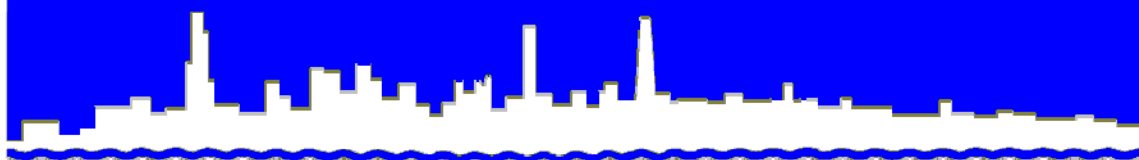


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 15-39

CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS

MONITORING REPORT FOR

THIRD QUARTER 2015

December 2015

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THOMAS C. GRANATO, Ph.D., BCES

Director of Monitoring and Research

November 23, 2015

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 East and West Solids Management Areas - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2015-AO-59622, Monitoring Report for July, August, and September 2015

The attached tables contain the monitoring data for the Calumet East and West Solids Management Areas for July, August, and September 2015 as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2015-AO-59622. Biosolids were placed in the solids drying areas during July, August, and September 2015.

Table 1, Analysis of Water From Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on September 9, 2015.

Table 2, Analysis of Water From Lysimeters L-1N through L-3N at the Calumet West Solids Management Area Sampled on September 9, 2015.

Table 3, Analysis of Biosolids Placed in the Calumet East Solids Management Area During July 2015.

Table 4, Analysis of Biosolids Placed in the Calumet East Solids Management Area During August 2015.

Table 5, Analysis of Biosolids Placed in the Calumet East Solids Management Area During September 2015.

Subject: Calumet East and West Solids Management Areas - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit Nos. 2015-AO-59622, Monitoring Report for July, August, and September 2015

Table 6, Analysis of Biosolids Placed in the Calumet West Solids Management Area During July 2015.

Table 7, Analysis of Biosolids Placed in the Calumet West Solids Management Area During August 2015.

Very truly yours,

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

TCG:HZ:DB:cm

Attachments

cc/att: Mr. J. Patel, IEPA
Records Unit, IEPA
Dr. H. Zhang
Dr. A. Cox
Dr. L. Hundal
Dr. D. Brose

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-6N
 AT THE CALUMET EAST SOLIDS MANAGEMENT AREA SAMPLED ON
 SEPTEMBER 9, 2015

Parameter	Lysimeter No.					
	L-1N	L-2N	L-3N	L-4N	L-5N	L-6N
pH ¹	7.5	7.4	7.5	7.1	7.6	7.7
	----- mg L ⁻¹ -----					
Cl ⁻	173	137	48	843	235	20
SO ₄ ²⁻	2,177	1,952	1,517	2,787	583	766
NO ₂ +NO ₃ -N	0.86	<0.15	<0.15	0.18	0.54	0.21

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-3N AT THE CALUMET WEST SOLIDS MANAGEMENT AREA SAMPLED ON SEPTEMBER 9, 2015

Parameter	Lysimeter No.		
	L-1N	L-2N	L-3N
pH ¹	7.8	8.1	7.7
	----- mg L ⁻¹ -----		
Cl ⁻	64	26	58
SO ₄ ²⁻	1,993	2,044	2,434
NO ₂ +NO ₃ -N	<0.15	<0.15	0.26

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE
 CALUMET EAST SOLIDS MANAGEMENT DRYING
 AREA DURING JULY 2015

Parameter	Analysis ¹
pH	7.5
Total Solids	9.4
Total Volatile Solids ²	42

¹Mean of two samples.

²Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
EAST SOLIDS MANAGEMENT DRYING
AREA DURING AUGUST 2015

Parameter	Analysis ¹
pH	7.5
	---- % ----
Total Solids	9.0
Total Volatile Solids ²	47

¹Mean of three samples.

²Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
EAST SOLIDS MANAGEMENT DRYING AREA
DURING SEPTEMBER 2015

Parameter	Analysis ¹
pH	7.2
	---- % ----
Total Solids	15
Total Volatile Solids ²	53

¹Mean of six samples.

²Total volatile solids as a percentage of total solids.

TABLE 6: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET WEST
 SOLIDS MANAGEMENT DRYING AREA DURING
 JULY 2015

Parameter	Analysis ¹
pH	7.3
	---- % ----
Total Solids	11
Total Volatile Solids ²	44

¹One sample.

²Total volatile solids as a percentage of total solids.

TABLE 7: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
WEST SOLIDS MANAGEMENT DRYING AREA
DURING AUGUST 2015

Parameter	Analysis ¹
pH	7.4
	---- % ----
Total Solids	6.8
Total Volatile Solids ²	52

¹Mean of three samples.

²Total volatile solids as a percentage of total solids.