

*Protecting Our Water Environment*



*Metropolitan Water Reclamation District of Greater Chicago*

***MONITORING AND RESEARCH  
DEPARTMENT***

*REPORT NO. 17-36*

*CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS*

*MONITORING REPORT FOR*

*SECOND QUARTER 2017*

*August 2017*

## Protecting Our Water Environment

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**Edward W. Podczewinski, P.E.**

Acting Director of Monitoring and Research

August 17, 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 April, May, and June 2017

The attached tables contain the monitoring data for the Calumet East and West Solids Management Areas for April, May, and June 2017 as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2015-AO-59622. Biosolids were placed in the Calumet East Solids Management Area in May and June and in the Calumet West Solids Management Area in April, May, and June.

Table 1 Analysis of Water From Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on May 24, 2017.

Table 2 Analysis of Water From Lysimeters L-1N through L-3N at the Calumet West Solids Management Area Sampled on May 24, 2017.

Table 3 Analysis of Biosolids Placed in the Calumet East Solids Management Area During May 2017.

Table 4 Analysis of Biosolids Placed in the Calumet East Solids Management Area During June 2017.

Table 5 Analysis of Biosolids Placed in the Calumet West Solids Management Area During April 2017.

Table 6 Analysis of Biosolids Placed in the Calumet West Solids Management Area During May 2017.

Mr. S. Alan Keller

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Subject: Calumet East and West Solids Management Areas - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit Nos. 2015-AO-59622, Monitoring Report for April, May, and June 2017

Table 7 Analysis of Biosolids Placed in the Calumet West Solids Management Area During June 2017.

Very truly yours,

Albert E. Cox  
Environmental Monitoring and Research Manager  
Monitoring and Research Department

AC:DB:cm

Attachments

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

**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 SECOND QUARTER 2017**

**Monitoring and Research Department**  
**Edward W. Podczewinski, Acting Director**

**August 2017**

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-6N AT THE CALUMET EAST SOLIDS MANAGEMENT AREA SAMPLED ON MAY 24, 2017

Parameter	Lysimeter No.					
	L-1N	L-2N	L-3N	L-4N	L-5N	L-6N
pH <sup>1</sup>	7.4	8.0	7.5	7.1	7.6	7.9
	----- mg L <sup>-1</sup> -----					
Cl <sup>-</sup>	162	132	38	812	223	19
SO <sub>4</sub> <sup>2-</sup>	1,907	1,881	1,352	2,379	574	671
NO <sub>2</sub> +NO <sub>3</sub> -N	0.77	<0.15	<0.15	<0.15	<0.15	0.19

<sup>1</sup>pH 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  
 MAY 24, 2017

Parameter	Lysimeter No.		
	L-1N	L-2N	L-3N
pH <sup>1</sup>	7.8	8.4	7.8
	----- mg L <sup>-1</sup> -----		
Cl <sup>-</sup>	33	23	28
SO <sub>4</sub> <sup>2-</sup>	1,663	1,858	1,726
NO <sub>2</sub> +NO <sub>3</sub> -N	<0.15	<0.15	0.23

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

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE  
CALUMET EAST SOLIDS MANAGEMENT DRYING  
AREA DURING MAY 2017

Parameter	Analysis <sup>1</sup>
pH	7.7
	---- % ----
Total Solids	12
Total Volatile Solids <sup>2</sup>	54

<sup>1</sup>Mean of four samples.

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

TABLE 4: ANALYSIS OF BIOSOLIDS PLACED IN THE  
 CALUMET EAST SOLIDS MANAGEMENT DRYING  
 AREA DURING JUNE 2017

Parameter	Analysis <sup>1</sup>
pH	8.2 <sup>2</sup>
	---- % ----
Total Solids	13
Total Volatile Solids <sup>3</sup>	42

<sup>1</sup>Mean of eight samples.

<sup>2</sup>pH available for one sample. pH values unavailable for other samples due to use of incorrect lab test schedules at time of sampling.

<sup>3</sup>Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF BIOSOLIDS PLACED IN THE  
 CALUMET WEST SOLIDS MANAGEMENT DRYING  
 AREA DURING APRIL 2017

Parameter	Analysis <sup>1</sup>
pH	N/A <sup>2</sup> ---- % ----
Total Solids	6.9
Total Volatile Solids <sup>3</sup>	50

<sup>1</sup>Mean of four samples.

<sup>2</sup>pH unavailable due to incorrect lab test schedules used at time of sampling.

<sup>3</sup>Total volatile solids as a percentage of total solids.

TABLE 6: ANALYSIS OF BIOSOLIDS PLACED IN THE  
 CALUMET WEST SOLIDS MANAGEMENT DRYING  
 AREA DURING MAY 2017

Parameter	Analysis <sup>1</sup>
pH	N/A <sup>2</sup> ---- % ----
Total Solids	7.4
Total Volatile Solids <sup>3</sup>	50

<sup>1</sup>Mean of six samples.

<sup>2</sup>pH unavailable due to incorrect lab test schedules used at time of sampling.

<sup>3</sup>Total volatile solids as a percentage of total solids.

TABLE 7: ANALYSIS OF BIOSOLIDS PLACED IN THE  
CALUMET WEST SOLIDS MANAGEMENT DRYING  
AREA DURING JUNE 2017

Parameter	Analysis <sup>1</sup>
pH	N/A <sup>2</sup>
	---- % ----
Total Solids	8.5
Total Volatile Solids <sup>3</sup>	47

<sup>1</sup>Mean of eight samples.

<sup>2</sup>pH unavailable due to incorrect lab test schedules used at time of sampling.

<sup>3</sup>Total volatile solids as a percentage of total solids.