

Protecting Our Water Environment



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 08-27

***122ND AND STONY ISLAND AVENUE SOLIDS MANAGEMENT AREA
MONITORING REPORT FOR
FIRST QUARTER 2008***

JUNE 2008

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

June 5, 2008

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,
JEPA Permit No. 2005-AO-4283, Monitoring Report for January,
February, and March 2008

The attached three tables contain the monitoring data for the 122nd and Stony Island Avenue Solids Management Area for January, February, and March 2008 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 January 9, 2008

Table 2, Analysis of Water from Lysimeters L- 1 through L-4 at the 122nd and Stony Island Avenue Solids Management Area Sampled on February 25, 2008

Table 3, Analysis of Water from Lysimeters L- 1 through L-4 at the 122nd and Stony Island Avenue Solids Management Area Sampled on March 11, 2008

Mr. S. Alan Keller

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June 5, 2008

Subject: 122nd and Stony Island Avenue Solids Management Area - Stickney
WRP, IEPA Permit No. 2005-AO-4283, Monitoring Report for January,
February, and March 2008

No biosolids were placed in or removed from the solids drying area during January, February,
and March 2008.

Very truly yours,

Louis Kollias
Director
Research and Development

LK:PL:kq

Attachments

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

cc wo/att: Jamjun/Sharma/Garelli

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-4 AT THE 122ND AND STONY ISLAND AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 9, 2008

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.7	8.0	7.9	8.1
EC	mS/m	267	202	276	199
Total Dissolved Solids	mg/L	2,120	1,460	2,754	1,256
Total Diss. Org. Carbon	"	36	15	32	17
Cl ⁻	"	224	405	98	297
SO ₄ ⁼	"	264	116	706	28
TKN	"	35	2.7	9.3	4.5
NH ₃ -N	"	33	1.1	5.7	3.0
NO ₂ + NO ₃ -N	"	0.28	0.09	0.12	0.63
Total P	"	<0.05	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	1,271	521	1,235	651
Al	"	0.044	<0.007	0.057	0.017
B	"	4.12	1.20	0.460	1.40
Ca	"	302	121	527	133
Cd	"	<0.0004	0.0012	0.0005	0.0004
Cr	"	0.0010	0.0016	0.0010	0.0016
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	0.198	0.043	0.549	0.089
Hg	μg/L	<0.05	<0.05	<0.05	<0.05
K	mg/L	30	36	6	16
Mg	"	140	62.3	167	67.0
Mn	"	0.3298	0.8602	0.4750	0.1135
Na	"	179	252	48	200
Ni	"	<0.0004	0.0017	<0.0004	0.0007
Pb	"	<0.004	<0.004	<0.004	<0.004
Zn	"	0.005	0.003	0.005	0.004

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 FEBRUARY 25, 2008

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		6.7	7.3	7.2	7.9
EC	mS/m	282	119	255	156
Total Dissolved Solids	mg/L	2,000	1,474	2,588	1,220
Total Diss. Org. Carbon	"	36	15	37	18
Cl ⁻	"	236	415	101	297
SO ₄ ⁼	"	291	191	658	23
TKN	"	36	2.1	9.5	4.0
NH ₃ -N	"	33	0.51	5.6	2.2
NO ₂ + NO ₃ -N	"	0.37	0.17	0.27	0.56
Total P	"	<0.05	0.06	<0.05	<0.05
Alkalinity as CaCO ₃	"	1,201	448	1,173	624
Al	"	0.049	0.021	0.076	0.020
B	"	4.26	0.838	0.399	1.29
Ca	"	260	119	508	121
Cd	"	<0.0004	<0.0004	<0.0004	<0.0004
Cr	"	0.0019	0.0020	0.0015	0.0013
Cu	"	<0.002	<0.002	<0.002	<0.002
Fe	"	0.255	9.77	4.19	2.10
Hg	μg/L	<0.05	<0.05	<0.05	<0.05
K	mg/L	30	32	5	16
Mg	"	128	61.0	160	62.8
Mn	"	0.2815	1.055	0.5171	0.1061
Na	"	182	239	46	193
Ni	"	0.0012	0.0023	0.0004	0.0018
Pb	"	<0.004	0.007	<0.004	0.006
Zn	"	0.006	0.013	0.006	0.004

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 MARCH 11, 2008

Parameter	Unit	Lysimeter No.			
		L-1	L-2	L-3	L-4
pH ¹		7.5	7.6	7.4	8.0
EC	mS/m	216	176	276	138
Total Dissolved Solids	mg/L	2,066	1,478	2,648	1,328
Total Diss. Org. Carbon	"	37	14	36	17
Cl ⁻	"	235	404	102	290
SO ₄ ⁼	"	289	211	716	26
TKN	"	36	1.8	9.3	2.5
NH ₃ -N	"	32	0.41	5.5	1.2
NO ₂ + NO ₃ -N	"	0.57	0.09	0.25	0.82
Total P	"	<0.05	<0.05	0.08	<0.10
Alkalinity as CaCO ₃	"	1,220	422	1,245	614
Al	"	0.082	0.029	0.079	0.048
B	"	4.30	0.816	0.399	1.27
Ca	"	281	127	520	125
Cd	"	<0.0004	0.0009	<0.0004	<0.0008
Cr	"	0.0013	0.0013	0.0010	0.0022
Cu	"	<0.002	<0.002	<0.002	<0.004
Fe	"	1.07	2.64	3.32	0.164
Hg	μg/L	<0.05	0.08	<0.05	<0.10
K	mg/L	31	34	6	16
Mg	"	135	64.9	162	64.4
Mn	"	0.2877	0.9914	0.4925	0.1080
Na	"	190	249	47	194
Ni	"	0.0007	0.0018	0.0004	<0.0008
Pb	"	<0.004	0.007	<0.004	0.013
Zn	"	0.006	0.004	0.005	0.007

¹pH analyzed beyond recommended holding time of 15 minutes.