

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 21-40

CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS

MONITORING REPORT FOR

THIRD QUARTER 2021

November 2021

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Edward W. Podczerwinski, P.E.
Director of Monitoring and Research

November 22, 2021

Ms. Catherine Siders
Illinois Environmental Protection Agency
Bureau of Water
DWPC Compliance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274

Dear Ms. Siders:

Subject: Calumet East and West Solids Management Areas - Calumet Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2020-AO-64905, Monitoring Report for July, August, and September 2021

The attached tables contain the monitoring data for the Calumet East and West Solids Management Areas for July, August, and September 2021, as required by Illinois Environmental Protection Agency (IEPA) Operating Permit No. 2020-AO-64905. Biosolids were placed in the Calumet East Solids Management Area in July, August, and September 2021 and in the Calumet West Solids Management Area in July and August 2021.

Table 1 Analysis of Water From Lysimeters L-1N through L-6N at the Calumet East Solids Management Area Sampled on August 16, 2021.

Table 2 Analysis of Water From Lysimeters L-1N through L-3N at the Calumet West Solids Management Area Sampled on August 16, 2021.

Table 3 Analysis of Biosolids Placed in the Calumet East Solids Management Area During July, August, and September 2021.

Table 4 Analysis of Biosolids Placed in the Calumet West Solids Management Area During July and August 2021.

Very truly yours,



Albert E. Cox, Ph.D.
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:lf

Attachment

cc: Mr. J. Patel, IEPA/Mr. T. Bennett, IEPA
Mr. B. Fleming, IEPA/Dr. H. Zhang

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CALUMET EAST AND WEST SOLIDS MANAGEMENT AREAS
MONITORING REPORT
FOR THIRD QUARTER 2021

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-6N AT THE CALUMET EAST SOLIDS MANAGEMENT AREA SAMPLED ON AUGUST 16, 2021

Parameter	Lysimeter No.					
	L-1N	L-2N ¹	L-3N	L-4N	L-5N	L-6N
pH	7.2	6.9	7.2	6.9	7.7	7.6
	-----mg L ⁻¹ -----					
Cl ⁻	152	120	34	861	239	19
SO ₄ ²⁻	2,066	1,649	1,212	2,601	545	705
NO ₂ ⁻ +NO ₃ ⁻ -N	0.54	<0.25	<0.25	<0.25	0.46	<0.25

¹Lysimeter L-2N did not produce adequate sample volume for analysis on August 16, and was re-sampled on August 24, 2021.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-3N AT THE CALUMET WEST SOLIDS MANAGEMENT AREA SAMPLED ON AUGUST 16, 2021

Parameter	Lysimeter No.		
	L-1N	L-2N	L-3N
pH	7.5	8.2	7.3
	-----mg L ⁻¹ -----		
Cl ⁻	37	24	60
SO ₄ ²⁻	1,794	1,996	2,244
NO ₂ ⁻ +NO ₃ ⁻ -N	<0.25	<0.25	<0.25

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET EAST SOLIDS MANAGEMENT AREA DURING JULY, AUGUST, AND SEPTEMBER 2021

Parameter	July	August	September
pH	7.4	7.5	7.3
		-----mg L ⁻¹ -----	
Total Solids	8.2	10.2	6.9
Total Volatile Solids ¹	49.7	49.4	53.6

¹Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF BIOSOLIDS PLACED IN THE CALUMET WEST SOLIDS MANAGEMENT AREA DURING JULY AND AUGUST 2021

Parameter	July	August
pH	7.4	7.6
	-----mg L ⁻¹ -----	
Total Solids	8.0	10.0
Total Volatile Solids ¹	50.1	43.3

¹Total volatile solids as a percentage of total solids.