

Protecting Our Water Environment



METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 08-32

CALUMET WEST SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

FIRST QUARTER 2008

JUNE 2008

Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312-751-5600

Louis Kollias, P.E., BCEE
Director of Research and Development

June 5, 2008

312-751-5190

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 West Solids Management Area - Calumet WRP, Contract No. 84-270-2P, C175399, JEPA Permit No. 2005-AO-4281-1, Monitoring Report for January, February, and March 2008

The attached three tables contain the monitoring data for the Calumet West Solids Management Area for January, February, and March 2008 as required by IEPA Operating Permit No. 2005-AO-428 1-1.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet West Solids Management Area Sampled on January 9, 2008

Table 2, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet West Solids Management Area Sampled on February 20, 2008

Table 3, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet West Solids Management Area Sampled on March 5, 2008

Mr. S. Alan Keller

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June 5, 2008

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No biosolids were placed in or removed from the solids drying area during January, February, and March 2008.

Very truly yours,

Louis Kollias
Director
Research and Development

LK:PL:kq
Attachments

cc w/att: Mr. Sulski, IEPA
Records Unit, IEPA
Stuba/Granato/Cox/Lindo/M. Patel

cc wo/att: Jamjun/Sharma/Conway

TABLE 1: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-3 AT THE CALUMET WEST
SOLIDS MANAGEMENT AREA SAMPLED ON JANUARY 9, 2008

Parameter	Unit	Lysimeter No.		
		L-1	L-2	L-3
pH ¹		7.8	7.9	7.8
EC	mS/m	274	272	266
Total Dissolved Solids	mg/L	2,956	3,276	3,428
Total Diss. Org. Carbon	"	1	2	2
Cl ⁻	"	118	35	28
SO ₄ ⁼	"	1,474	1,771	1,887
TKN	"	0.65	0.41	0.28
NH ₃ -N	"	0.31	0.09	<0.02
NO ₂ + NO ₃ -N	"	0.19	0.31	0.54
Total P	"	<0.05	<0.05	<0.05
Alkalinity as CaCO ₃	"	167	176	143
Al	"	0.040	0.043	0.043
Ca	"	332	368	387
Cd	"	0.0004	<0.0004	<0.0004
Cr	"	0.0005	<0.0005	<0.0005
Cu	"	<0.002	<0.002	<0.002
Fe	"	1.63	0.082	0.018
Hg	μg/L	<0.05	<0.05	<0.05
K	mg/L	7	8	6
Mg	"	152	186	194
Mn	"	0.1272	0.1006	0.0235
Na	"	199	185	189
Ni	"	<0.0004	0.0048	<0.0004
Pb	"	<0.004	<0.004	<0.004
Zn	"	0.006	0.011	0.006

¹pH analyzed beyond recommended holding time of 15 minutes.

TABLE 2: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-3 AT THE CALUMET WEST
SOLIDS MANAGEMENT AREA SAMPLED ON FEBRUARY 20, 2008

Parameter	Unit	Lysimeter No.		
		L-1	L-2	L-3
pH ¹				7.7
EC	mS/m			213
Total Dissolved Solids	mg/L			NA
Total Diss. Org. Carbon	"			NA
Cl ⁻	"			34
SO ₄ ⁼	"			NA
		L	L	
TKN	"	Y	Y	0.38
NH ₃ -N	"	S	S	0.10
NO ₂ + NO ₃ -N	"	I	I	0.51
Total P	"	M	M	<0.10
Alkalinity as CaCO ₃	"	E	E	106
		T	T	
Al	"	E	E	0.054
Ca	"	R	R	357
Cd	"			<0.0008
Cr	"	F	F	<0.0010
Cu	"	R	R	0.020
		O	O	
Fe	"	Z	Z	0.022
Hg	μg/L	E	E	<0.10
K	mg/L	N	N	6
Mg	"			174
Mn	"			0.0052
Na	"			186
Ni	"			<0.0008
Pb	"			0.017
Zn	"			0.023

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 3: ANALYSIS OF WATER FROM LYSIMETERS
L-1 THROUGH L-3 AT THE CALUMET WEST
SOLIDS MANAGEMENT AREA SAMPLED ON MARCH 5, 2008

Parameter	Unit	Lysimeter No.		
		L-1	L-2	L-3
pH ¹			7.5	7.8
EC	mS/m		288	282
Total Dissolved Solids	mg/L		3,240	NA
Total Diss. Org. Carbon	"		2	NA
Cl ⁻	"		35	NA
SO ₄ ⁼	"		1,921	1,902
		L		
TKN	"	Y	0.34	0.10
NH ₃ -N	"	S	0.08	<0.04
NO ₂ + NO ₃ -N	"	I	0.14	0.48
Total P	"	M	<0.05	<0.10
Alkalinity as CaCO ₃	"	E	186	NA
		T		
Al	"	E	0.040	0.064
Ca	"	R	367	361
Cd	"		<0.0004	<0.0008
Cr	"	F	<0.0005	<0.0010
Cu	"	R	<0.002	<0.004
		O		
Fe	"	Z	0.036	0.044
Hg	μg/L	E	<0.05	<0.10
K	mg/L	N	8	6
Mg	"		192	185
Mn	"		0.1229	0.0424
Na	"		185	178
Ni	"		0.0080	<0.0008
Pb	"		<0.004	<0.008
Zn	"		0.217	0.092

¹pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.