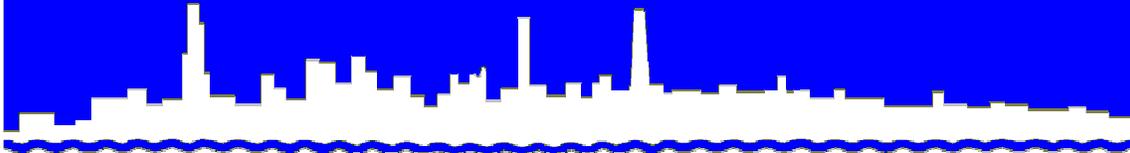


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 11-48

CALUMET WEST SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

SECOND QUARTER 2011

AUGUST 2011

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Thomas C. Granato, Ph.D.
Acting Director of Monitoring and Research
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August 29, 2011

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 West Solids Management Area - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2010-AO-0265, Monitoring Report for April, May, and June 2011

The attached five tables contain the monitoring data for the Calumet West Solids Management Area for April, May, and June 2011 as required by the Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2010-AO-0265.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1N Through L-3N at the Calumet West Solids Management Area Sampled on May 11, 2011

Table 2, Analysis of Monthly Compositated Biosolids Placed in the Calumet West Solids Management Drying Area During April 2011

Table 3, Analysis of Monthly Compositated Biosolids Placed in the Calumet West Solids Management Drying Area During May 2011

Table 4, Analysis of Monthly Compositated Biosolids Placed in the Calumet West Solids Management Drying Area During June 2011

Table 5, Analysis of Monthly Compositated Processed Digested Biosolids Removed from the Calumet West Solids Management Drying Area During May 2011

Mr. S. Alan Keller

2

August 29, 2011

Subject: Calumet West Solids Management Area - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2010-AO-0265, Monitoring Report for April, May, and June 2011

Biosolids were placed in the solids drying area during April, May, and June and removed from the site during May 2011.

Very truly yours,

Thomas C. Granato, Ph.D.
Acting Director
Monitoring and Research

TCG:PL:cm

Attachments

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

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N
THROUGH L-3N AT THE CALUMET WEST SOLIDS MANAGEMENT
AREA SAMPLED ON MAY 11, 2011

Parameter	Unit	Lysimeter No.		
		L-1N	L-2N	L-3N
pH ¹		8.1	9.1	8.0
EC	mS/m	293	274	366
Total Dissolved Solids	mg/L	2,968	2,596	3,784
Total Dissolved Organic Carbon	"	3	6	2
Cl ⁻	"	36	34	57
SO ₄ ⁼	"	1,504	1,435	1,960
TKN	"	1	2	1
NH ₃ -N	"	0.7	2	1
NO ₂ + NO ₃ -N	"	0.08	< 0.04	< 0.04
Total P	"	< 0.10	< 0.10	< 0.10
Alkalinity as CaCO ₃	"	250	44	241
Al	"	< 1.0	< 1.0	< 1.0
Ca	"	302	486	413
Cd	"	< 0.001	< 0.001	< 0.001
Cr	"	< 0.003	< 0.003	< 0.003
Cu	"	< 0.005	< 0.005	< 0.005
Fe	"	0.4	< 0.2	0.9
Hg	μg/L	< 0.20	< 0.20	< 0.20
K	mg/L	13	28	10
Mg	"	203	11.4	252
Mn	"	0.071	0.004	0.269
Na	"	153	200	203
Ni	"	< 0.008	< 0.008	< 0.008
Pb	"	< 0.03	< 0.03	< 0.03
Zn	"	< 0.02	< 0.02	< 0.02

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS
PLACED IN THE CALUMET WEST SOLIDS MANAGEMENT DRYING AREA
DURING APRIL 2011

Parameter	Unit	Concentration ¹
pH		7.1
Total Solids	%	35.7
Total Volatile Solids ²	"	44.5

¹Values are for one sample.

²Total volatile solids as a percentage of total solids.

TABLE 3: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS
PLACED IN THE CALUMET WEST SOLIDS MANAGEMENT DRYING AREA
DURING MAY 2011

Parameter	Unit	Concentration ¹
pH		7.8
Total Solids	%	7.8
Total Volatile Solids ²	”	46.6

¹Values are for one sample.

²Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS
 PLACED IN THE CALUMET WEST SOLIDS MANAGEMENT DRYING AREA
 DURING JUNE 2011

Parameter	Unit	Concentration ¹
pH		7.9
Total Solids	%	14.6
Total Volatile Solids ²	"	46.8

¹Values are the means of five samples.

²Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED BIOSOLIDS REMOVED FROM THE CALUMET WEST SOLIDS MANAGEMENT DRYING AREA DURING MAY 2011

Parameter	Unit	Concentration ¹
pH		7.3
Total Solids	%	35.2
Total Volatile Solids ²	"	41.0
TKN	mg/kg	25,347
NH ₃ -N	"	3,938
Total P	"	23,176
Al	"	10,214
Ca	"	51,038
Cd	"	2
Cr	"	99
Cu	"	409
Fe	"	23,023
Hg	"	1.0
K	"	1,958
Mg	"	18,319
Mn	"	985
Na	"	943
Ni	"	49
Pb	"	85
Zn	"	1,092

¹Values are the means of eight samples.

²Total volatile solids as a percentage of total solids.