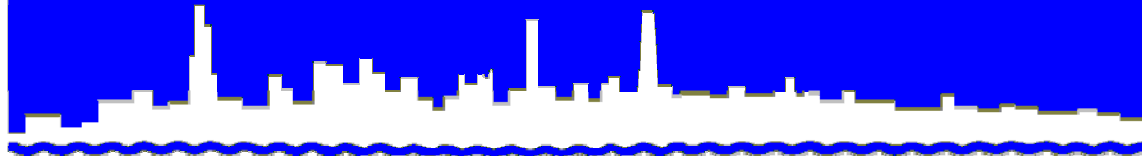


*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

*REPORT NO. 10-24*

*LAWNDALE AVENUE SOLIDS MANAGEMENT AREA*

*MONITORING REPORT FOR*

*FIRST QUARTER 2010*

*MAY 2010*

**Metropolitan Water Reclamation District of Greater Chicago**

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**Louis Kollias, P.E., BCEE**

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May 27, 2010

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 Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2005-AO-4283-2, Monitoring Report for January, February, and March 2010

The attached three tables contain the monitoring data for the Lawndale Avenue Solids Management Area for January, February, and March 2010, as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2005-AO-4283-2.

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 13, 2010

Table 2, Analysis of Water from Lysimeters L-4N and L-6N at the Lawndale Avenue Solids Management Area Sampled During January, February, and March 2010

Table 3, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale Avenue Solids Management Area Sampled on March 17, 2010

Two new lysimeters, L-1N and L-2N, were installed at this site in September 2008 as replacements for L-1 and L-2, respectively. The new and old lysimeters are monitored simultaneously. A request has been submitted to the IEPA to terminate monitoring of the old lysimeters.

Mr. S. Alan Keller

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May 27, 2010

Subject: Lawndale Avenue Solids Management Area - Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2005-AO-4283-2, Monitoring Report for January, February, and March 2010

No biosolids were placed in or removed from the drying site during this quarter.

Very truly yours,

Louis Kollias  
Director  
Monitoring and Research

LK:PL:kq

Attachments

cc w/att: Mr. Sulski, IEPA  
Records Unit, IEPA  
O'Connor/Cox/Lindo

TABLE 1: ANALYSIS<sup>1</sup> OF WATER FROM MONITORING WELLS M-11 THROUGH M-15 AT THE LAWDALE AVENUE SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 13, 2010

Parameter	Unit	Monitoring Well No.				
		M-11	M-12	M-13	M-14	M-15
pH <sup>2</sup>		8.0	7.7	8.0	7.7	7.9
EC	mS/m	82	100	120	80	148
Total Dissolved Solids	mg/L	672	870	1,296	552	1,650
Total Dissolved Org. Carbon	"	2	1	2	1	2
Cl <sup>-</sup>	"	11	15	10	<10	10
SO <sub>4</sub> <sup>=</sup>	"	186	335	588	118	797
TKN	"	1	0.2	0.3	0.4	2
NH <sub>3</sub> -N	"	1	0.4	0.4	0.3	1
NO <sub>2</sub> +NO <sub>3</sub> -N	"	0.13	<0.04	<0.04	<0.04	<0.04
Total P	"	<0.1	<0.1	<0.1	<0.1	<0.1
Alkalinity as CaCO <sub>3</sub>	"	145	93	139	137	156
Al	"	<0.035	<0.035	0.038	<0.035	0.073
As	"	<0.025	<0.025	<0.025	<0.025	<0.025
B	"	1.4	1.8	1.6	1.3	1.2
Ca	"	95	81	171	76	243
Cd	"	<0.002	<0.002	<0.002	<0.002	<0.002
Cr	"	<0.003	<0.003	<0.003	<0.003	<0.003
Cu	"	<0.01	<0.01	<0.01	<0.01	<0.01
Fe	"	0.07	0.05	<0.02	0.03	1.2
Hg	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
K	mg/L	9	10	10	8	11
Mg	"	45	38	81	41	109
Mn	"	0.013	0.004	0.007	0.003	0.018
Na	"	57	135	93	42	64
Ni	"	<0.002	<0.002	<0.002	<0.002	<0.002
Pb	"	<0.02	0.02	<0.02	<0.02	<0.02
Se	"	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	"	0.93	0.68	0.69	0.51	3.6
Fecal coliform	MPN <sup>3</sup>	<1	<1	<1	<1	<1
Static H <sub>2</sub> O Elev.	ft	626	630	625	623	605

<sup>1</sup>Limit of quantitation (LOQ) instead of MDL used as reporting limit.

<sup>2</sup>pH analyzed beyond recommended holding time of 15 minutes.

<sup>3</sup>Most Probable Number.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS L-4N AND L-6N AT THE  
LAWNSDALE AVENUE SOLIDS MANAGEMENT AREA SAMPLED DURING  
JANUARY, FEBRUARY, AND MARCH 2010

Parameter	Unit	January 20, 2010		February 8, 2010		March 17, 2010	
		L-4N	L-6N	L-4N	L-6N	L-4N	L-6N
pH <sup>1</sup>			7.9			7.8	7.8
EC	mS/m		313			323	360
Total Dissolved Solids	mg/L		NA <sup>2</sup>			3,042	3,444
Total Diss. Org. Carbon	“		58			5	62
Cl <sup>-</sup>	“		110			24	72
SO <sub>4</sub> <sup>=</sup>	“		1,390			1,414	1,353
TKN	“		17			5	16
NH <sub>3</sub> -N	“	L	12	L	L	4	11
NO <sub>2</sub> +NO <sub>3</sub> -N	“	Y	0.44	Y	Y	1.8	0.44
Total P	“	S	<0.1	S	S	<0.1	<0.1
Alkalinity as CaCO <sub>3</sub>	“	I	NA <sup>2</sup>	I	I	570	874
Al	“	M		M	M		
Al	“	E	0.122	E	E	0.098	0.102
As	“	T	<0.025	T	T	<0.025	<0.025
B	“	E	0.15	E	E	0.16	0.14
Ca	“	R	721	R	R	540	643
Cd	“		<0.002			<0.002	<0.002
Cr	“	F		F	F		
Cr	“	R	<0.003	R	R	<0.003	<0.003
Cu	“	O	<0.01	O	O	<0.01	<0.01
Fe	“	Z	36	Z	Z	0.17	28
Hg	µg/L	E	<0.20	E	E	<0.20	<0.20
K	“	N	5	N	N	6	5
Mg	“		158			127	145
Mn	“		0.912			0.554	0.638
Na	“		75			104	72
Ni	“		0.003			0.009	0.007
Pb	“		<0.02			<0.02	<0.02
Se	“		<0.1			<0.1	<0.1
Zn	“		0.02			0.01	0.02

<sup>1</sup>pH analyzed beyond recommended holding time of 15 minutes.

<sup>2</sup>No Analysis.

TABLE 3: ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-9N AT  
THE LAWNSDALE AVENUE SOLIDS MANAGEMENT AREA SAMPLED  
ON MARCH 17, 2010

Parameter	Unit	Lysimeter No.				
		L-1	L-1N	L-2	L-2N	L-3N
pH <sup>1</sup>		7.6	7.9	7.8	8.1	7.8
EC	mS/m	185	199	292	245	263
Total Dissolved Solids	mg/L	1,434	1,608	2,068	1,584	1,918
Total Diss. Org. Carbon	"	9	11	3	5	26
Cl <sup>-</sup>	"	63	44	410	354	128
SO <sub>4</sub> <sup>=</sup>	"	510	648	526	300	228
TKN	"	6	5	0.4	1	3
NH <sub>3</sub> -N	"	5	4	0.1	0.2	1
NO <sub>2</sub> +NO <sub>3</sub> -N	"	0.13	0.22	0.24	0.40	0.62
Total P	"	<0.1	<0.1	<0.1	<0.1	0.4
Alkalinity	"	460	458	396	405	1,129
Al	"	0.078	0.051	0.050	0.046	0.078
As	"	<0.025	<0.025	<0.025	<0.025	<0.025
B	"	0.45	0.49	0.16	0.16	0.07
Ca	"	224	215	225	143	318
Cd	"	<0.002	<0.002	<0.002	<0.002	<0.002
Cr	"	<0.003	<0.003	<0.003	<0.003	<0.003
Cu	"	<0.01	<0.01	<0.01	<0.01	<0.01
Fe	"	3.7	1.6	0.33	0.07	13
Hg	µg/L	<0.20	<0.20	<0.20	<0.20	<0.20
K	mg/L	6	14	3	2	1
Mg	"	92	108	98	85	128
Mn	"	0.086	0.034	0.010	0.060	0.633
Na	"	42	49	242	220	75
Ni	"	0.005	0.005	<0.002	<0.002	<0.002
Pb	"	<0.02	<0.02	<0.02	<0.02	<0.02
Se	"	<0.1	<0.1	<0.1	<0.1	<0.1
Zn	"	<0.01	<0.01	<0.01	<0.01	<0.01

TABLE 3 (Continued): ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-9N AT THE LAWNDALE AVENUE SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 17, 2010

Parameter	Unit	Lysimeter No.				
		L-5N	L-6	L-7N	L-8N	L-9N
pH <sup>1</sup>		7.8	7.9		8.1	8.0
EC	mS/m	593	194		244	274
Total Dissolved Solids	mg/L	4,854	1,540		1,498	1,972
Total Diss. Org. Carbon	"	4	5		4	35
Cl <sup>-</sup>	"	786	98		462	212
SO <sub>4</sub> <sup>=</sup>	"	1,652	471	L Y	177	319
TKN	"	3	1	S	2	4
NH <sub>3</sub> -N	"	2	0.2	I	0.8	0.4
NO <sub>2</sub> +NO <sub>3</sub> -N	"	0.44	0.39	M	0.53	0.75
Total P	"	<0.1	<0.1	E	<0.1	<0.1
Alkalinity	"	500	457	T E	279	940
Al	"	0.092	0.050	R	<0.035	0.054
As	"	<0.025	<0.025		<0.025	<0.025
B	"	0.23	0.23	I	0.16	0.19
Ca	"	520	230	N	117	238
Cd	"	<0.002	<0.002	A C	<0.002	<0.002
Cr	"	<0.003	<0.003	C	<0.003	<0.003
Cu	"	<0.01	<0.01	E	<0.01	<0.01
Fe	"	15	0.04	S	2.3	8.8
Hg	µg/L	<0.20	<0.20	S	<0.20	<0.20
K	mg/L	17	7	I B	5	5
Mg	"	229	102	L	47	145
Mn	"	0.246	0.010	E	0.222	0.375
Na	"	459	38		249	144
Ni	"	<0.002	<0.002		<0.002	<0.002
Pb	"	<0.02	<0.02		<0.02	<0.02
Se	"	<0.1	<0.1		<0.1	<0.1
Zn	"	0.02	0.02		<0.01	0.01

<sup>1</sup>pH analyzed beyond recommended holding time of 15 minutes.