

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

*MONITORING AND RESEARCH
DEPARTMENT*

REPORT NO. 16-40

LAWNDALE AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

THIRD QUARTER 2016

December 2016

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

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December 16, 2016

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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: Lawndale Avenue Solids Management Area - Stickney Water Reclamation Plant, Illinois Environmental Protection Agency Permit No. 2015-AO-59623, Monitoring Report for July, August, and September 2016

The attached tables contain the monitoring data for the Lawndale Avenue Solids Management Area for July, August, and September 2016 as required by Illinois Environmental Protection Agency Operating Permit No. 2015-AO-59623. Biosolids were placed in the solids drying area during July, August, and September 2016.

Table 1 Analysis of Water from Monitoring Wells M-11 through M-15 at the Lawndale Avenue Solids Management Area Sampled on July 12, 2016.

Table 2 Analysis of Water from Lysimeters L-1N through L-9N at the Lawndale Avenue Solids Management Area Sampled on August 3, 2016.

Table 3 Analysis of Biosolids Placed in the Lawndale Avenue Solids Management Drying Area During July 2016.

Table 4 Analysis of Biosolids Placed in the Lawndale Avenue Solids Management Drying Area During August 2016.

Mr. S. Alan Keller

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Table 5 Analysis of Biosolids Placed in the Lawndale Avenue Solids Management Drying Area During September 2016.

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

Mr. E. Podczerwinski

Dr. H. Zhang

Dr. A. Cox

Dr. G. Tian

Dr. D. Brose

TABLE 1: ANALYSIS OF WATER FROM MONITORING WELLS M-11 THROUGH M-15 AT THE LAWNSDALE AVENUE SOLIDS MANAGEMENT AREA SAMPLED ON JULY 12, 2016

Parameter	Monitoring Well No.				
	M-11	M-12	M-13	M-14	M-15
pH ¹	7.0	7.6	7.6	7.4	7.3
	----- mg L ⁻¹ -----				
Cl ⁻	18	14	9.0	10	8.0
SO ₄ ²⁻	197	361	627	130	820
NO ₂ +N	<0.15	<0.15	<0.15	<0.15	<0.15
O ₃ -N					

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS L-1N THROUGH L-9N
 AT THE LAWDALE AVENUE SOLIDS MANAGEMENT AREA
 SAMPLED ON AUGUST 3, 2016

Parameter	Lysimeter No.								
	L 1 N	L 2 N	L 3 N	L 4 N	L 5 N	L 6 N	L 7 N	L 8 N	L 9 N
pH ¹	7 . 4	7.5	7 . 5	7.3	7.4	7.5	8 . 1	7 . 7	7.6
	----- mg L ⁻¹ -----								
Cl ⁻	1 4	2 7	1 4 7	16	680	77	7 0 8	5 2 5	334
SO ₄ ²⁻	7 0 1	1 7 0	1 1 1	1,228	1,705	1,423	< 5 . 0	1 8 3	200
NO ₂ ⁺	< 0		0				0	0	
NO ₃ -N	. 1 5	6.0	. 4 5	1.5	0.79	0.43	. 1 8	. 4 6	0.36

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 3: ANALYSIS OF BIOSOLIDS PLACED IN THE LAWNSDALE
AVENUE SOLIDS MANAGEMENT AREA
DURING JULY 2016

Parameter	Analysis ¹
pH	7.5
	---- % ----
Total Solids	10
Total Volatile Solids ²	45

¹Mean of 4 samples.

²Total volatile solids as a percentage of total solids.

TABLE 4: ANALYSIS OF BIOSOLIDS PLACED IN THE LAWNSDALE
AVENUE SOLIDS MANAGEMENT AREA
DURING AUGUST 2016

Parameter	Analysis ¹
pH	7.4
	---- % ----
Total Solids	10
Total Volatile Solids ²	44

¹Mean of 2 samples.

²Total volatile solids as a percentage of total solids.

TABLE 5: ANALYSIS OF BIOSOLIDS PLACED IN THE LAWNSDALE
 AVENUE SOLIDS MANAGEMENT AREA
 DURING SEPTEMBER 2016

Parameter	Analysis ¹
pH	7.4
	---- % ----
Total Solids	9.6
Total Volatile Solids ²	44

¹Mean of three samples.

²Total volatile solids as a percentage of total solids.