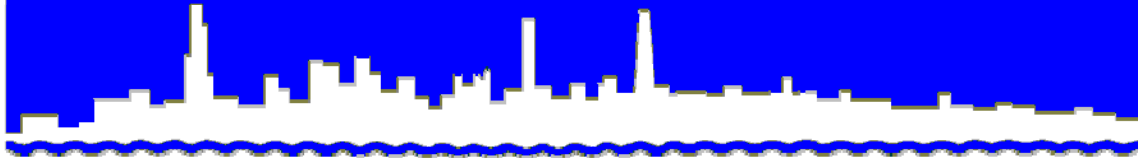


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 13-5

CALUMET WEST SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FOURTH QUARTER 2012

March 2013

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THOMAS C. GRANATO, Ph.D.
Director of Monitoring and Research

March 8, 2013

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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 October, November, and December 2012

The attached four tables contain the monitoring data for the Calumet West Solids Management Area for October, November, and December 2012 as required by 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 November 14, 2012

Table 2, Analysis of Monthly Compositied Biosolids Placed in the Calumet West Solids Management Drying Area During October 2012

Table 3, Analysis of Monthly Compositied Processed Digested Biosolids Removed from the Calumet West Solids Management Drying Area During October 2012

Table 4, Analysis of Monthly Compositied Processed Digested Biosolids Removed from the Calumet West Solids Management Drying Area During November 2012

Mr. S. Alan Keller

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March 8, 2013

Subject: Calumet West Solids Management Area - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2010-AO-0265, Monitoring Report for October, November, and December 2012

Biosolids were placed in the solids drying area during October and removed from the site during October and November 2012.

Very truly yours,

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

TCG:PL:cm

Attachments

cc w/att: Mr. J. Patel, IEPA

Region 2 – Des Plaines

Records Unit, IEPA

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-3N AT THE CALUMET WEST SOLIDS MANAGEMENT AREA SAMPLED ON NOVEMBER 14, 2012

Parameter	Unit	Lysimeter No.		
		L-1N	L-2N	L-3N
pH ¹		8.1	7.6	
EC	mS/m	294	276	
Total Dissolved Solids	mg/L	3,108	2,840	
Total Dissolved Organic Carbon	"	2	5	
Cl ⁻	"	43	31	
SO ₄ ⁼	"	1,750	1,741	
TKN	"	< 1	2	D
NH ₃ -N	"	0.8	1	E
NO ₂ + NO ₃ -N	"	< 0.15	< 0.15	F
Total P	"	< 0.10	< 0.10	E
Alkalinity as CaCO ₃	"	276	37	C
				T
Al	"	< 1.0	< 1.0	I
Ca	"	338	546	V
Cd	"	< 0.001	< 0.001	E
Cr	"	< 0.005	< 0.005	
Cu	"	< 0.005	< 0.005	V
				A
Fe	"	0.5	< 0.1	L
Hg	μg/L	< 0.20	< 0.20	V
K	mg/L	12	21	E
Mg	"	210	17	
Mn	"	0.076	0.019	
Na	"	158	185	
Ni	"	< 0.005	0.007	
Pb	"	< 0.02	< 0.02	
Zn	"	< 0.01	< 0.01	

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 OCTOBER 2012

Parameter	Unit	Concentration ¹
pH		7.4
Total Solids	%	7.0
Total Volatile Solids ²	"	49.0

¹Values are for one sample.

²Total volatile solids as a percentage of total solids.

TABLE 3: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED
BIOSOLIDS REMOVED FROM THE CALUMET WEST SOLIDS
MANAGEMENT DRYING AREA DURING OCTOBER 2012

Parameter	Unit	Concentration ¹
pH		7.2
Total Solids	%	41.2
Total Volatile Solids ²	"	43.6
TKN	mg/kg	26,487
NH ₃ -N	"	4,126
Total P	"	22,157
Al	"	12,095
Ca	"	44,472
Cd	"	2
Cr	"	51
Cu	"	380
Fe	"	21,860
Hg	"	0.89
K	"	3,326
Mg	"	15,782
Mn	"	904
Na	"	1,388
Ni	"	26
Pb	"	81
Zn	"	1,075

¹Values are the means of four samples.

²Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED
 BIOSOLIDS REMOVED FROM THE CALUMET WEST SOLIDS
 MANAGEMENT DRYING AREA DURING NOVEMBER 2012

Parameter	Unit	Concentration ¹
pH		6.7
Total Solids	%	70.4
Total Volatile Solids ²	"	39.4
TKN	mg/kg	23,231
NH ₃ -N	"	3,084
Total P	"	31,895
Al	"	11,726
Ca	"	49,873
Cd	"	2
Cr	"	51
Cu	"	422
Fe	"	22,844
Hg	"	0.93
K	"	3,809
Mg	"	16,796
Mn	"	978
Na	"	1,368
Ni	"	28
Pb	"	78
Zn	"	1,082

¹Values are the means of two samples.

²Total volatile solids as a percentage of total solids.