



*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 16-07

CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS

MONITORING REPORT FOR

FOURTH QUARTER 2015

February 2016

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February 23, 2016

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 2015

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

Table 1 Analysis of Water From Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on December 2, 2015.

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

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

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

Table 5 Analysis of Biosolids Placed in the Calumet West Solids Management Area During October 2015.

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Table 6 Analysis of Biosolids Placed in the Calumet West Solids Management Area During November 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 DECEMBER 2, 2015

Parameter	Lysimeter No.					
	L-1N	L-2N	L-3N	L-4N	L-5N	L-6N
pH ¹	7.7	7.9	7.7	7.5	7.6	7.9
	----- mg L ⁻¹ -----					
Cl ⁻	182	175	45	864	234	20
SO ₄ ²⁻	2,138	1,720	1,508	2,651	576	776
NO ₂ +NO ₃ -N	0.79	<0.15	<0.15	<0.15	0.25	0.19

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 2, 2015

Parameter	Lysimeter No.		
	L-1N	L-2N	L-3N
pH ¹	7.9	8.0	7.7
	----- mg L ⁻¹ -----		
Cl ⁻	37	24	91
SO ₄ ²⁻	1,955	1,994	2,404
NO ₂ +NO ₃ -N	<0.15	<0.15	0.19

¹pH analyzed beyond recommended holding time of 15 minutes.

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

Parameter	Analysis ¹
pH	7.4
	---- % ----
Total Solids	13
Total Volatile Solids ²	47

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 AREA
DURING DECEMBER 2015

Parameter	Analysis ¹
pH	7.6
	---- % ----
Total Solids	8.8
Total Volatile Solids ²	44

¹Mean of three samples.

²Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET
WEST SOLIDS MANAGEMENT AREA
DURING OCTOBER 2015

Parameter	Analysis ¹
pH	7.5
	---- % ----
Total Solids	8.9
Total Volatile Solids ²	47

¹Mean of three samples.

²Total volatile solids as a percentage of total solids.

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

Parameter	Analysis ¹
pH	7.6
	---- % ----
Total Solids	8.6
Total Volatile Solids ²	45

¹Mean of four samples.

²Total volatile solids as a percentage of total solids.