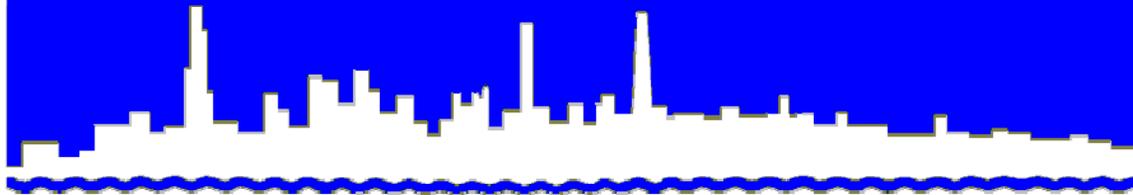


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 17-05

CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS

MONITORING REPORT FOR

FOURTH QUARTER 2016

FEBRUARY 2017

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 312-751-5600

**CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS
MONITORING REPORT FOR FOURTH QUARTER 2016**

Mariyana T. Spyropoulos
President
Barbara J. McGowan
Vice President
Frank Avila
Chairman of Finance
Timothy Bradford
Martin Durkin
Josita Morita
Debra Shore
Kari K. Steele
David J. Walsh

Metropolitan Water Reclamation District of Greater Chicago

**CECIL LUE-HING RESEARCH AND DEVELOPMENT COMPLEX
6001 WEST PERSHING ROAD CICERO, ILLINOIS 60804-4112**

February 24, 2017

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 October, November, and December 2016

The attached tables contain the monitoring data for the Calumet East and West Solids Management Areas for October, November, and December 2016 as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2015-AO-59622. Biosolids were placed in the Calumet East and West Solids Management Areas in October 2016.

Table 1 Analysis of Water From Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on December 5, 2016.

Table 2 Analysis of Water From Lysimeters L-1N through L-3N at the Calumet West Solids Management Area Sampled on December 5, 2016.

Table 3 Analysis of Biosolids Placed in the Calumet East Solids Management Area During October 2016.

Table 4 Analysis of Biosolids Placed in the Calumet West Solids Management Area During October 2016.

Albert E. Cox, Ph.D.

Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:DB:cm

Attachment

cc/att: Mr. J. Patel, IEPA/Records Unit, IEPA
Dr. T. Granato/Mr. E. Podczewinski
Dr. H. Zhang/Dr. G. Tian/Dr. D. Brose

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

DECEMBER 5, 2016

Parameter	Lysimeter No.					
	L-1N	L-2N	L-3N	L-4N	L-5N	L-6N
pH ¹	7.6	7.4	7.5	7.4	7.6	7.9
	----- mg L ⁻¹ -----					
Cl ⁻	164	127	38	842	225	19
SO ₄ ²⁻	1,960	1,797	1,393	2,390	532	671
NO ₂ +NO ₃ -N	0.67	<0.15	<0.15	<0.15	0.39	0.16

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
 DECEMBER 5, 2016

Parameter	Lysimeter No.		
	L-1N	L-2N	L-3N
pH ¹	7.9	7.8	7.6
	----- mg L ⁻¹ -----		
Cl ⁻	36	21	54
SO ₄ ²⁻	1,859	1,919	2,241
NO ₂ +NO ₃ -N	<0.15	<0.15	0.20

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
EAST SOLIDS MANAGEMENT AREA DURING
OCTOBER 2016

Parameter	Analysis ¹
pH	8.2
	---- % ----
Total Solids	8.6
Total Volatile Solids ²	48

¹One sample.

²Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
WEST SOLIDS MANAGEMENT AREA DURING
OCTOBER 2016

Parameter	Analysis ¹
pH	7.3
	---- % ----
Total Solids	25
Total Volatile Solids ²	33

¹Mean of four samples.

²Total volatile solids as a percentage of total solids.