Metropolitan Water Reclamation District of Greater Chicago

MONITORING AND RESEARCH DEPARTMENT

REPORT NO. 10-09

CALUMET WEST SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FOURTH QUARTER 2009

FEBRUARY 2010

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago
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February 26, 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 West Solids Management Area - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2005-AO-4281-2, Monitoring Report for October, November, and December 2009

The attached two tables contain the monitoring data for the Calumet West Solids Management Area for October, November and December 2009 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-1 through L-3N at the Calumet West Solids Management Area Sampled on October 14, 2009

Table 2, Analysis of Monthly Composited Digested Biosolids Placed in the Calumet West Solids Management Drying Area During October 2009

Three new lysimeters, L-1N, L-2N, and L-3N, were installed at this site in September 2008 as replacements for L-1, L-2, and L-3, respectively. The new and old lysimeters are monitored simultaneously. A request has been submitted to the IEPA to terminate monitoring of the old lysimeters.

A supplemental permit was issued by the IEPA on July 30, 2009, to modify the monitoring schedule for lysimeters at the Calumet West drying site to once per quarter.

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Biosolids were placed in the solids drying area during October 2009. No biosolids were removed from the solids drying area during the fourth quarter.

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/Cox/Lindo

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-3N AT THE CALUMET WEST SOLIDS MANAGEMENT AREA SAMPLED ON OCTOBER 14, 2009

Parameter	Unit	Lysimeter No. L-1	L-1N	L-2	L-2N	L-3	L-3N
pH[1]		7.8	8.0	7.9	10.9	7.8	7.9
EC	mS/m	209	212	238	156	241	255
Total Dissolved Solids	mg/L	NA	2,712	3,336	1,740	3,316	3,628
Total Diss. Org. Carbo	"	NA	3	3	9	1	2
Cl^-	"	NA	42	33	40	30	51
$SO_4^=$	"	NA	1,540	2,030	859	2,010	1,740
TKN	"	NA	0.9	0.4	3	0.2	1
NH_3-N	"	NA	0.5	0.1	2	<0.1	0.9
NO_2+NO_3-N	"	NA	0.15	0.35	<0.10	0.48	<0.10
Total P	"	NA	<0.25	<0.25	<0.25	<0.25	<0.25
Alkalinity[2]	"	NA	232	190	114	156	259
Al	"	NA	0.085	0.096	0.189	0.115	0.101
Ca	"	NA	286	358	239	371	383
Cd	"	NA	<0.002	<0.002	<0.002	<0.002	<0.002
Cr	"	NA	<0.003	<0.003	<0.003	<0.003	<0.003
Cu	"	NA	<0.01	<0.01	<0.01	0.02	<0.01
Fe	"	NA	0.33	0.12	<0.02	2.8	3.1
Hg	µg/L	NA	<0.20	<0.20	<0.20	<0.20	<0.20
K	mg/L	NA	15	8	36	6	10
Mg	"	NA	167	188	9	184	232
Mn	"	NA	0.072	0.114	0.006	0.041	0.369
Na	"	NA	138	170	181	181	192
Ni	"	NA	<0.002	0.004	0.013	<0.002	<0.002
Pb	"	NA	<0.02	<0.02	<0.02	0.02	<0.02
Zn	"	NA	0.01	0.03	<0.01	0.01	<0.01

[1]pH analyzed beyond recommended holding time of 15 minutes.
[2]As $CaCO_3$
NA = No analysis; insufficient sample.

TABLE 2: ANALYSIS OF MONTHLY COMPOSITED DIGESTED BIOSOLIDS PLACED IN THE CALUMET WEST SOLIDS MANAGEMENT DRYING AREA DURING OCTOBER 2009

Parameter	Unit	Concentration[1]
pH		7.9
Total Solids	%	13.1
Total Volatile Solids[2]	"	40.7
TKN	mg/kg	34,583
NH_3-N	"	7,762

[1]Values for one sample only.
[2]Total volatile solids as a percentage of total soli