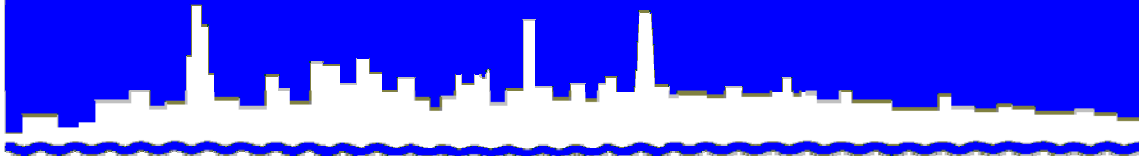


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 07-59

122ND STONY ISLAND AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

SECOND QUARTER 2007

AUGUST 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

August 30, 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: 122nd and Stony Island Avenue Solids Management Area – Stickney
WRP, IEPA Permit No. 2005-AO-4283, Monitoring Report for April,
May, and June 2007

The attached four tables contain the monitoring data for the 122nd and Stony Island Avenue Solids Management Area for April, May, and June 2007 as required by IEPA Operating Permit No. 2005-AO-4283.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1 through L-4 at the 122nd and Stony Island Avenue Solids Management Area Sampled on April 4, 2007

Table 2, Analysis of Water from Lysimeters L-1 through L-4 at the 122nd and Stony Island Avenue Solids Management Area Sampled on May 2, 2007

Table 3, Analysis of Water from Lysimeters L-1 through L-4 at the 122nd and Stony Island Avenue Solids Management Area Sampled on June 14, 2007

Table 4, Analysis of Monthly Compositing Digested Biosolids Placed in the 122nd and Stony Island Avenue Solids Management Drying Area During April 2007

Subject: 122nd and Stony Island Avenue Solids Management Area - Stickney
WRP, IEPA Permit No. 2005-AO-4283, Monitoring Report for April,
May, and June 2007

Biosolids were placed in the solids drying area during April 2007. No biosolids were removed from the solids drying area during April, May, and June 2007.

Very truly yours,

Louis Kollias
Director
Research and Development

LK:PL:spy

Attachments

cc w/att: Mr. Sulski, IEPA
Records Unit, IEPA
Stuba/Granato/Cox/Lindo/M. Patel

cc wo/att: Sharma/S. Levy/Jamjun/Quintanilla

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-4 AT THE 122ND AND STONY ISLAND AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON APRIL 4, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.4	7.5	7.4	7.8
EC	mS/m	293	234	280	198
Total Dissolved Solids	mg/L	2,064	1,448	2,658	1,276
Total Diss. Org. Carbon	"	37	11	43	18
Cl ⁻	"	249	374	106	326
SO ₄ ⁼	"	204	352	609	11
TKN	"	44	1.8	12	6.2
NH ₃ -N	"	33	0.54	5.8	3.8
NO ₂ + NO ₃ -N	"	0.31	0.07	0.22	0.03
Total P	"	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	1,194	325	1,351	735
Al	"	0.056	0.023	0.075	0.023
B	"	4.25	0.723	0.417	1.46
Ca	"	288	124	508	119
Cd	"	<0.0004	0.0006	<0.0004	<0.0004
Cr	"	<0.0005	0.0006	<0.0005	<0.0005
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	0.284	0.813	1.64	0.067
Hg	μg/L	<0.05	<0.05	<0.05	<0.05
K	mg/L	29	33	5	22
Mg	"	137	71.5	164	69.0
Mn	"	0.3291	1.324	0.5061	0.1476
Na	"	163	238	45	217
Ni	"	<0.0004	0.0027	0.0005	0.0020
Pb	"	<0.004	<0.004	<0.004	<0.004
Zn	"	0.005	0.003	0.003	0.009

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-4 AT THE 122ND AND STONY ISLAND AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON MAY 2, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.6	7.7	7.5	7.9
EC	mS/m	306	230	288	203
Total Dissolved Solids	mg/L	2,114	1,710	3,058	1,302
Total Diss. Org. Carbon	"	36	11	48	18
Cl ⁻	"	258	370	111	327
SO ₄ ⁼	"	310	405	741	8
TKN	"	39	2.1	9.8	6.7
NH ₃ -N	"	33	0.52	5.4	3.9
NO ₂ + NO ₃ -N	"	0.06	0.10	0.21	0.20
Total P	"	0.06	0.05	0.21	0.05
Alkalinity as CaCO ₃	"	1,192	332	1,371	753
Al	"	0.056	0.024	2.30	0.025
B	"	4.54	0.711	0.367	1.51
Ca	"	268	124	508	112
Cd	"	0.0004	0.0009	0.0006	0.0005
Cr	"	0.0006	0.0007	0.0014	0.0009
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	0.211	0.928	23.4	0.081
Hg	μg/L	<0.05	<0.05	<0.05	<0.05
K	mg/L	28	32	5	23
Mg	"	134	70.5	162	68.8
Mn	"	0.3129	1.319	0.5212	0.1532
Na	"	159	225	44	217
Ni	"	0.0009	0.0032	0.0019	0.0025
Pb	"	<0.004	<0.004	<0.004	<0.004
Zn	"	0.008	0.012	0.014	0.008

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 3: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-4 AT THE 122ND AND STONY ISLAND AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JUNE 14, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.7	7.7	7.4	7.7
EC	mS/m	304	224	301	197
Total Dissolved Solids	mg/L	2,108	1,612	2,736	1,300
Total Diss. Org. Carbon	"	38	11	41	18
Cl ⁻	"	249	366	105	304
SO ₄ ⁼	"	320	397	747	35
TKN	"	35	2.4	9.3	6.0
NH ₃ -N	"	32	1.1	5.2	4.0
NO ₂ + NO ₃ -N	"	0.19	0.03	0.13	<0.02
Total P	"	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	1,169	354	1,253	720
Al	"	0.069	0.033	0.096	0.042
B	"	4.43	0.785	0.418	1.38
Ca	"	279	136	516	137
Cd	"	0.0006	0.0009	0.0005	0.0004
Cr	"	0.0029	0.0023	0.0027	0.0018
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	0.686	1.22	3.57	0.443
Hg	μg/L	0.20	0.07	0.14	<0.05
K	mg/L	29	34	6	17
Mg	"	139	76.0	166	70.1
Mn	"	0.3090	1.331	0.5839	0.1514
Na	"	163	228	48	201
Ni	"	<0.0004	0.0024	<0.0004	0.0012
Pb	"	<0.004	<0.004	<0.004	<0.004
Zn	"	0.011	0.004	0.007	0.003

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 4: ANALYSIS OF MONTHLY COMPOSITED DIGESTED
 BIOSOLIDS PLACED IN THE 122ND AND STONY ISLAND AVENUE
 SOLIDS MANAGEMENT DRYING AREA DURING APRIL 2007

Parameter	Unit	Concentration*
pH		7.8
Total Solids	%	24.6
Total Volatile Solids**	%	53.6
TKN	mg/kg	44,687
NH ₃ -N	”	6,252

*Values for one sample only.

**Total volatile solids as a percentage of total solids.