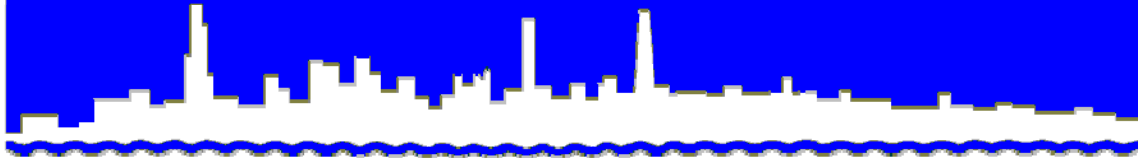


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 13-30

HARLEM AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

SECOND QUARTER 2013

AUGUST 2013

Protecting Our Water Environment

BOARD OF COMMISSIONERS

Kathleen Therese Meany
President
Barbara J McGowan
Vice President
Mariyana T. Spyropoulos
Chairman of Finance
Michael A. Alvarez
Frank Avila
Cynthia M. Santos
Debra Shore
Kari K. Steele
Patrick D. Thompson

Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street

Chicago, Illinois 60611-3154

312.751.5190

THOMAS C. GRANATO, Ph.D.

Director of Monitoring and Research

312.751.5190 f: 312.751.5194
thomas.granato@mwr.org

August 22, 2013

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 April, May, and June 2013

The attached four tables contain the monitoring data for the Harlem Avenue Solids Management Area for April, May, and June 2013 as required by Illinois Environmental Protection Agency (IEPA) 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 May 1, 2013

Table 2, Analysis of Monthly Composited Biosolids Placed in the Harlem Avenue Solids Management Drying Area During June 2013

Table 3, Analysis of Monthly Composited Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area During April 2013

Table 4, Analysis of Monthly Composited Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area During June 2013

Mr. S. Alan Keller

2

August 22, 2013

Subject: Harlem Avenue Solids Management Area – Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2009-AO-2715-1, Monitoring Report for April, May, and June 2013

Biosolids were placed in the solids drying area during June and removed from the site during April and June 2013.

Very truly yours,

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

TCG:PL:cm

Attachments

cc w/att: Mr. Patel, IEPA
Records Unit, IEPA

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N1
THROUGH L-3N AT THE HARLEM AVENUE SOLIDS MANAGEMENT
AREA SAMPLED ON MAY 1, 2013

Parameter	Unit	Lysimeter No.		
		L-1N1	L-2N	L-3N
pH ¹		7.9	7.9	7.8
EC	mS/m	248	312	175
Total Dissolved Solids	mg/L	1,868	3,512	1,314
Total Dissolved Organic Carbon	"	38	4	11
Cl ⁻	"	NA ²	NA ²	NA ²
SO ₄ ⁼	"	12	1,796	67
Alkalinity as CaCO ₃	"	NA ²	NA ²	NA ²
TKN	"	8	< 1	2
NH ₃ -N	"	6	0.2	0.9
NO ₂ + NO ₃ -N	"	< 0.15	< 0.15	< 0.15
Total P	"	< 0.20	< 0.20	0.60
Al	"	< 1.0	< 1.0	< 1.0
Ca	"	320	570	222
Cd	"	< 0.001	< 0.001	< 0.001
Cr	"	< 0.005	< 0.005	< 0.005
Cu	"	< 0.005	< 0.005	< 0.005
Fe	"	4	0.2	14
Hg	μg/L	< 0.20	< 0.20	< 0.20
K	mg/L	5	< 1	2
Mg	"	215	189	101
Mn	"	0.279	2.53	0.628
Na	"	52	26	66
Ni	"	< 0.005	< 0.005	< 0.005
Pb	"	< 0.02	< 0.02	< 0.02
Zn	"	< 0.01	0.02	< 0.01

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 JUNE 2013

Parameter	Unit	Concentration ¹
pH		8.0
Total Solids	%	20.8
Total Volatile Solids ²	"	43.3

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 HARLEM AVENUE SOLIDS
MANAGEMENT DRYING AREA DURING APRIL 2013

Parameter	Unit	Concentration ¹
pH		7.5
Total Solids	%	37.2
Total Volatile Solids ²	"	52.9
TKN	mg/kg	39,184
NH ₃ -N	"	3,193
Total P	"	25,740
Al	"	15,408
Ca	"	36,446
Cd	"	3
Cr	"	138
Cu	"	587
Fe	"	30,579
Hg	"	1.2
K	"	2,334
Mg	"	13,301
Mn	"	557
Mo	"	8
Na	"	528
Ni	"	56
Pb	"	81
Zn	"	812

¹ Values are the means of two samples.

² Total 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 JUNE 2013

Parameter	Unit	Concentration ¹
pH		7.1
Total Solids	%	57.4
Total Volatile Solids ²	"	39.5
TKN	mg/kg	26,874
NH ₃ -N	"	2,654
Total P	"	25,454
Al	"	20,681
Ca	"	38,361
Cd	"	3
Cr	"	142
Cu	"	474
Fe	"	22,123
Hg	"	1.1
K	"	3,080
Mg	"	16,008
Mn	"	558
Mo	"	9
Na	"	727
Ni	"	44
Pb	"	109
Zn	"	818

¹Values are the means of five samples.

²Total volatile solids as a percentage of total solids.