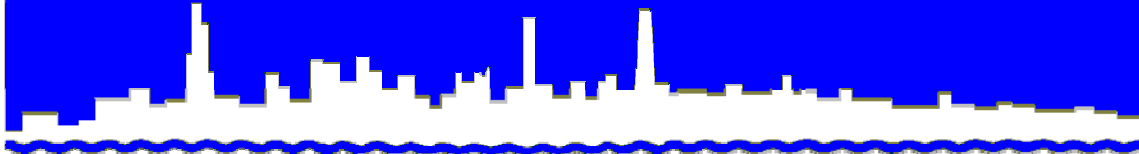


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 07-77

122ND STONY ISLAND AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

THIRD QUARTER 2007

NOVEMBER 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

November 29, 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 - Sticlmeiy WRP,
IEPA Permit No. 2005-AO-4283, Monitoring Report for July, August, and
September 2007

The attached five tables contain the monitoring data for the 122nd and Stony Island Avenue Solids Management Area for July, August, and September 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 July 11, 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 August 8, 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 September 5, 2007

Table 4, Analysis of Monthly Compositied Processed Digested Biosolids Removed from the 122nd and Stony Island Avenue Solids Management Drying Area During August 2007

Table 5, Analysis of Monthly Compositied Processed Digested Biosolids Removed from the 122nd and Stony Island Avenue Solids Management Drying Area During September 2007

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

No biosolids were placed in the solids drying area during July, August, and September 2007. Biosolids were removed from the solids drying area during August and September 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/Garelli/Jamjun/Conway

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-4 AT THE 122ND AND STONY ISLAND AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JULY 11, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.8	7.8		7.9
EC	mS/m	221	217		178
Total Dissolved Solids	mg/L	2,000	1,652		1,328
Total Diss. Org. Carbon	"	37	12		17
Cl ⁻	"	255	355		298
SO ₄ ⁼	"	275	334		37
TKN	"	35	3.3		5.3
NH ₃ -N	"	35	1.9		3.8
NO ₂ + NO ₃ -N	"	0.14	0.20	L	0.08
Total P	"	0.05	<0.05	Y	<0.05
Alkalinity as CaCO ₃	"	1,217	375	S	635
				I	
Al	"	0.056	0.025	M	0.033
B	"	4.44	0.971	E	1.37
Ca	"	274	140	T	129
Cd	"	0.0006	0.0010	E	0.0006
Cr	"	0.0037	0.0031	R	0.0024
Cu	"	<0.002	<0.002	D	<0.002
Fe	"	0.104	1.66	R	0.478
Hg	μg/L	<0.05	<0.05	Y	0.05
K	mg/L	29	34		15
Mg	"	137	75.8		64.7
Mn	"	0.2859	1.167		0.3216
Na	"	163	221		197
Ni	"	<0.0004	0.0012		0.0006
Pb	"	0.005	0.005		0.007
Zn	"	0.004	0.002		0.002

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 AUGUST 8, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.4	7.5	7.2	7.7
EC	mS/m	276	218	297	187
Total Dissolved Solids	mg/L	2,060	1,726	3,222	1,260
Total Diss. Org. Carbon	"	36	11	45	18
Cl ⁻	"	242	379	105	298
SO ₄ ⁼	"	264	305	751	28
TKN	"	38	1.7	9.3	5.8
NH ₃ -N	"	34	0.58	5.5	3.9
NO ₂ + NO ₃ -N	"	0.29	0.20	0.40	0.10
Total P	"	<0.05	<0.05	<0.05	0.05
Alkalinity as CaCO ₃	"	1,255	392	1,310	647
Al	"	0.036	0.013	0.059	0.017
B	"	4.88	0.944	0.416	1.46
Ca	"	275	133	534	131
Cd	"	0.0010	0.0029	0.0010	0.0006
Cr	"	0.0016	0.0015	0.0018	0.0014
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	5.00	7.24	20.9	5.19
Hg	μg/L	0.09	0.07	<0.05	0.10
K	mg/L	29	34	5	13
Mg	"	136	71.8	169	64.4
Mn	"	0.3584	1.296	0.5030	0.1252
Na	"	176	218	48	197
Ni	"	0.0014	0.0027	0.0009	0.0027
Pb	"	<0.004	0.006	<0.004	<0.004
Zn	"	0.004	0.003	0.006	0.005

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 SEPTEMBER 5, 2007

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.6	7.7	7.4	7.8
EC	mS/m	292	220	298	203
Total Dissolved Solids	mg/L	2,000	1,736	3,016	1,316
Total Diss. Org. Carbon	"	37	12	45	18
Cl ⁻	"	232	416	112	303
SO ₄ ⁼	"	235	250	714	23
TKN	"	35	2.4	9.1	5.5
NH ₃ -N	"	33	1.1	5.6	3.7
NO ₂ + NO ₃ -N	"	0.40	0.04	0.08	0.12
Total P	"	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	1,220	447	1,282	671
Al	"	0.063	0.040	0.084	0.041
B	"	3.84	0.978	0.354	1.23
Ca	"	260	132	498	124
Cd	"	<0.0004	0.0020	0.0005	0.0004
Cr	"	0.0011	0.0016	0.0018	0.0013
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	2.60	7.25	17.5	2.20
Hg	μg/L	<0.05	0.08	0.08	0.13
K	mg/L	28	37	6	15
Mg	"	127	73.3	160	62.4
Mn	"	0.2955	1.342	0.5389	0.1239
Na	"	171	229	47	197
Ni	"	0.0007	0.0017	0.0004	0.0018
Pb	"	<0.004	<0.004	<0.004	<0.004
Zn	"	0.030	0.011	0.015	0.005

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 4: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED BIOSOLIDS REMOVED FROM THE 122ND AND STONY ISLAND AVENUE SOLIDS MANAGEMENT DRYING AREA DURING AUGUST 2007

Parameter	Unit	Concentration ¹
pH		8.2
Total Solids	%	27.0
Total Volatile Solids ²	%	44.8
TKN	mg/kg	32,131
NH ₃ -N	”	6,827
Total P	”	18,462
Al	”	25,878
As	”	10
Ca	”	42,742
Cd	”	4
Cr	”	196
Cu	”	449
Fe	”	20,707
Hg	”	0.63
K	”	5,201
Mg	”	18,977
Mn	”	763
Mo	”	13
Na	”	895
Ni	”	53
Pb	”	137
Se	”	2.0
Zn	”	945

¹Values for one sample only.

²Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED BIOSOLIDS REMOVED FROM THE 122ND AND STONY ISLAND AVENUE SOLIDS MANAGEMENT DRYING AREA DURING SEPTEMBER 2007

Parameter	Unit	Concentration ¹
pH		8.4
Total Solids	%	23.0
Total Volatile Solids ²	%	48.8
TKN	mg/kg	42,768
NH ₃ -N	”	8,842
Total P	”	19,410
Al	”	20,795
As	”	11
Ca	”	38,730
Cd	”	5
Cr	”	170
Cu	”	439
Fe	”	19,051
Hg	”	0.89
K	”	4,502
Mg	”	16,461
Mn	”	693
Mo	”	14
Na	”	1,504
Ni	”	52
Pb	”	121
Se	”	4.0
Zn	”	887

¹Values are the means of nine samples.

²Total volatile solids as a percentage of total solids.