
PW-6MR	Benzene	µg/L	1	0%	56	56	--	--	Insufficient data
PW-6MR	1,1,2,2-Tetrachloroethane	µg/L	1	0%	45.5	45.5	--	--	Insufficient data
PW-6MR	Tetrachloroethene	µg/L	1	0%	13	13	--	--	Insufficient data
PW-6MR	Trichloroethene	µg/L	1	0%	35.5	35.5	--	--	Insufficient data
PW-6MR	cis-1,2-Dichloroethene	µg/L	1	0%	840	840	--	--	Insufficient data
PW-6MR	Vinyl chloride	µg/L	1	0%	54	54	--	--	Insufficient data

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
The Lockport Bedrock Monitoring Program									
NAPL Purge wells									
PW-6MR	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	ND(9.4)	ND(9.4)	--	--	Insufficient data
PW-6MR	Methylene chloride	µg/L	1	100%	ND(50)	ND(50)	--	--	Insufficient data
PW-6MR	Sulfate	mg/L	1	0%	1470	1470	--	--	Insufficient data
PW-6UR	Chlorendic acid	µg/L	1	0%	400	400	--	--	Insufficient data
PW-6UR	Benzene	µg/L	1	0%	88	88	--	--	Insufficient data
PW-6UR	1,1,2,2-Tetrachloroethane	µg/L	1	0%	210	210	--	--	Insufficient data
PW-6UR	Tetrachloroethene	µg/L	1	0%	110	110	--	--	Insufficient data
PW-6UR	Trichloroethene	µg/L	1	0%	200	200	--	--	Insufficient data
PW-6UR	cis-1,2-Dichloroethene	µg/L	1	0%	1200	1200	--	--	Insufficient data
PW-6UR	Vinyl chloride	µg/L	1	0%	480	480	--	--	Insufficient data
PW-6UR	bis(2-Ethylhexyl)phthalate (DEH	µg/L	1	100%	9.4 U	9.4 U	--	--	Insufficient data
PW-6UR	Methylene chloride	µg/L	1	100%	50 U	50 U	--	--	Insufficient data
PW-6UR	Sulfate	mg/L	1	0%	168	168	--	--	Insufficient data
PW-7U	Chlorendic acid	µg/L	2	0%	400	920	--	--	Insufficient data
PW-7U	Benzene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
PW-7U	1,1,2,2-Tetrachloroethane	µg/L	2	50%	0.51 J	1.0 U	--	--	Insufficient data
PW-7U	Tetrachloroethene	µg/L	2	0%	1.8	2.9	--	--	Insufficient data
PW-7U	Trichloroethene	µg/L	2	0%	2.1	5.1	--	--	Insufficient data
PW-7U	cis-1,2-Dichloroethene	µg/L	2	0%	3.8	7.8	--	--	Insufficient data
PW-7U	Vinyl chloride	µg/L	2	0%	0.69 J	0.76 J	--	--	Insufficient data
PW-7U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	9.5 U	19 U	--	--	Insufficient data
PW-7U	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
PW-7U	Sulfate	mg/L	2	0%	265	290	--	--	Insufficient data
PW-8M	Chlorendic acid	µg/L	2	0%	2800	7000	--	--	Insufficient data
PW-8M	Benzene	µg/L	2	0%	11	66	--	--	Insufficient data
PW-8M	1,1,2,2-Tetrachloroethane	µg/L	2	50%	5.0 U	17 J	--	--	Insufficient data
PW-8M	Tetrachloroethene	µg/L	2	0%	2.3 J	45	--	--	Insufficient data
PW-8M	Trichloroethene	µg/L	2	0%	46	72	--	--	Insufficient data
PW-8M	cis-1,2-Dichloroethene	µg/L	2	0%	46	350	--	--	Insufficient data
PW-8M	Vinyl chloride	µg/L	2	0%	5.1	24	--	--	Insufficient data
PW-8M	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	9.4 U	300 U	--	--	Insufficient data
PW-8M	Methylene chloride	µg/L	2	50%	5.0 U	15 J	--	--	Insufficient data
PW-8M	Sulfate	mg/L	2	0%	400	565	--	--	Insufficient data
PW-8U	Chlorendic acid	µg/L	2	0%	9400	21000	--	--	Insufficient data
PW-8U	Benzene	µg/L	2	0%	54	120	--	--	Insufficient data
PW-8U	1,1,2,2-Tetrachloroethane	µg/L	2	50%	9.6	10 U	--	--	Insufficient data
PW-8U	Tetrachloroethene	µg/L	2	50%	5.2 J	10 U	--	--	Insufficient data
PW-8U	Trichloroethene	µg/L	2	0%	17	110	--	--	Insufficient data
PW-8U	cis-1,2-Dichloroethene	µg/L	2	0%	61	91	--	--	Insufficient data
PW-8U	Vinyl chloride	µg/L	2	0%	11	16	--	--	Insufficient data
PW-8U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	50%	24	290 U	--	--	Insufficient data
PW-8U	Methylene chloride	µg/L	2	50%	8.0 U	11	--	--	Insufficient data
PW-8U	Sulfate	mg/L	2	0%	220	372	--	--	Insufficient data
PW-9U	Chlorendic acid	µg/L	2	0%	2700	2900	--	--	Insufficient data
PW-9U	Benzene	µg/L	2	0%	23 J	31 J	--	--	Insufficient data
PW-9U	1,1,2,2-Tetrachloroethane	µg/L	2	50%	14 J	25 U	--	--	Insufficient data
PW-9U	Tetrachloroethene	µg/L	2	0%	170	460	--	--	Insufficient data
PW-9U	Trichloroethene	µg/L	2	0%	240	270	--	--	Insufficient data
PW-9U	cis-1,2-Dichloroethene	µg/L	2	0%	67	110	--	--	Insufficient data
PW-9U	Vinyl chloride	µg/L	2	100%	25 U	50 U	--	--	Insufficient data
PW-9U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	190 U	580 U	--	--	Insufficient data
PW-9U	Methylene chloride	µg/L	2	50%	25 U	40 J	--	--	Insufficient data
PW-9U	Sulfate	mg/L	2	0%	543	660	--	--	Insufficient data
PW-10U	Chlorendic acid	µg/L	2	0%	2000	3200	--	--	Insufficient data
PW-10U	Benzene	µg/L	2	0%	68	170	--	--	Insufficient data
PW-10U	1,1,2,2-Tetrachloroethane	µg/L	2	0%	19 J	84 J	--	--	Insufficient data
PW-10U	Tetrachloroethene	µg/L	2	50%	30 U	80 J	--	--	Insufficient data
PW-10U	Trichloroethene	µg/L	2	0%	64	1200	--	--	Insufficient data
PW-10U	cis-1,2-Dichloroethene	µg/L	2	0%	480	650	--	--	Insufficient data
PW-10U	Vinyl chloride	µg/L	2	0%	23 J	44 J	--	--	Insufficient data
PW-10U	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	9.4 U	390 U	--	--	Insufficient data
PW-10U	Methylene chloride	µg/L	2	50%	20 J	100 U	--	--	Insufficient data
PW-10U	Sulfate	mg/L	2	0%	399	400	--	--	Insufficient data

TABLE 2

TREND TEST RESULTS - SITE ORGANIC INDICATORS (SOIs)
HYDE PARK LANDFILL SITE
TOWN OF NIAGARA, NEW YORK

Well	Parameters	Units	Number of Samples	Percent Non-Detects	Minimum	Maximum	Mann-Kendall Trend Test S-Statistic	Probability	Conclusion
Bloody Run Creek Monitoring									
BR-1	Chlorendic acid	µg/L	2	100%	250 U	250 U	--	--	Insufficient data
BR-1	Benzene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-1	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-1	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-1	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-1	cis-1,2-Dichloroethene	µg/L	2	50%	1.0 U	1.9	--	--	Insufficient data
BR-1	Vinyl chloride	µg/L	2	50%	0.75 J	1.0 U	--	--	Insufficient data
BR-1	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	100%	9.6 U	19 U	--	--	Insufficient data
BR-1	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-2	Chlorendic acid	µg/L	2	0%	340	900 J	--	--	Insufficient data
BR-2	Benzene	µg/L	2	50%	0.24 J	1.0 U	--	--	Insufficient data
BR-2	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-2	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-2	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-2	cis-1,2-Dichloroethene	µg/L	2	0%	0.45 J	0.70 J	--	--	Insufficient data
BR-2	Vinyl chloride	µg/L	2	0%	0.50 J	0.58 J	--	--	Insufficient data
BR-2	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	50%	4.7 J	20 U	--	--	Insufficient data
BR-2	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	Chlorendic acid	µg/L	2	50%	180 J	250 U	--	--	Insufficient data
BR-3	Benzene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	cis-1,2-Dichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-3	Vinyl chloride	µg/L	2	1	1.0 U	1.0 U	--	--	Insufficient data
BR-3	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	50%	13	19 U	--	--	Insufficient data
BR-3	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	Chlorendic acid	µg/L	2	50%	250 UJ	270	--	--	Insufficient data
BR-4	Benzene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	1,1,2,2-Tetrachloroethane	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	Tetrachloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	Trichloroethene	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	cis-1,2-Dichloroethene	µg/L	2	50%	0.26 J	1.0 U	--	--	Insufficient data
BR-4	Vinyl chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data
BR-4	bis(2-Ethylhexyl)phthalate (DEH	µg/L	2	50%	8.8 J	19 U	--	--	Insufficient data
BR-4	Methylene chloride	µg/L	2	100%	1.0 U	1.0 U	--	--	Insufficient data

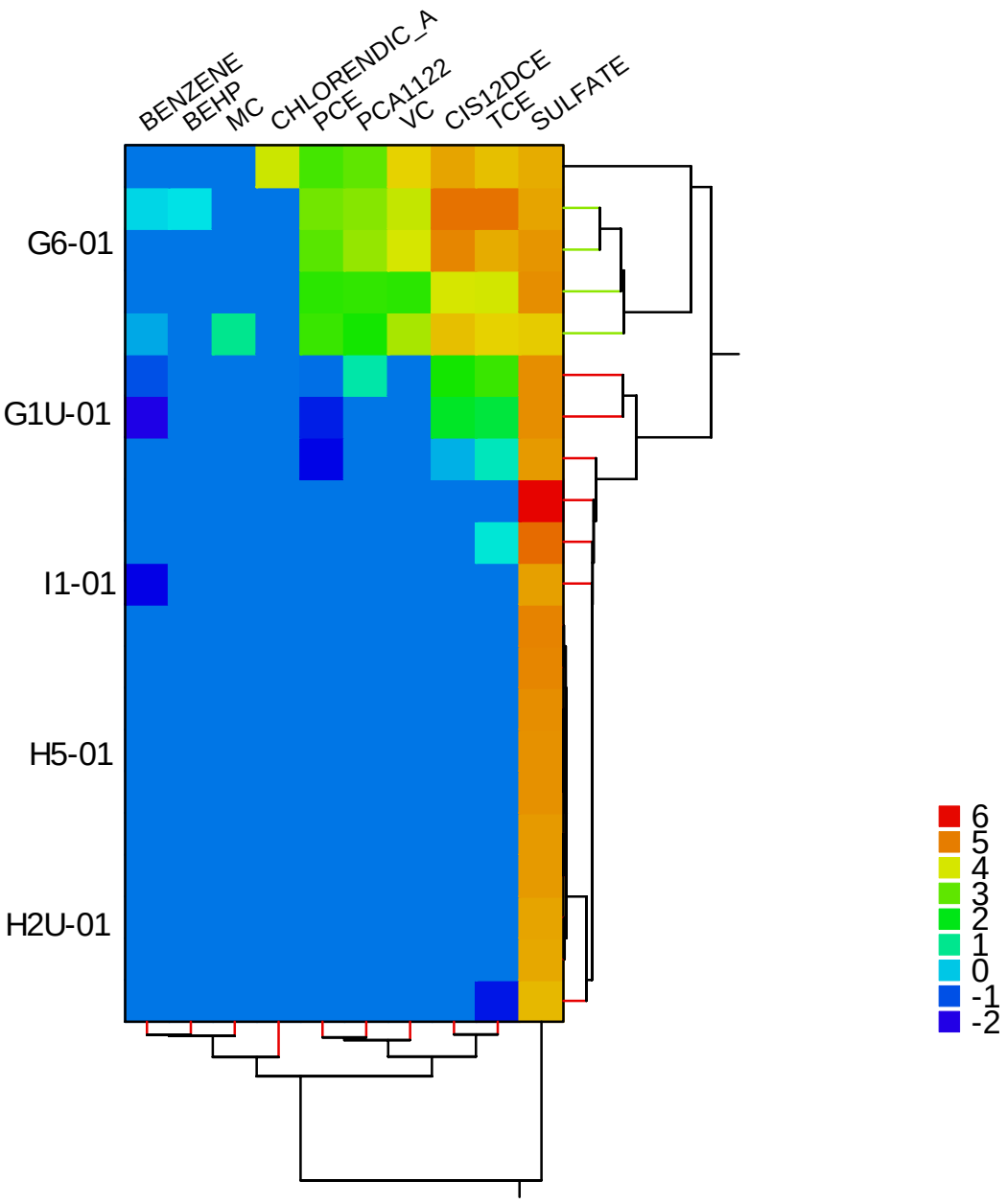

figure 1
Flow Zone 1 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

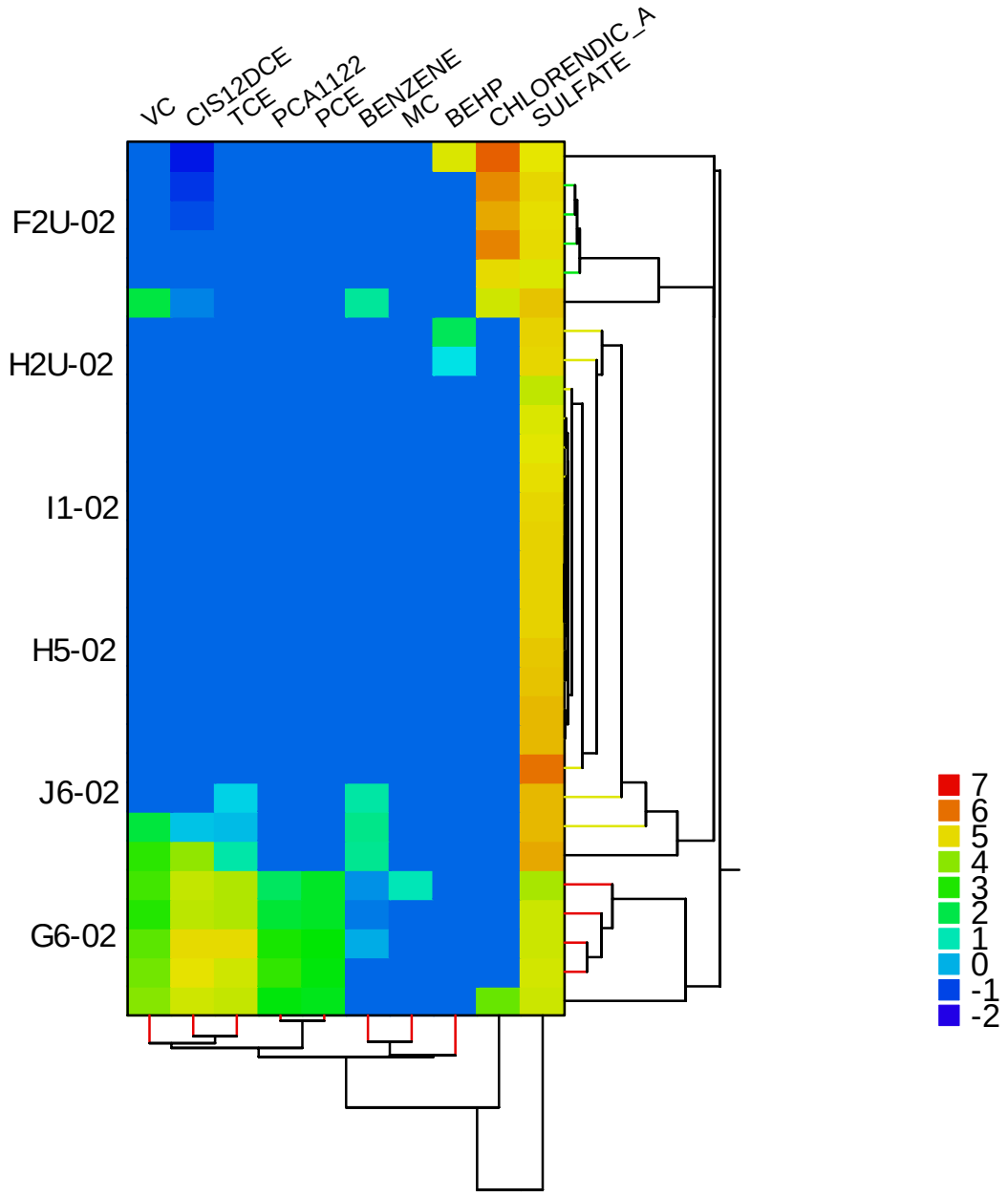

figure 2
Flow Zone 2 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

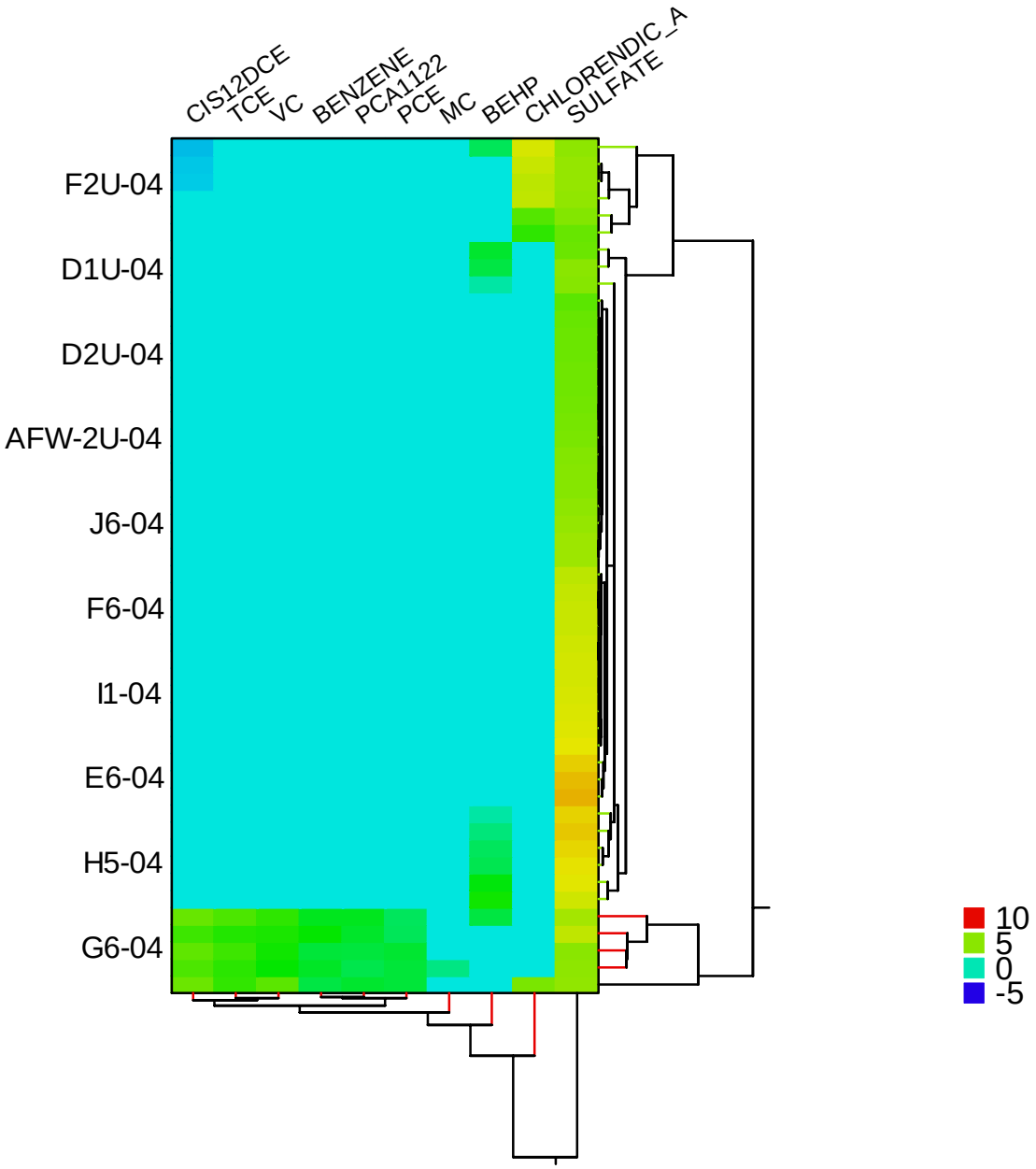

figure 3
Flow Zone 4 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

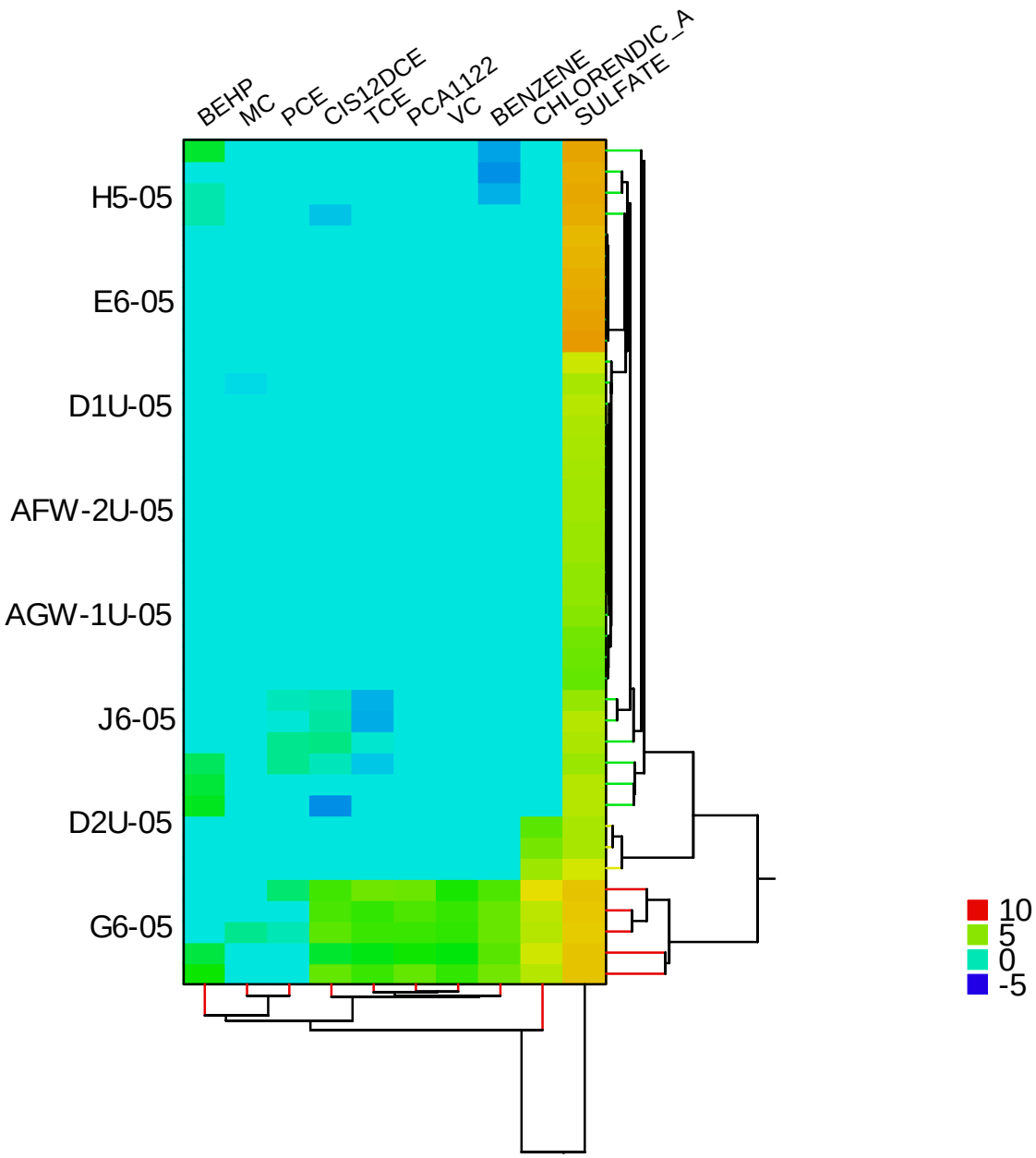

figure 4
Flow Zone 5 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

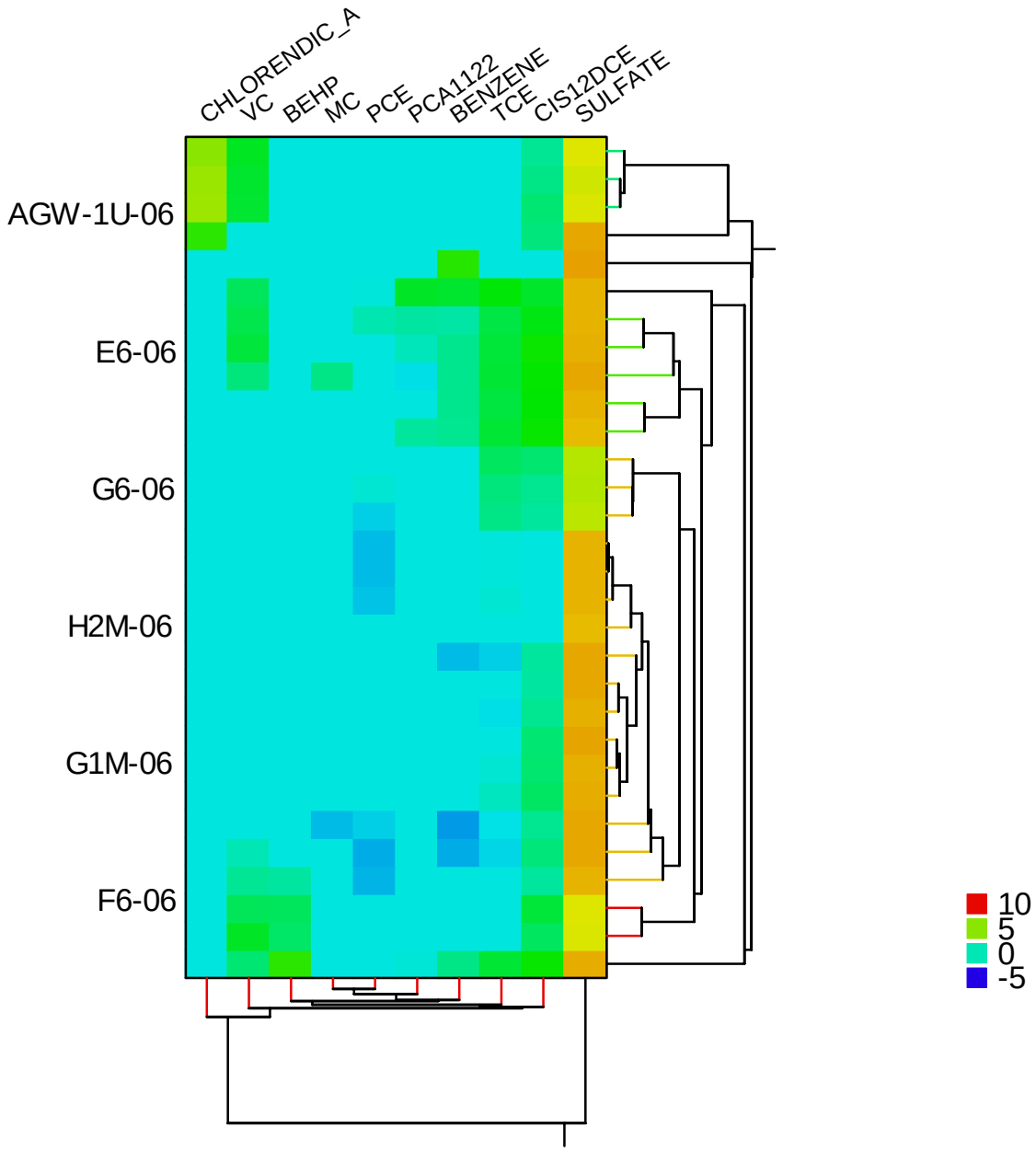

figure 5
Flow Zone 6 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

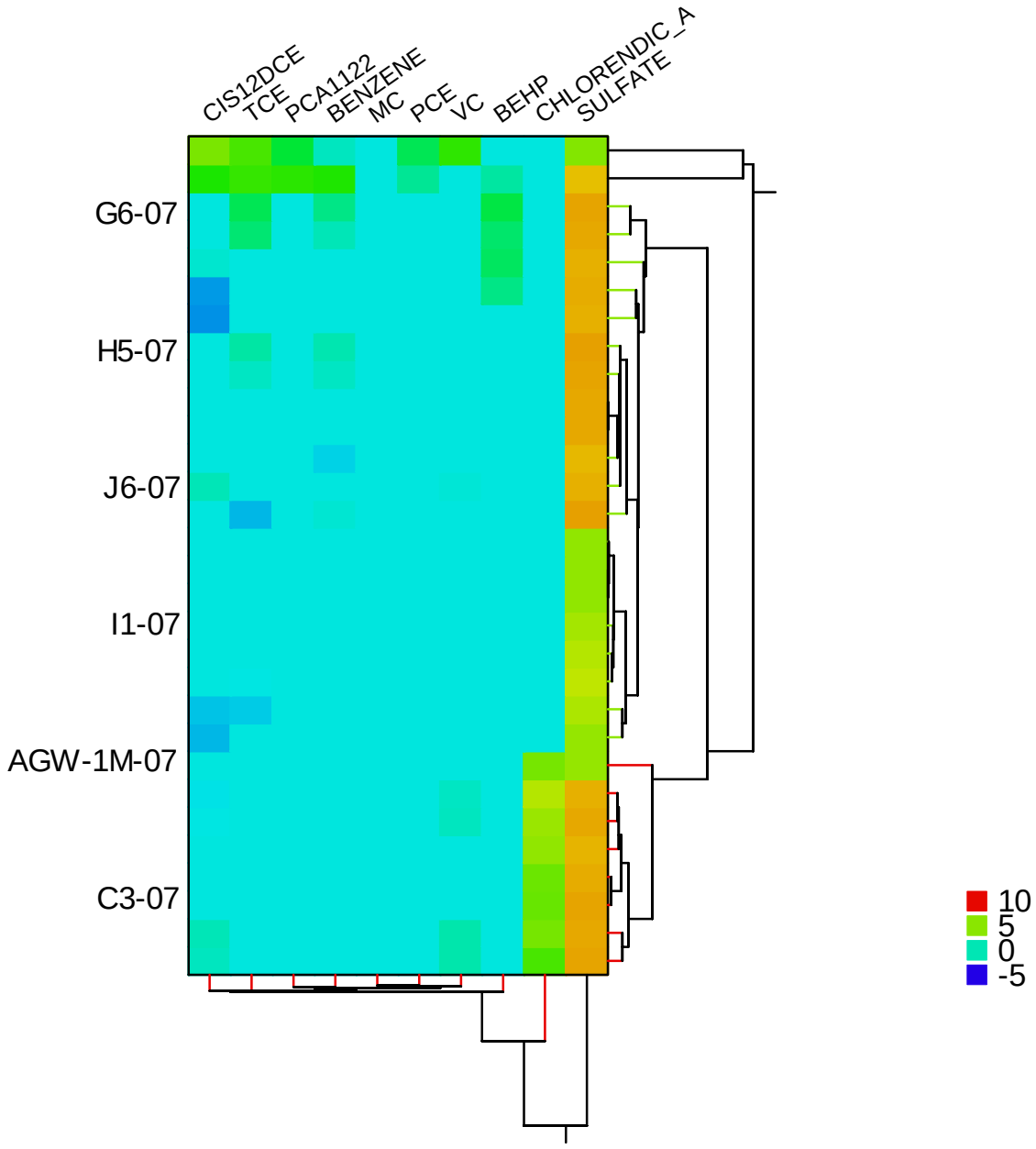

figure 6
Flow Zone 7 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

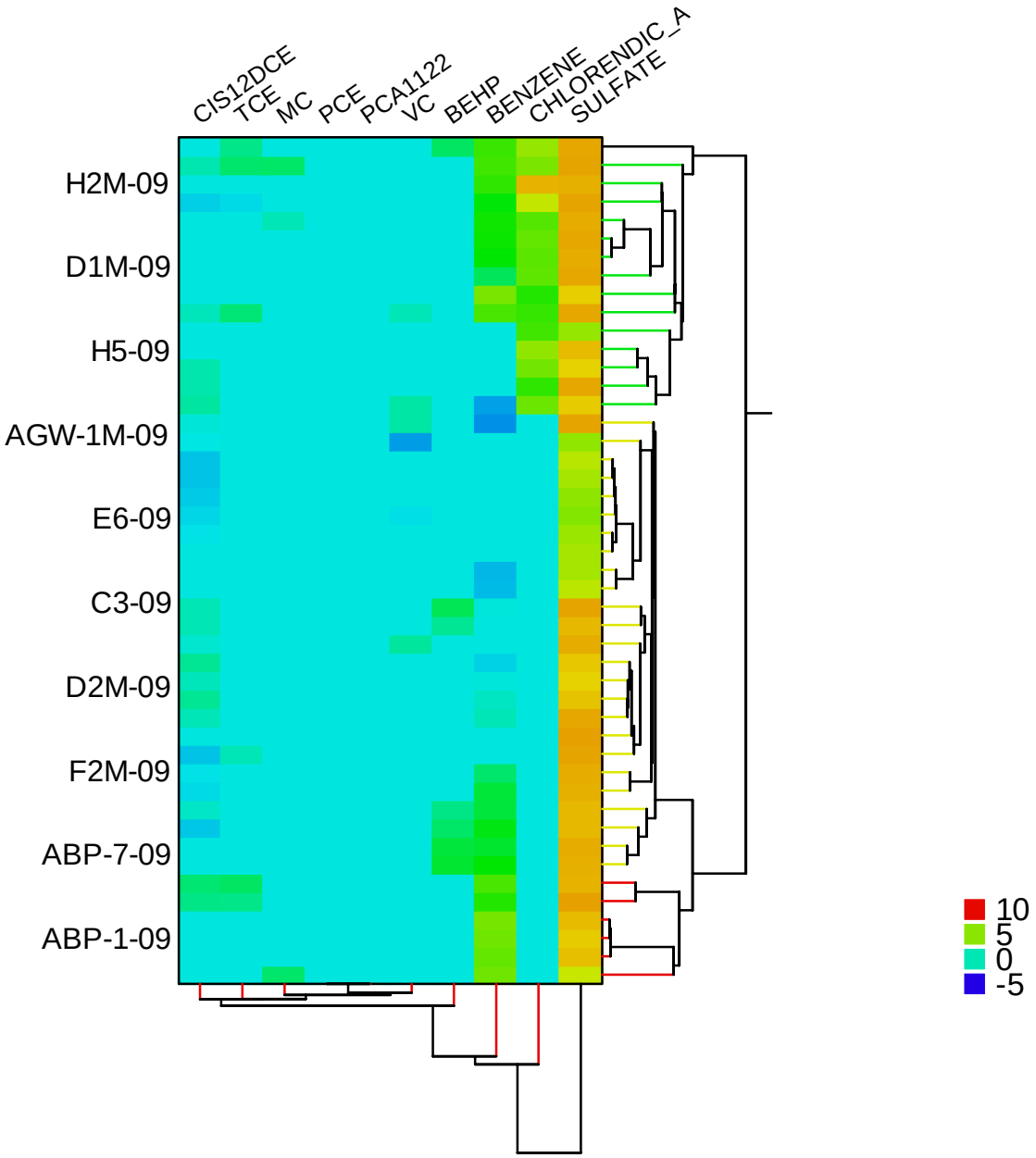

figure 7
Flow Zone 9 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

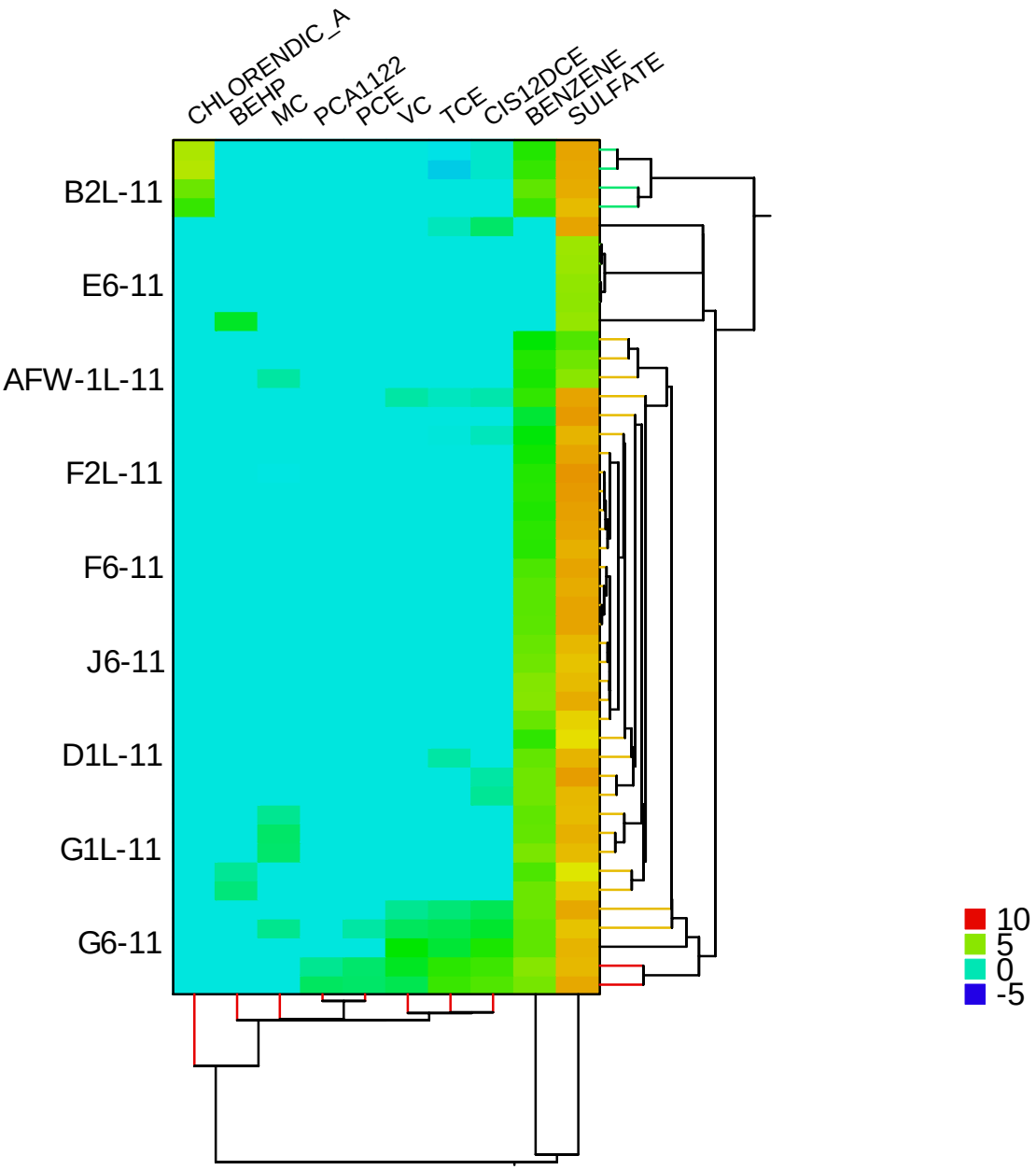

figure 8
Flow Zone 11 Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York

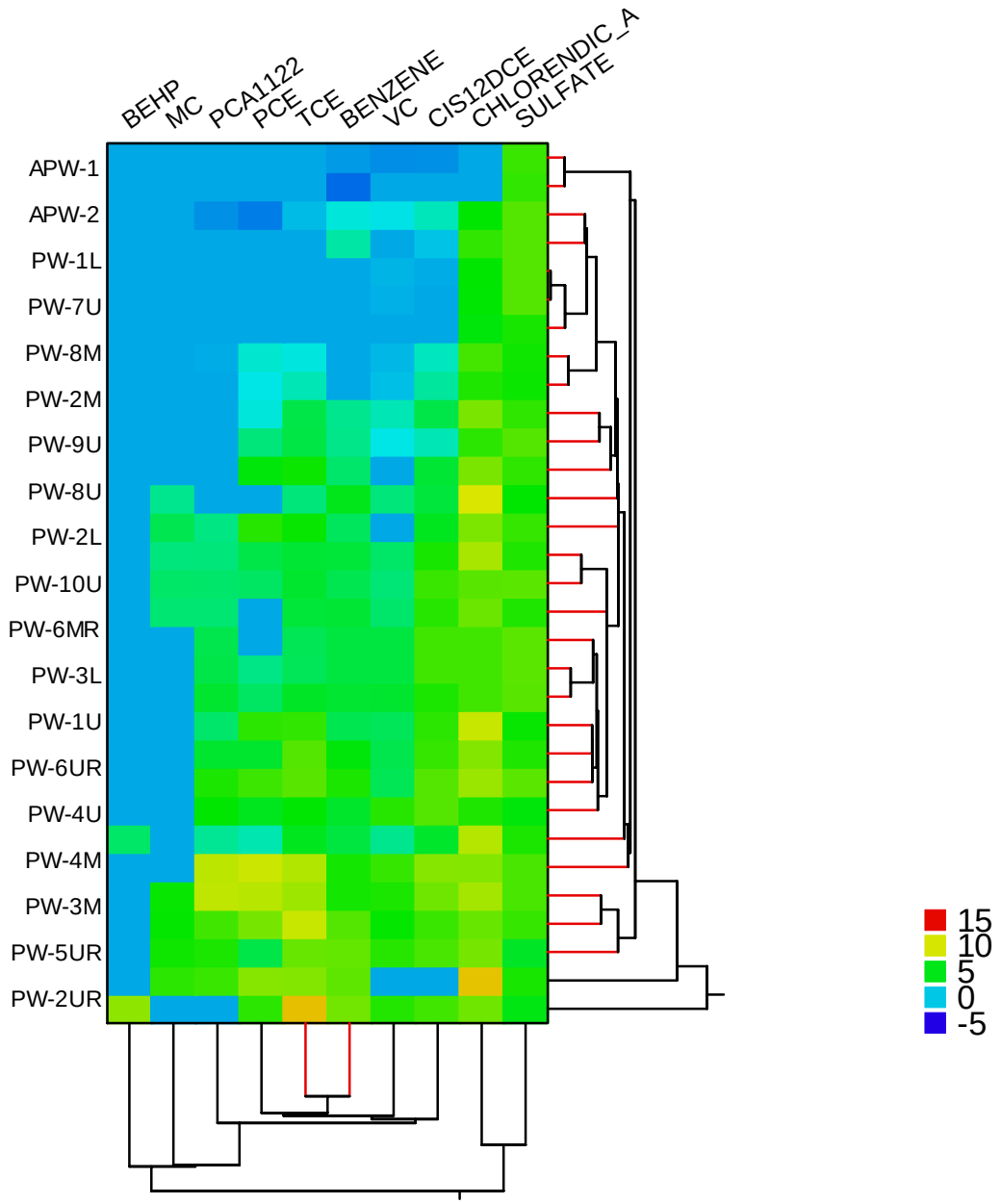

figure 9
Purge Wells Cluster Analysis Results
Using Site Organic Indicators and Sulfate
Five-Year Report
Hyde Park Landfill Facility
Town of Niagara, New York