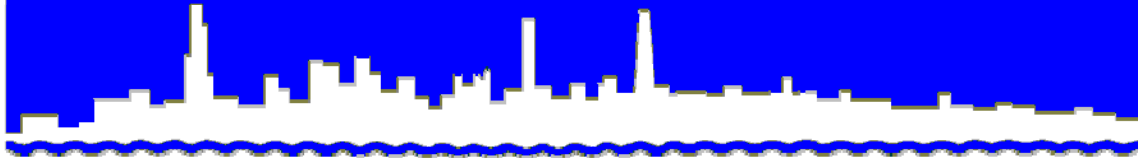


*Protecting Our Water Environment*



***Metropolitan Water Reclamation District of Greater Chicago***

*MONITORING AND RESEARCH  
DEPARTMENT*

***REPORT NO. 12-52***

***HARLEM AVENUE SOLIDS MANAGEMENT AREA***

***MONITORING REPORT FOR***

***THIRD QUARTER 2012***

***DECEMBER 2012***

**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 Department  
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December 21, 2012

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 July, August, and September 2012

The attached six tables contain the monitoring data for the Harlem Avenue Solids Management Area for July, August, and September 2012 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 July 11, 2012

Table 2, Analysis of Monthly Compositated Biosolids Placed in the Harlem Avenue Solids Management Drying Area During July 2012

Table 3, Analysis of Monthly Compositated Biosolids Placed in the Harlem Avenue Solids Management Drying Area During August 2012

Table 4, Analysis of Monthly Compositated Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area During July 2012

Table 5, Analysis of Monthly Compositated Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area During August 2012

Subject: Harlem Avenue Solids Management Area – Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2009-AO-2715-1, Monitoring Report for July, August, and September 2012

Table 6, Analysis of Monthly Composited Processed Digested Biosolids Removed from the Harlem Avenue Solids Management Drying Area During September 2012

Biosolids were placed in the solids drying area during July and August and removed from the site during July, August, and September 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-1N1  
THROUGH L-3N AT THE HARLEM AVENUE SOLIDS MANAGEMENT  
AREA SAMPLED ON JULY 11, 2012

Parameter	Unit	Lysimeter No.		
		L-1N1	L-2N	L-3N
pH <sup>1</sup>		7.7	8.1	8.0
EC	mS/m	266	295	218
Total Dissolved Solids	mg/L	1,956	4,080	1,792
Total Dissolved Organic Carbon	"	35	5	14
Cl <sup>-</sup>	"	101	39	106
SO <sub>4</sub> <sup>=</sup>	"	20	1,805	106
TKN	"	8	< 1	2
NH <sub>3</sub> -N	"	5	< 0.1	0.8
NO <sub>2</sub> + NO <sub>3</sub> -N	"	< 0.15	0.82	< 0.15
Total P	"	0.11	< 0.10	0.15
Alkalinity as CaCO <sub>3</sub>	"	1,107	455	861
Al	"	< 1.0	< 1.0	< 1.0
Ca	"	322	659	295
Cd	"	< 0.001	< 0.001	< 0.001
Cr	"	< 0.005	< 0.005	< 0.005
Cu	"	< 0.005	< 0.005	< 0.005
Fe	"	4	< 0.1	21
Hg	μg/L	< 0.20	< 0.20	< 0.20
K	mg/L	3	< 1	< 1
Mg	"	185	183	120
Mn	"	0.306	2.31	0.900
Na	"	45	23	39
Ni	"	< 0.005	0.010	< 0.005
Pb	"	< 0.02	< 0.02	< 0.02
Zn	"	< 0.01	0.03	0.02

<sup>1</sup>pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF MONTHLY COMPOSITED BIOSOLIDS  
 PLACED IN THE HARLEM AVENUE SOLIDS MANAGEMENT DRYING AREA  
 DURING JULY 2012

Parameter	Unit	Concentration <sup>1</sup>
pH		8.1
Total Solids	%	21.6
Total Volatile Solids <sup>2</sup>	"	43.7

<sup>1</sup>Values are the means of 15 samples.

<sup>2</sup>Total 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 AUGUST 2012

Parameter	Unit	Concentration <sup>1</sup>
pH		8.0
Total Solids	%	19.3
Total Volatile Solids <sup>2</sup>	"	45.2

<sup>1</sup>Values are the means of 12 samples.

<sup>2</sup>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 JULY 2012

Parameter	Unit	Concentration <sup>1</sup>
pH		7.0
Total Solids	%	79.5
Total Volatile Solids <sup>2</sup>	"	42.5
TKN	mg/kg	19,801
NH <sub>3</sub> -N	"	4,497
Total P	"	15,717
Al	"	18,948
Ca	"	39,076
Cd	"	3
Cr	"	145
Cu	"	419
Fe	"	17,192
Hg	"	0.88
K	"	3,070
Mg	"	18,952
Mn	"	551
Mo	"	11
Na	"	1,192
Ni	"	41
Pb	"	107
Zn	"	821

<sup>1</sup>Values are the means of eight samples.

<sup>2</sup>Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED  
 BIOSOLIDS REMOVED FROM THE HARLEM AVENUE SOLIDS  
 MANAGEMENT DRYING AREA DURING AUGUST 2012

Parameter	Unit	Concentration <sup>1</sup>
pH		6.8
Total Solids	%	68.6
Total Volatile Solids <sup>2</sup>	"	40.2
TKN	mg/kg	23,217
NH <sub>3</sub> -N	"	3,585
Total P	"	19,884
Al	"	21,472
Ca	"	40,361
Cd	"	3
Cr	"	148
Cu	"	420
Fe	"	17,940
Hg	"	0.94
K	"	3,000
Mg	"	18,546
Mn	"	575
Mo	"	10
Na	"	873
Ni	"	40
Pb	"	123
Zn	"	838

<sup>1</sup>Values are the means of five samples.

<sup>2</sup>Total volatile solids as a percentage of total solids.



TABLE 6: ANALYSIS OF MONTHLY COMPOSITED PROCESSED DIGESTED BIOSOLIDS REMOVED FROM THE HARLEM AVENUE SOLIDS MANAGEMENT DRYING AREA DURING SEPTEMBER 2012

Parameter	Unit	Concentration <sup>1</sup>
pH		6.2
Total Solids	%	68.1
Total Volatile Solids <sup>2</sup>	"	39.2
TKN	mg/kg	20,246
NH <sub>3</sub> -N	"	672
Total P	"	23,739
Al	"	22,027
Ca	"	41,863
Cd	"	3
Cr	"	150
Cu	"	419
Fe	"	17,063
Hg	"	0.96
K	"	2,603
Mg	"	18,472
Mn	"	581
Mo	"	9
Na	"	686
Ni	"	39
Pb	"	123
Zn	"	845

<sup>1</sup>Values are the means of three samples.

<sup>2</sup>Total volatile solids as a percentage of total solids.