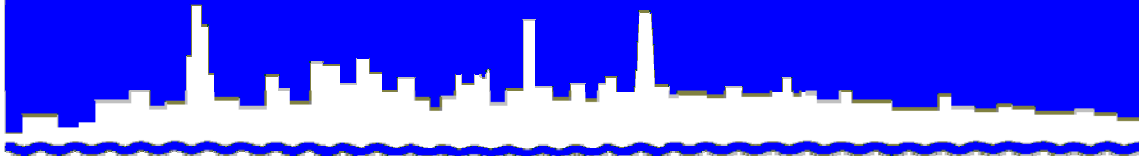


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 07-30

LAWNDALE AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FIRST QUARTER 2007

MAY 2007

Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312-751-5600

Louis Kollias, P.E., BCEE
Director of Research and Development
312-751-5190

May 18, 2007

Mr. S. Alan Keller, P.E.
Manager, Permit Section
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794 -9276

Dear Mr. Keller:

Subject: Lawndale Avenue Solids Management Area - Stickney WRP, Contract No. 80-159-2P, IEPA Permit No. 2005-AO-4283, Monitoring Report for January, February, and March 2007

The attached five tables contain the monitoring data for the Lawndale Avenue Solids Management Area for January, February, and March 2007 as required by IEPA Operating Permit No. 2005-AO-4283. In a letter dated January 19, 2007, the IEPA granted permission to terminate the monitoring of lysimeters L-7 and L-8. Therefore, monitoring data for these lysimeters will not be included in this and subsequent reports.

The data reported are as follows:

Table 1, Analysis of Water from Monitoring Wells M-11 through M-15 at the Lawndale Avenue Solids Management Area Sampled on January 24, 2007

Table 2, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale Avenue Solids Management Area Sampled on January 3, 2007

Table 3, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale Avenue Solids Management Area Sampled on February 15, 2007

Table 4, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale Avenue Solids Management Area Sampled on March 1, 2007

Table 5, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale Avenue Solids Management Area Sampled on March 14, 2007

Subject: Lawndale Avenue Solids Management Area - Stickney WRP, Contract No. 80-159-2P, IEPA Permit No. 2005-AO-4283, Monitoring Report for January, February, and March 2007

No biosolids were placed in or removed from the solids drying area during January, February, and March 2007.

Very truly yours,

Louis Kollias
Director
Research and Development

LK:PL:spy

Attachments

cc w/att: Mr. Sulski, IEPA
Records Unit, IEPA
Mr. W. Stuba
Dr. T. Granato
Dr. A. Cox
Dr. P. Lindo
Ms. M. Patel

cc wo/att: Ms. M. Sharma
Mr. S. Levy
Mr. O. Jamjun
Mr. A. Quintanilla
Mr. A. Ryzak

TABLE 1: ANALYSIS OF WATER FROM MONITORING WELLS
M-11 THROUGH M-15 AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 24, 2007

Parameter	Unit	Monitoring Well No.				
		M-11	M-12	M-13	M-14	M-15
pH ¹		8.1	8.0	7.9	8.0	7.9
EC	mS/m	45	57	65	48	78
Total Dissolved Solids	mg/L	686	876	1,364	536	1,714
Total Diss. Org. Carbon	"	2	1	2	1	2
Cl ⁻	"	8	15	10	9	9
SO ₄ ⁼	"	191	81	596	120	775
TKN	"	1.5	0.62	0.77	0.57	0.91
NH ₃ -N	"	0.92	0.23	0.30	0.16	0.42
NO ₂ + NO ₃ -N	"	0.12	0.05	0.05	<0.02	<0.02
Total P	"	0.12	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	<1	<1	<1	<1	<1
Al	"	0.023	0.027	0.029	0.011	0.040
As	"	<0.01	<0.01	<0.01	<0.01	<0.01
B	"	1.17	1.57	1.30	1.14	1.01
Ca	"	90	76	163	69	226
Cd	"	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Cr	"	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cu	"	<0.002	<0.002	<0.002	<0.002	<0.002
Fe	"	0.184	0.080	0.026	0.014	1.40
Hg	μg/L	<0.05	<0.05	<0.05	0.05	<0.05
K	mg/L	9	10	10	8	10
Mg	"	43.4	36.0	77.3	40.0	103
Mn	"	0.0175	0.0046	0.0077	0.0034	0.0177
Na	"	57	133	89	42	62
Ni	"	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Pb	"	0.005	0.005	0.005	0.005	0.006
Se	"	<0.02	<0.02	<0.02	<0.02	<0.02
Zn	"	1.40	1.14	1.51	0.786	4.77
FC	MPN*	<1	<1	<1	<1	<1

¹pH analyzed beyond recommended holding time of 15 minutes.

*MPN = Most probable number per 100 mL.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 3, 2007

Parameter	Unit	Lysimeter No.				
		L-1	L-2	L-3	L-3N	L-4
pH ¹		7.3	7.7	7.7	7.2	6.9
EC	mS/m	191	297	151	232	338
Total Dissolved Solids	mg/L	1,718	NA	896	1,966	4,332
Total Diss. Org. Carbon	"	7	4	6	21	14
Cl ⁻	"	75	543	198	134	54
SO ₄ ⁼	"	583	625	64	234	1,908
TKN	"	5.1	0.92	3.5	3.2	13
NH ₃ -N	"	4.2	<0.04	3.0	1.0	9.3
NO ₂ + NO ₃ -N	"	0.33	2.3	0.14	0.70	0.60
Total P	"	<0.05	<0.10	1.8	<0.05	0.68
Alkalinity as CaCO ₃	"	435	430	317	1,193	831
Al	"	0.054	0.056	0.027	0.069	0.095
As	"	<0.01	<0.02	<0.01	<0.01	<0.01
B	"	0.535	0.248	0.243	0.095	0.218
Ca	"	234	267	102	356	599
Cd	"	<0.0004	<0.0008	0.0004	<0.0004	0.0004
Cr	"	<0.0005	<0.0010	0.0006	<0.0005	<0.0005
Cu	"	<0.002	<0.004	<0.002	<0.002	<0.002
Fe	"	2.20	0.016	1.08	10.8	16.2
Hg	μg/L	0.05	0.10	<0.05	<0.05	<0.05
K	mg/L	7	3	3	2	8
Mg	"	100	116	43.4	138	300
Mn	"	0.0973	0.0054	0.0730	0.9659	0.8129
Na	"	56	283	100	79	26
Ni	"	0.0021	<0.0008	<0.0004	0.0008	<0.0004
Pb	"	0.004	0.012	0.006	<0.004	<0.004
Se	"	<0.02	<0.04	<0.02	<0.02	<0.02
Zn	"	0.007	0.008	0.002	0.011	0.004

TABLE 2 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 3, 2007

Parameter	Unit	Lysimeter No.				
		L-4N	L-5	L-5N	L-6	L-6N
pH ¹		7.3	7.6	7.6	NA	7.1
EC	mS/m	369	162	489	NA	339
Total Dissolved Solids	mg/L	4,228	1,466	5,084	NA	2,394
Total Diss. Org. Carbon	"	11	1	3	NA	49
Cl ⁻	"	37	51	762	NA	79
SO ₄ ⁼	"	1,913	611	1,786	NA	1,416
TKN	"	13	0.39	2.6	1.5	28
NH ₃ -N	"	10	<0.02	1.7	<0.02	20
NO ₂ + NO ₃ -N	"	0.24	0.25	1.2	0.07	0.74
Total P	"	<0.05	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	874	272	485	NA	898
Al	"	0.085	0.034	0.091	NA	0.093
As	"	<0.01	<0.01	<0.01	NA	<0.01
B	"	0.175	0.837	0.395	NA	0.234
Ca	"	562	170	533	NA	638
Cd	"	0.0004	<0.0004	0.0007	NA	0.0004
Cr	"	<0.0005	<0.0005	<0.0005	NA	<0.0005
Cu	"	<0.002	<0.002	<0.002	NA	<0.002
Fe	"	15.3	0.008	1.32	NA	20.2
Hg	μg/L	<0.05	<0.05	<0.05	NA	<0.05
K	mg/L	9	3	28	NA	12
Mg	"	200	108	292	NA	156
Mn	"	1.312	0.0020	0.2806	NA	0.4367
Na	"	274	43	372	NA	75
Ni	"	<0.0004	<0.0004	0.0011	NA	0.0094
Pb	"	<0.004	0.004	<0.004	NA	<0.004
Se	"	<0.02	<0.02	<0.02	NA	<0.02
Zn	"	0.019	0.004	0.008	NA	0.010

TABLE 2 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 3, 2007

Parameter	Unit	Lysimeter No.		
		L-7N	L-8N	L-9N
pH ¹		8.0	7.6	7.5
EC	mS/m	134	244	243
Total Dissolved Solids	mg/L	652	1,952	NA
Total Diss. Org. Carbon	"	NA	8	28
Cl ⁻	"	116	441	165
SO ₄ ⁼	"	161	214	284
TKN	"	1.6	3.4	3.0
NH ₃ -N	"	0.10	2.1	0.98
NO ₂ + NO ₃ -N	"	1.7	0.65	0.23
Total P	"	<0.10	<0.05	<0.05
Alkalinity as CaCO ₃	"	370	539	1,070
Al	"	0.028	0.048	0.038
As	"	<0.02	<0.01	<0.01
B	"	0.310	0.230	0.255
Ca	"	113	200	188
Cd	"	<0.0008	<0.0004	<0.0004
Cr	"	<0.0010	<0.0005	0.0010
Cu	"	<0.004	<0.002	<0.002
Fe	"	0.054	0.347	7.59
Hg	μg/L	0.12	<0.05	<0.05
K	mg/L	8	6	7
Mg	"	68.7	94.8	99.3
Mn	"	0.0702	0.2600	0.1698
Na	"	49	224	307
Ni	"	0.0010	<0.0004	0.0007
Pb	"	0.010	<0.004	0.006
Se	"	<0.04	<0.02	<0.02
Zn	"	0.004	0.009	0.009

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 3: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON FEBRUARY 15, 2007

Parameter	Unit	Lysimeter No.				
		L-1	L-2	L-3	L-3N	L-4
pH ¹				8.1		7.9
EC	mS/m			137		395
Total Dissolved Solids	mg/L			814		4,182
Total Diss. Org. Carbon	"			8		12
Cl ⁻	"			200		62
SO ₄ ⁼	"			74		NA
TKN	"			4.9		10
NH ₃ -N	"	L	L	3.0	L	6.3
NO ₂ + NO ₃ -N	"	Y	Y	0.04	Y	0.07
Total P	"	S	S	1.7	S	0.41
Alkalinity as CaCO ₃	"	I	I	320	I	798
		M	M		M	
Al	"	E	E	0.027	E	0.080
As	"	T	T	<0.01	T	<0.01
B	"	E	E	0.225	E	0.204
Ca	"	R	R	106	R	606
Cd	"			<0.0004		<0.0004
		F	F		F	
Cr	"	R	R	<0.0005	R	<0.0005
Cu	"	O	O	<0.002	O	<0.002
Fe	"	Z	Z	0.923	Z	7.80
Hg	μg/L	E	E	0.05	E	<0.05
K	mg/L	N	N	3	N	7
Mg	"			45.7		320
Mn	"			0.0782		0.6045
Na	"			99		27
Ni	"			0.0004		<0.0004
Pb	"			<0.004		<0.004
Se	"			<0.02		<0.02
Zn	"			0.006		0.011

TABLE 3 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON FEBRUARY 15, 2007

Parameter	Unit	Lysimeter No.				
		L-4N	L-5	L-5N	L-6	L-6N
pH ¹						
EC	mS/m					
Total Dissolved Solids	mg/L					
Total Diss. Org. Carbon	"					
Cl ⁻	"					
SO ₄ ⁼	"					
TKN	"					
NH ₃ -N	"	L	L	L	L	L
NO ₂ + NO ₃ -N	"	Y	Y	Y	Y	Y
Total P	"	S	S	S	S	S
Alkalinity as CaCO ₃	"	I	I	I	I	I
		M	M	M	M	M
Al	"	E	E	E	E	E
As	"	T	T	T	T	T
B	"	E	E	E	E	E
Ca	"	R	R	R	R	R
Cd	"					
		F	F	F	F	F
Cr	"	R	R	R	R	R
Cu	"	O	O	O	O	O
Fe	"	Z	Z	Z	Z	Z
Hg	μg/L	E	E	E	E	E
K	mg/L	N	N	N	N	N
Mg	"					
Mn	"					
Na	"					
Ni	"					
Pb	"					
Se	"					
Zn	"					

TABLE 3 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON FEBRUARY 15, 2007

Parameter	Unit	Lysimeter No.		
		L-7N	L-8N	L-9N
pH ¹		7.1		
EC	mS/m	130		
Total Dissolved Solids	mg/L	872		
Total Diss. Org. Carbon	"	10		
Cl ⁻	"	115		
SO ₄ ⁼	"	157		
TKN	"	1.9		
NH ₃ -N	"	0.24	L	L
NO ₂ + NO ₃ -N	"	0.27	Y	Y
Total P	"	0.12	S	S
Alkalinity as CaCO ₃	"	360	I M	I M
Al	"	0.030	E	E
As	"	<0.02	T	T
B	"	0.266	E	E
Ca	"	113	R	R
Cd	"	<0.0008	F	F
Cr	"	<0.0010	R	R
Cu	"	0.010	O	O
Fe	"	0.042	Z	Z
Hg	μg/L	<0.10	E	E
K	mg/L	7	N	N
Mg	"	69.7		
Mn	"	0.0626		
Na	"	51		
Ni	"	0.0060		
Pb	"	<0.008		
Se	"	<0.04		
Zn	"	0.032		

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis. SO₄ result measured beyond highest calibration standard. Original sample discarded before re-run.

TABLE 4: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 1, 2007

Parameter	Unit	Lysimeter No.				
		L-1	L-2	L-3	L-3N	L-4
pH ¹		7.5	7.7		7.5	
EC	mS/m	158	298		237	
Total Dissolved Solids	mg/L	1,328	2,242		1,416	
Total Diss. Org. Carbon	"	7	3		20	
Cl ⁻	"	50	552		150	
SO ₄ ⁼	"	487	542		224	
TKN	"	5.7	0.62		3.1	
NH ₃ -N	"	4.5	<0.02	L	0.97	L
NO ₂ + NO ₃ -N	"	0.09	0.08	Y	0.33	Y
Total P	"	<0.05	<0.05	S	<0.05	S
Alkalinity as CaCO ₃	"	468	475	I M	1,081	I M
Al	"	0.034	0.041	E	0.041	E
As	"	<0.01	<0.01	T	<0.01	T
B	"	0.476	0.198	E	0.103	E
Ca	"	225	273	R	351	R
Cd	"	<0.0004	<0.0004		<0.0004	
Cr	"	<0.0005	<0.0005	F R	<0.0005	F R
Cu	"	<0.002	<0.002	O	<0.002	O
Fe	"	3.41	0.020	Z	0.065	Z
Hg	μg/L	<0.05	<0.05	E	<0.05	E
K	mg/L	6	3	N	2	N
Mg	"	92.3	115		138	
Mn	"	0.0932	0.0139		0.8889	
Na	"	42	287		80	
Ni	"	0.0010	0.0005		0.0016	
Pb	"	<0.004	<0.004		<0.004	
Se	"	<0.02	<0.02		<0.02	
Zn	"	0.005	0.009		0.011	

TABLE 4 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 1, 2007

Parameter	Unit	Lysimeter No.				
		L-4N	L-5	L-5N	L-6	L-6N
pH ¹		7.7	7.8	7.8		7.5
EC	mS/m	371	150	503		324
Total Dissolved Solids	mg/L	3,052	1,358	4,516		2,860
Total Diss. Org. Carbon	"	11	1	3		54
Cl ⁻	"	38	52	789		82
SO ₄ ⁼	"	1,743	593	1,636		1,328
TKN	"	14	0.46	3.1		29
NH ₃ -N	"	10	<0.02	1.6	L	22
NO ₂ + NO ₃ -N	"	0.07	0.06	0.38	Y	0.15
Total P	"	0.05	0.05	<0.05	S	0.05
Alkalinity as CaCO ₃	"	780	270	460	I M	777
Al	"	0.064	0.025	0.060	E	0.064
As	"	<0.01	<0.01	<0.01	T	<0.01
B	"	0.184	0.774	0.347	E	0.253
Ca	"	559	167	599	R	632
Cd	"	<0.0004	<0.0004	<0.0004		<0.0004
Cr	"	<0.0005	<0.0005	<0.0005	F R	<0.0005
Cu	"	<0.002	<0.002	<0.002	O	<0.002
Fe	"	0.161	<0.004	0.032	Z	1.46
Hg	μg/L	<0.05	<0.05	<0.05	E	<0.05
K	mg/L	8	4	26	N	11
Mg	"	194	108	355		157
Mn	"	1.233	0.0120	0.2578		0.3940
Na	"	256	43	371		76
Ni	"	<0.0004	<0.0004	0.0015		0.0089
Pb	"	<0.004	<0.004	<0.004		<0.004
Se	"	<0.02	<0.02	<0.02		<0.02
Zn	"	0.018	0.005	0.036		0.012

TABLE 4 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 1, 2007

Parameter	Unit	Lysimeter No.		
		L-7N	L-8N	L-9N
pH ¹		8.2	7.9	7.9
EC	mS/m	125	258	257
Total Dissolved Solids	mg/L	NA	1,726	1,562
Total Diss. Org. Carbon	"	10	9	28
Cl ⁻	"	113	436	166
SO ₄ ⁼	"	140	271	271
TKN	"	2.0	3.8	3.1
NH ₃ -N	"	0.08	2.2	0.84
NO ₂ + NO ₃ -N	"	0.33	0.35	0.32
Total P	"	<0.10	0.05	0.07
Alkalinity as CaCO ₃	"	368	595	1,013
Al	"	0.028	0.032	0.032
As	"	<0.02	<0.01	<0.01
B	"	0.246	0.197	0.217
Ca	"	116	207	188
Cd	"	<0.0008	<0.0004	<0.0004
Cr	"	<0.0010	<0.0005	<0.0005
Cu	"	0.012	<0.002	0.004
Fe	"	0.072	3.10	6.03
Hg	μg/L	<0.10	<0.05	<0.05
K	mg/L	7	5	6
Mg	"	65.8	98.3	100
Mn	"	0.0726	0.2778	0.1675
Na	"	49	212	299
Ni	"	0.0026	<0.0004	0.0018
Pb	"	<0.008	<0.004	<0.004
Se	"	<0.04	<0.02	<0.02
Zn	"	0.022	0.045	0.009

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 5: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 14, 2007

Parameter	Unit	Lysimeter No.				
		L-1	L-2	L-3	L-3N	L-4
pH ¹		7.7	8.0	8.0	7.5	7.3
EC	mS/m	167	296	120	249	372
Total Dissolved Solids	mg/L	1,400	2,224 ²	844	1,706	4,590
Total Diss. Org. Carbon	"	6	4	6	21	19
Cl ⁻	"	44	497	209	144	68
SO ₄ ⁼	"	482	523	50	233	1,997
TKN	"	4.2	1.0	3.8	3.0	12
NH ₃ -N	"	3.7	0.04	3.1	0.99	8.1
NO ₂ + NO ₃ -N	"	0.30	0.42	0.09	0.29	0.09
Total P	"	0.05	0.10	2.0	0.05	0.26
Alkalinity as CaCO ₃	"	442	424	331	1,238	815
Al	"	0.045	0.064	0.031	0.072	0.091
As	"	<0.01	<0.02	<0.01	<0.01	<0.01
B	"	0.481	0.204	0.208	0.073	0.207
Ca	"	211	235	98	363	568
Cd	"	<0.0004	<0.0008	<0.0004	<0.0004	<0.0004
Cr	"	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005
Cu	"	<0.002	<0.004	<0.002	<0.002	<0.002
Fe	"	1.58	0.238	0.919	9.67	8.08
Hg	μg/L	<0.05	<0.10	<0.05	<0.05	0.05
K	mg/L	6	3	3	1	7
Mg	"	92.3	107	43.0	138	353
Mn	"	0.0766	0.0106	0.0687	0.9499	0.6691
Na	"	41	269	101	79	29
Ni	"	0.0014	<0.0008	<0.0004	0.0007	<0.0004
Pb	"	<0.004	<0.008	<0.004	<0.004	<0.004
Se	"	<0.02	<0.04	<0.02	<0.02	<0.02
Zn	"	0.008	0.012	0.003	0.007	0.008

TABLE 5 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 14, 2007

Parameter	Unit	Lysimeter No.		
		L-7N	L-8N	L-9N
pH ¹		8.2	7.9	7.9
EC	mS/m	122	246	245
Total Dissolved Solids	mg/L	NA	1,872	NA
Total Diss. Org. Carbon	"	10	8	25
Cl ⁻	"	118	446	166
SO ₄ ⁼	"	172	197	247
TKN	"	2.1	4.0	2.5
NH ₃ -N	"	0.66	2.7	0.80
NO ₂ + NO ₃ -N	"	0.16	0.21	0.37
Total P	"	0.10	<0.05	0.07
Alkalinity as CaCO ₃	"	406	589	981
Al	"	0.048	0.049	0.045
As	"	<0.02	<0.01	<0.01
B	"	0.250	0.196	0.212
Ca	"	132	209	195
Cd	"	<0.0008	0.0004	<0.0004
Cr	"	<0.0010	<0.0005	<0.0005
Cu	"	<0.004	<0.002	<0.002
Fe	"	0.354	0.988	0.072
Hg	μg/L	0.14	<0.05	<0.05
K	mg/L	7	5	6
Mg	"	71.5	97.7	102
Mn	"	0.0824	0.2960	0.0080
Na	"	50	215	289
Ni	"	0.0016	<0.0004	0.0009
Pb	"	<0.008	<0.004	<0.004
Se	"	<0.04	<0.02	<0.02
Zn	"	0.008	0.008	0.006

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

²Total Dissolved Solids result for L-2 reported for sample analyzed beyond recommended holding time.

TABLE 5 (Continued): ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 14, 2007

Parameter	Unit	Lysimeter No.				
		L-4N	L-5	L-5N	L-6	L-6N
pH ¹		7.6	8.0	7.9	NA	7.6
EC	mS/m	356	161	531	NA	326
Total Dissolved Solids	mg/L	3,612	1,424	4,872	NA	NA
Total Diss. Org. Carbon	"	8	1	NA	NA	54
Cl ⁻	"	36	52	791	NA	88
SO ₄ ⁼	"	1,678	577	NA	NA	1,366
TKN	"	11	0.35	3.3	1.2	28
NH ₃ -N	"	8.7	0.02	1.8	<0.02	19
NO ₂ + NO ₃ -N	"	0.09	0.07	0.62	0.12	0.03
Total P	"	<0.05	<0.05	0.10	<0.05	<0.05
Alkalinity as CaCO ₃	"	796	265	490	NA	822
Al	"	0.096	0.040	0.100	NA	0.098
As	"	<0.01	<0.01	<0.02	NA	<0.01
B	"	0.163	0.769	0.352	NA	0.215
Ca	"	556	169	492	NA	633
Cd	"	<0.0004	<0.0004	<0.0008	NA	<0.0004
Cr	"	<0.0005	<0.0005	<0.0010	NA	<0.0005
Cu	"	<0.002	<0.002	<0.004	NA	<0.002
Fe	"	0.095	0.011	0.152	NA	16.9
Hg	μg/L	<0.05	<0.05	<0.10	NA	<0.05
K	mg/L	7	3	23	NA	11
Mg	"	175	110	314	NA	157
Mn	"	1.264	0.0105	0.2374	NA	0.4267
Na	"	240	44	365	NA	77
Ni	"	<0.0004	<0.0004	<0.0008	NA	0.0089
Pb	"	<0.004	<0.004	<0.008	NA	<0.004
Se	"	<0.02	<0.02	<0.04	NA	<0.02
Zn	"	0.012	0.006	0.014	NA	0.008