

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 10-42

CALUMET EAST SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

SECOND QUARTER 2010

AUGUST 2010

Protecting Our Water Environment

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August 20, 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: Calumet East Solids Management Area - Stickney Water Reclamation Plant,
Illinois Environmental Protection Agency Permit No. 2005-AO-4281-2,
Monitoring Report for April, May, and June 2010

The attached table contains the monitoring data for the Calumet East Solids Management Area for April, May, and June 2010 as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2005-AO-4281-2.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on April 14, 2010

Four new lysimeters, L-2N, L-3N, L-4N, and L-6N, were installed at this site in September 2008 as replacements for L-2, L-3, L-4, and L-6, respectively. By a letter dated June 10, 2010, the IEPA approved termination of monitoring of the old lysimeters. Data for these lysimeters will not be included in future quarterly reports.

No biosolids were placed in or removed from the solids drying area during April, May, and June 2010.

Very truly yours,

Louis Kollias
Director
Monitoring and Research

LK:PL:kq

Attachments

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

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N
THROUGH L-6N AT THE CALUMET EAST SOLIDS MANAGEMENT
AREA SAMPLED ON APRIL 14, 2010

Parameter	Unit	Lysimeter No.			
		L-1N	L-2	L-2N	L-3
pH ¹		8.0	8.1	8.1	8.1
EC	mS/m	409	412	367	193
Total Dissolved Solids	mg/L	4,092	4,100	3,768	1,704
Total Dissolved Organic Carbon	"	8	4	21	7
Cl ⁻	"	169	187	145	38
SO ₄ ⁼	"	2,033	2,088	1,754	671
TKN	"	12	0.8	4	1
NH ₃ -N	"	5	< 0.1	3	0.4
NO ₂ + NO ₃ -N	"	0.20	0.10	0.32	0.11
Total P	"	< 0.10	< 0.10	4.4	< 0.10
Alkalinity as CaCO ₃	"	467	457	569	466
Al	"	0.155	0.173	NA ²	0.082
Ca	"	472	544	522	210
Cd	"	< 0.003	< 0.003	< 0.003	< 0.003
Cr	"	< 0.003	< 0.003	< 0.003	< 0.003
Cu	"	< 0.008	< 0.008	< 0.008	< 0.008
Fe	"	8.31	< 0.025	29.5	0.627
Hg	μg/L	< 0.20	< 0.20	< 0.20	< 0.20
K	mg/L	9	6	11	2
Mg	"	278	258	228	129
Mn	"	0.217	0.018	0.863	0.019
Na	"	171	140	103	56
Ni	"	< 0.004	0.005	< 0.004	< 0.004
Pb	"	< 0.020	< 0.020	< 0.020	< 0.020
Zn	"	< 0.015	0.031	< 0.015	0.027

TABLE 1: (Continued) ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-6N AT THE CALUMET EAST SOLIDS MANAGEMENT AREA SAMPLED ON APRIL 14, 2010

Parameter	Unit	Lysimeter No.			
		L-3N	L-4	L-4N	L-5
pH ¹		8.0	8.0	7.8	8.1
EC	mS/m	288	421	820	199
Total Dissolved Solids	mg/L	2,884	4,308	6,220	1,680
Total Dissolved Organic Carbon	"	6	3	13	1
Cl ⁻	"	52	466	890	213
SO ₄ ⁼	"	1,391	1,618	2,381	538
TKN	"	< 0.5	0.7	3	< 0.5
NH ₃ -N	"	0.2	0.6	2	0.2
NO ₂ + NO ₃ -N	"	0.10	0.17	< 0.04	0.08
Total P	"	0.15	< 0.10	0.58	0.13
Alkalinity as CaCO ₃	"	459	383	675	239
Al	"	NA ²	0.154	NA ²	0.081
Ca	"	404	457	602	194
Cd	"	< 0.003	< 0.003	< 0.003	< 0.003
Cr	"	< 0.003	< 0.003	< 0.003	< 0.003
Cu	"	< 0.008	< 0.008	< 0.008	< 0.008
Fe	"	0.931	11.1	77.5	0.203
Hg	μg/L	< 0.20	< 0.20	< 0.20	< 0.20
K	mg/L	6	6	13	4
Mg	"	181	255	300	89.4
Mn	"	0.654	0.108	0.645	0.049
Na	"	54	152	646	82
Ni	"	< 0.004	< 0.004	< 0.004	< 0.004
Pb	"	< 0.020	< 0.020	< 0.020	< 0.020
Zn	"	< 0.015	< 0.015	< 0.015	< 0.015

TABLE 1: (Continued) ANALYSIS OF WATER FROM LYSIMETERS L-1N
THROUGH L-6N AT THE CALUMET EAST SOLIDS MANAGEMENT
AREA SAMPLED ON APRIL 14, 2010

Parameter	Unit	Lysimeter No.	
		L-6	L-6N
pH ¹		8.2	8.2
EC	mS/m	155	155
Total Dissolved Solids	mg/L	1,344	1,352
Total Dissolved Organic Carbon	"	1	7
Cl ⁻	"	15	20
SO ₄ ⁼	"	606	544
TKN	"	< 0.5	1
NH ₃ -N	"	< 0.1	1
NO ₂ + NO ₃ -N	"	0.59	0.29
Total P	"	< 0.10	5.2
Alkalinity as CaCO ₃	"	272	339
Al	"	0.070	0.071
Ca	"	164	176
Cd	"	< 0.003	< 0.003
Cr	"	< 0.003	< 0.003
Cu	"	< 0.008	< 0.008
Fe	"	0.134	2.22
Hg	μg/L	< 0.20	< 0.20
K	mg/L	3	4
Mg	"	81.2	72.1
Mn	"	0.030	0.227
Na	"	67	69
Ni	"	< 0.004	< 0.004
Pb	"	< 0.020	< 0.020
Zn	"	< 0.015	< 0.015

¹pH analyzed beyond recommended holding time of 15 minutes.

²No analysis.