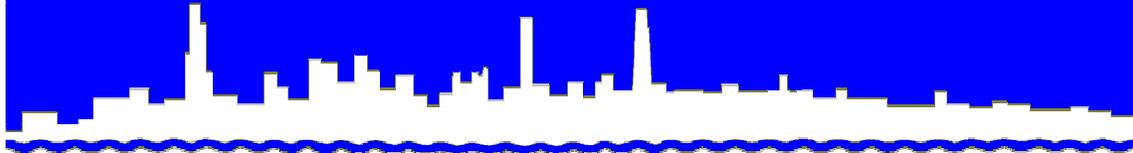


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***RESEARCH AND DEVELOPMENT
DEPARTMENT***

REPORT NO. 06-3

CALUMET WEST SLUDGE DRYING AREA

FOURTH QUARTER 2005

FEBRUARY 2006

February 7, 2006

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 WRP - Solids Drying Area (West), Contract No. 84-270-2P, C175399
IEPA Permit No. 2005-AO-4281, Monitoring Data for October, November, and December 2005

The attached three tables contain the monitoring data for the Calumet Solids Drying Area (West) site for October, November, and December 2005 as required by IEPA Operating Permit No. 2005-AO-4281.

The data reported are as follows:

Table 1, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet Water Reclamation Plant Solids Drying Area (West) Sampled on October 5, 2005

Table 2, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet Water Reclamation Plant Solids Drying Area (West) Sampled on November 2, 2005

Table 3, Analysis of Water from Lysimeters L-1 through L-3 at the Calumet Water Reclamation Plant Solids Drying Area (West) Sampled on December 14, 2005

Mr. S. Alan Keller

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February 7, 2006

Subject: Calumet WRP - Solids Drying Area (West), Contract No.
84-270-2P, C175399
IEPA Permit No. 2005-AO-4281, Monitoring Data for October,
November, and December 2005

No biosolids were placed in the drying area during October, November, and December 2005. No biosolids were removed from the drying area during October, November, and December 2005.

Very truly yours,

Richard Lanyon
Director
Research and Development

RL:GT:spy
Enclosures
cc w/enc.:

Sulski (IEPA)
Records Unit (IEPA)
Quintanilla
Sharma
Kollias
Granato
Cox
Tian
Dennison

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE 1

ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-3
 AT THE CALUMET WATER RECLAMATION PLANT
 SOLIDS DRYING AREA (WEST)
 SAMPLED ON OCTOBER 5, 2005

Parameter	Units	Lysimeter No.		
		L-1	L-2	L-3
pH*		7.4	7.8	7.6
EC	mS/m	272	273	306
Total Dissolved Solids	mg/L	2,756	3,128	3,700
Total Dissolved Organic Carbon	"	1	2	1
Cl ⁻	"	106	<0.6	26.0
SO ₄ ⁼	"	1,561	1,717	2,021
TKN	"	0.31	0.18	0.37
NH ₃ -N	"	0.15	<0.04	0.11
Total P	"	0.04	0.10	0.04
NO ₂ +NO ₃ -N	"	0.109	0.114	0.426
Alkalinity as CaCO ₃	"	138	160	152
Al	"	<0.07	<0.14	<0.07
Ca	"	285	291	341
Cd	"	0.0016	0.0018	0.0003
Cr	"	<0.0007	<0.0014	<0.0007
Cu	"	<0.002	<0.004	<0.002
Fe	"	1.31	0.030	0.030
Hg	µg/L	0.07	0.28	<0.06
K	mg/L	7.3	6.6	6.2
Mg	"	135	160	193
Mn	"	0.069	0.040	0.122
Na	"	193	169	194
Ni	"	<0.002	0.006	<0.002
Pb	"	<0.0009	<0.0018	<0.0009
Zn	"	0.011	0.014	0.009

*pH was measured beyond the 15-minute holding time.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE 2

ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-3
 AT THE CALUMET WATER RECLAMATION PLANT
 SOLIDS DRYING AREA (WEST)
 SAMPLED ON NOVEMBER 2, 2005

Parameter	Units	Lysimeter No.		
		L-1	L-2	L-3
pH*		7.4	7.5	7.5
EC	mS/m	282	292	294
Total Dissolved Solids	mg/L	1,434	NA	NA
Total Dissolved Organic Carbon	"	1	6	2
Cl ⁻	"	81.5	100	27.1
SO ₄ ⁼	"	625	2,986	1,633
TKN	"	0.14	0.28	0.39
NH ₃ -N	"	<0.02	0.04	<0.02
Total P	"	0.08	0.14	0.10
NO ₂ +NO ₃ -N	"	0.184	0.576	0.356
Alkalinity as CaCO ₃	"	88	326	104
Al	"	0.10	<0.14	0.12
Ca	"	338	335	380
Cd	"	<0.0003	<0.0006	<0.0003
Cr	"	<0.0007	<0.0014	<0.0007
Cu	"	<0.002	<0.004	<0.002
Fe	"	1.91	0.028	0.048
Hg	µg/L	<0.06	<0.12	<0.06
K	mg/L	7.8	7.4	6.3
Mg	"	152	177	196
Mn	"	0.082	0.178	0.130
Na	"	199	183	191
Ni	"	<0.002	0.008	<0.002
Pb	"	<0.0009	0.0020	<0.0009
Zn	"	NRR	NRR	NRR

*pH was measured beyond the 15-minute holding time.

NA = No Analysis; insufficient sample volume.

NRR = No reportable result.

METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO

TABLE 3

ANALYSIS OF WATER FROM LYSIMETERS L-1 THROUGH L-3
 AT THE CALUMET WATER RECLAMATION PLANT
 SOLIDS DRYING AREA (WEST)
 SAMPLED ON DECEMBER 14, 2005

Parameter	Units	Lysimeter No.		
		L-1	L-2	L-3
pH*		7.7	7.8	7.8
EC	mS/m	299	276	286
Total Dissolved Solids	mg/L	2,884	3,200	3,388
Total Dissolved Organic Carbon	"	1	2	1
Cl ⁻	"	127	34.5	27.1
SO ₄ ⁼	"	1,632	1,926	2,039
TKN	"	0.46	0.27	0.39
NH ₃ -N	"	0.18	0.02	0.08
Total P	"	0.05	<0.04	0.04
NO ₂ +NO ₃ -N	"	0.084	0.109	0.460
Alkalinity as CaCO ₃	"	157	176	159
Al	"	<0.07	<0.07	<0.07
Ca	"	300	329	350
Cd	"	<0.0003	<0.0003	<0.0003
Cr	"	<0.0007	<0.0007	<0.0007
Cu	"	<0.002	<0.002	<0.002
Fe	"	2.15	0.208	0.030
Hg	µg/L	<0.06	<0.06	<0.06
K	mg/L	6.9	7.3	6.0
Mg	"	142	175	186
Mn	"	0.083	0.446	0.143
Na	"	182	181	184
Ni	"	<0.002	0.006	<0.002
Pb	"	<0.0009	<0.0009	<0.0009
Zn	"	0.008	0.008	0.007

*pH was measured beyond the 15-minute holding time.