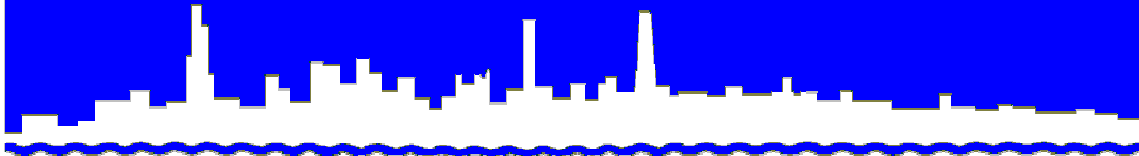


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 11-10

HARLEM AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FOURTH QUARTER 2010

MARCH 2011

Terrence J. O'Brien
President
Barbara J. McGowan
Vice President
Cynthia M. Santos
Chairman of Finance
Michael A. Alvarez
Frank Avila
Patricia Horton
Kathleen Therese Meany
Debra Shore
Mariyana T. Spyropoulos

Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street Chicago, Illinois 60611-3154 f: 312.751.5194 312.751.5190

Thomas C. Granato, Ph.D.
Acting Director of Monitoring and Research
thomas.granato@mwrdd.org

March 7, 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: Harlem Avenue Solids Management Area – Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2009-AO-2715-1, Monitoring Report for October, November, and December 2010

The attached four tables contain the monitoring data for the Harlem Avenue Solids Management Area for October, November, and December 2010 as required by Illinois Environmental Protection Agency Operating Permit No. 2009-AO-2715-1.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1N1 through L-3N at the Harlem Avenue Solids Management Area Sampled on October 6, 2010

Table 2, Analysis of Monthly Compositated Biosolids Placed in the Harlem Avenue Solids Management Drying Area during November 2010

Table 3, Analysis of Monthly Compositated Biosolids Placed in the Harlem Avenue Solids Management Drying Area during December 2010

Table 4, Analysis of Monthly Compositated Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area during October 2010

Mr. S. Alan Keller

2

March 4, 2011

Subject: Harlem Avenue Solids Management Area – Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2009-AO-2715-1, Monitoring Report for October, November, and December 2010

Biosolids were placed in the solids drying area during November and December and removed from the site during October 2010.

Very truly yours,

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

TCG:PL:kq

Attachments

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

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N1
THROUGH L-3N AT THE HARLEM AVENUE SOLIDS MANAGEMENT
AREA SAMPLED ON OCTOBER 6, 2010

Parameter	Unit	Lysimeter No.		
		L-1N1	L-2N	L-3N
pH ¹		8.0	8.0	8.0
EC	mS/m	261	381	211
Total Dissolved Solids	mg/L	1,888	4,384	1,744
Total Dissolved Organic Carbon	"	38	6	14
Cl ⁻	"	NA ²	NA ²	NA ²
SO ₄ ⁼	"	8	1,639	130
TKN	"	8	0.9	2
NH ₃ -N	"	7	< 0.1	0.9
NO ₂ + NO ₃ -N	"	0.11	77	3.6
Total P	"	0.12	< 0.10	< 0.10
Alkalinity as CaCO ₃	"	NA ²	561	1,064
Al	"	< 1.0	< 1.0	< 1.0
Ca	"	348	755	314
Cd	"	< 0.001	< 0.001	< 0.001
Cr	"	< 0.003	< 0.003	< 0.003
Cu	"	< 0.005	< 0.005	< 0.005
Fe	"	13	< 0.2	23
Hg	μg/L	< 0.20	< 0.20	< 0.20
K	mg/L	4	1	1
Mg	"	195	201	117
Mn	"	0.415	2.67	0.962
Na	"	48	24	45
Ni	"	< 0.008	0.011	< 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.

²No analysis; insufficient sample.

TABLE 2: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS
 PLACED IN THE HARLEM AVENUE SOLIDS MANAGEMENT DRYING AREA
 DURING NOVEMBER 2010

Parameter	Unit	Concentration ¹
pH		8.0
Total Solids	%	16.9
Total Volatile Solids ²	"	44.9

¹Values are the means of eight samples.

²Total volatile solids as a percentage of total solids.

TABLE 3: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS
 PLACED IN THE HARLEM AVENUE SOLIDS MANAGEMENT DRYING AREA
 DURING DECEMBER 2010

Parameter	Unit	Concentration ¹
pH		8.3
Total Solids	%	23.3
Total Volatile Solids ²	"	65.5

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 HARLEM AVENUE SOLIDS MANAGEMENT DRYING AREA DURING OCTOBER 2010

Parameter	Unit	Concentration ¹
pH		7.0
Total Solids	%	78.5
Total Volatile Solids ²	"	35.7
TKN	mg/kg	24,169
NH ₃ -N	"	4,303
Total P	"	20,106
Al	"	20,904
As	"	11
Ca	"	37,595
Cd	"	3
Cr	"	155
Cu	"	432
Fe	"	17,305
Hg	"	1.2
K	"	2,599
Mg	"	18,687
Mn	"	501
Mo	"	11
Na	"	686
Ni	"	39
Pb	"	136
Se	"	NA
Zn	"	882

No analysis.

¹Values are the means of seven samples.

²Total volatile solids as a percentage of total solids.