Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

MONITORING AND RESEARCH DEPARTMENT

REPORT NO. 09-23

MONTHLY CONTROLLED SOLIDS

DISTRIBUTION REPORT

OCTOBER 2008

APRIL 2009

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

100 EAST ERIE STREET CHICAGO, ILLINOIS 60611-3154 312.751.5190

Louis Kollias, P.E., BCEE
Director of Monitoring and Research
louis.kollias@mwrd.org

April 7, 2009

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: Metropolitan Water Reclamation District of Greater Chicago – Revised Controlled Solids Distribution Program IEPA Permit No. 2005-SC-3793, October 2008

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago - Controlled Solids Distribution Program for October 2008, as required by Illinois Environmental Protection Agency Permit No. 2005-SC-3793.

Sludge flow schematic diagrams for solids processed during October 2008 are shown in Figure 1 - John E. Egan Water Reclamation Plant (WRP), Figure 2 - Calumet WRP, and Figure 3 - Stickney WRP.

Biosolids were distributed to sixteen sites in October. The user information report for these sixteen sites is presented in Table 1, and the analyses of composited biosolids delivered to those sites are presented in Tables 2 - 19.

Very truly yours,

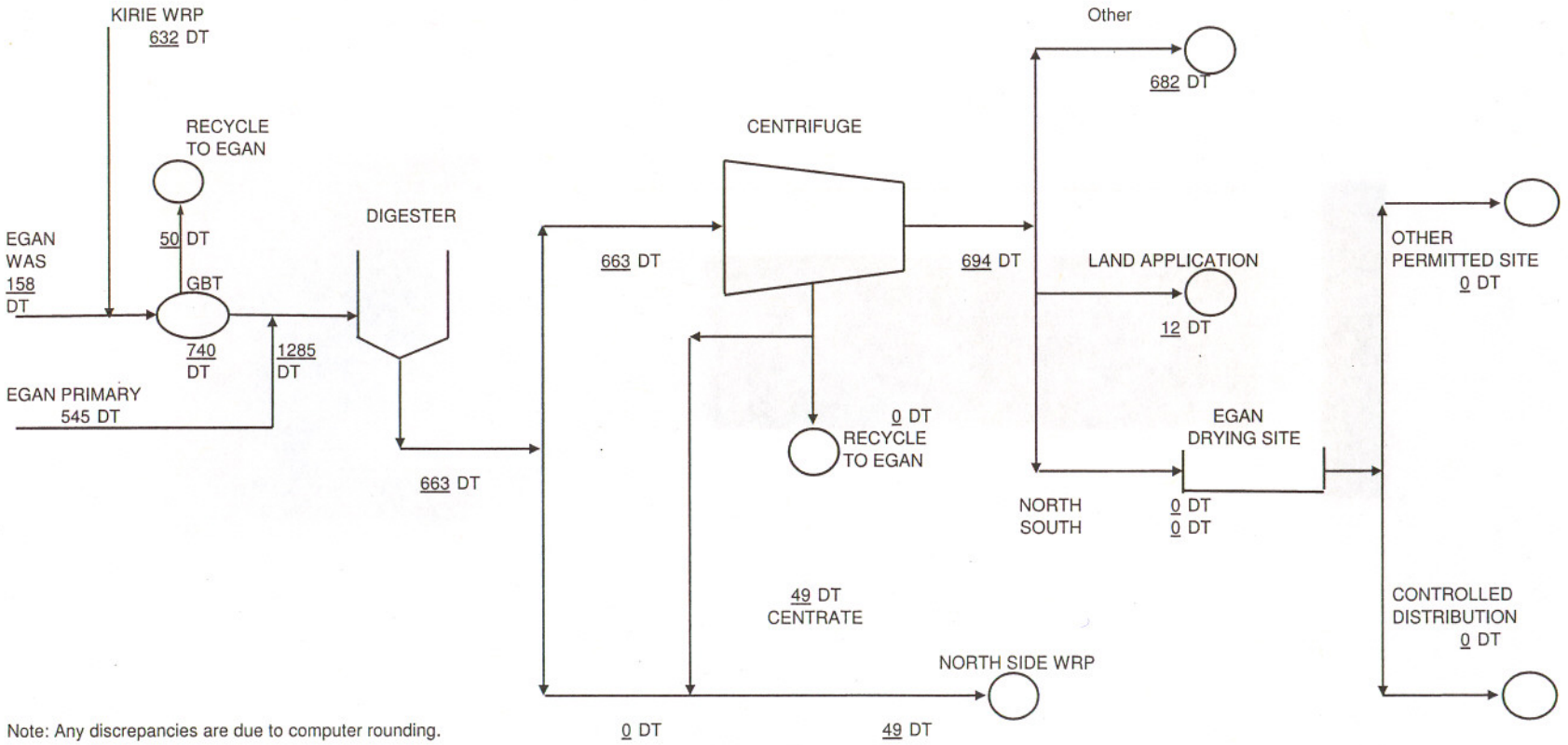
Louis Kollias
Director
Monitoring and Research

LK:KK:kq
Attachments
cc: Aistars (USEPA)
Sulski (IEPA)
Sobanski
Granato/O'Connor/Cox

J.E. EGAN WRP SOLIDS DISTRIBUTION-

December-08

FIGURE 1

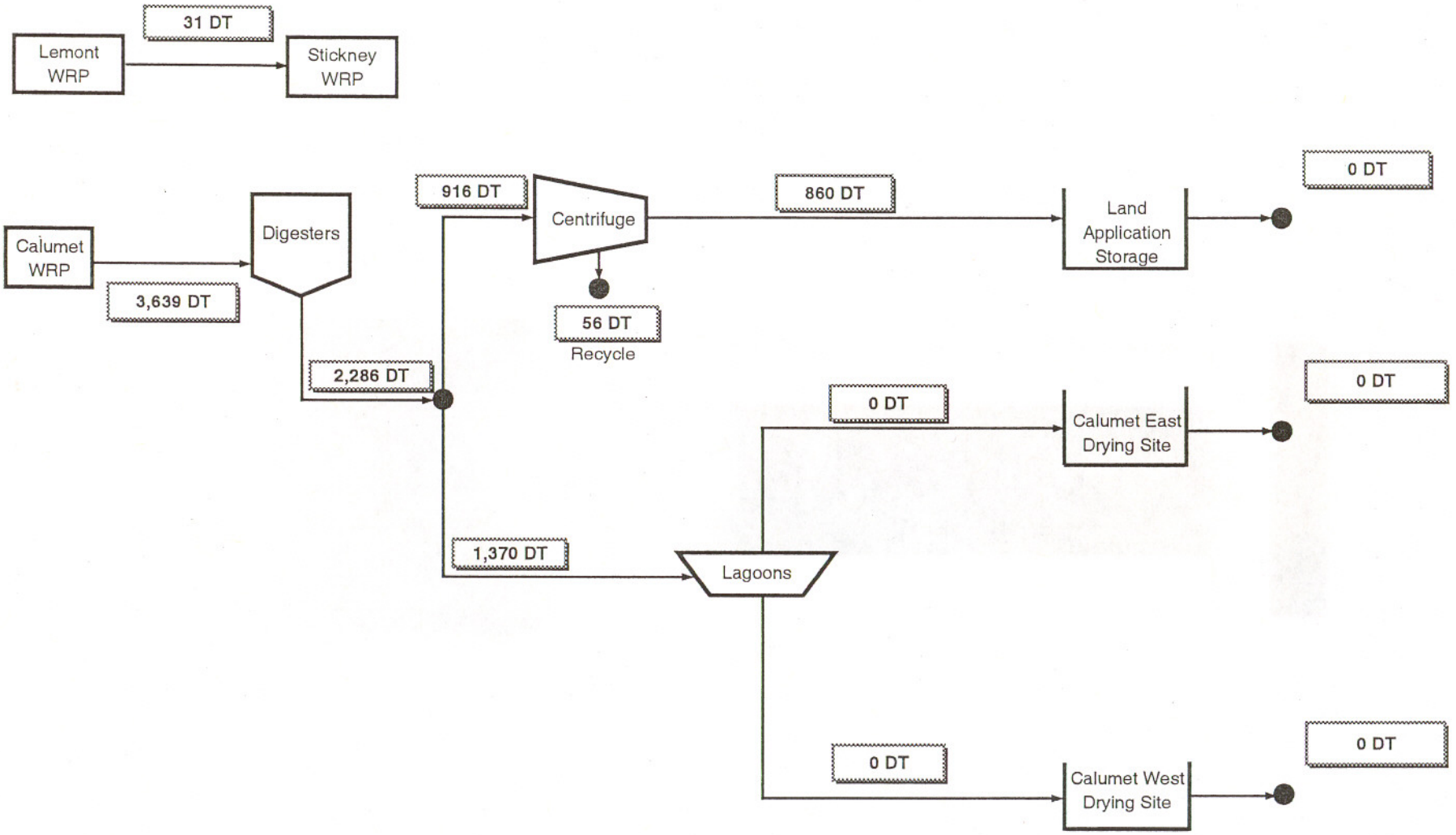


Note: Any discrepancies are due to computer rounding.

Centrifuge draw DT exceeds Centrifuge feed DT by 31 DT because of sample anomalies. Centrate DT are estimated to be approximately 49 DT.

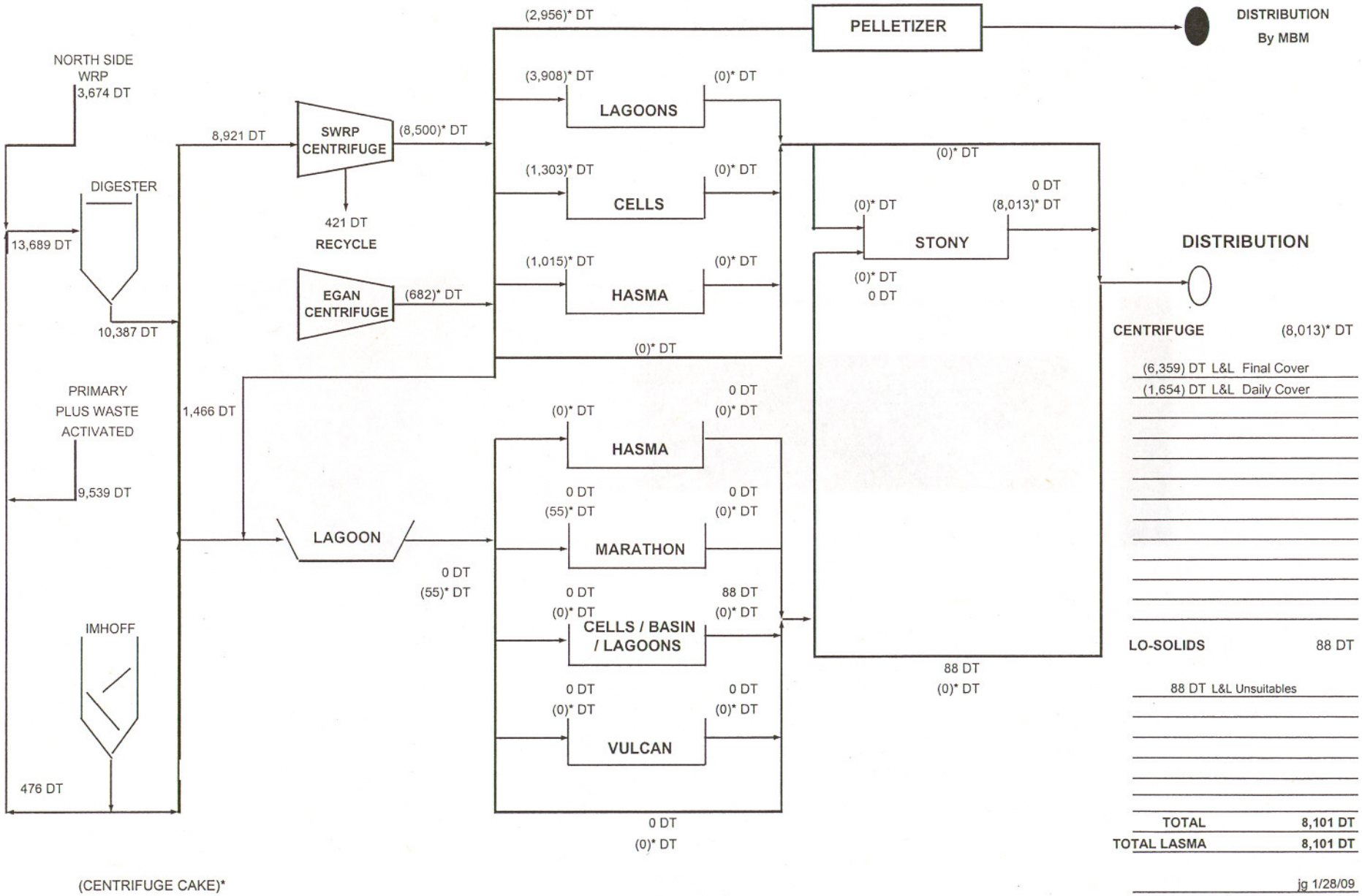
CALUMET WRP SOLIDS DISTRIBUTION - December 2008

Figure 2



STICKNEY WATER RECLAMATION PLANT SOLIDS DISTRIBUTION FOR DECEMBER 2008

Figure 3



\\Eagle\Stickney\M&O\LASMA\JSG Files\2008 EPA Rpt\2008 EPA Flow Diagram.xls

TABLE 1: CONTROLLED SOLIDS DISTRIBUTION PROGRAM USER INFORMATION REPORT FOR AGITATION DRIED ANAEROBICALLY DIGESTED SOLIDS

No.	Name and Address of User	Source	Dates Shipped	Quantity (dry tons) October 2008	Quantity (dry tons) Cumulative 2008	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
1.	Summit Park District 5700 S. Archer Ave. Summit, IL 60501	Calumet WRP- West Drying Area	2, 7, 31	138	338	Nutrient source for turf growth on baseball fields renovation.	9	15.3	Table 2
2.	Coyote Run Golf Course 720 Kedzie Ave. Flossmoor, IL 60422	Calumet WRP- West Drying Area	6, 16, 23, 31	141	141	Nutrient source for turf growth on golf course roughs.	12	11.7	Table 3
3.	Sullivan Park Oak Lawn Park District 99th St. and Kostner Ave. Oak Lawn , IL 60453	Calumet WRP- West Drying Area	6	49.5	49.5	Top dressing as fertilizer for turf growth.	1.5	33.0	Table 4
4.	Richards High School 10601 S. Central Ave. Oak Lawn, IL 60453	Calumet WRP- West Drying Area	6	145	145	Nutrient source for establishing turfgrass on baseball fields.	2	72.7	Table 5
5.	White Pines Golf Club 500 W. Jefferson St. Bensenville, IL 60106	Calumet WRP- West Drying Area	7	68.4	158	Nutrient source for turf growth on golf course roughs.	4	17.1	Table 6
6.	Blue Island Little League 127th St. and Division Rd. Blue Island, IL 60406	Calumet WRP- West Drying Area	17	29.7	29.7	Top dressing as fertilizer for turf around baseball field	2	14.9	Table 7
7.	Centennial Park Blue Island Park District 12901 Wood St. Blue Island, IL 60406	Stickney WRP- Vulcan Drying Area	21	39	167	Top dressing as fertilizer for turf around football field..	2	19.5	Table 8

TABLE 1 (Continued): CONTROLLED SOLIDS DISTRIBUTION PROGRAM USER INFORMATION REPORT
FOR AGITATION DRIED ANAEROBICALLY DIGESTED SOLIDS

No.	Name and Address of User	Source	Dates Shipped	Quantity (dry tons) October 2008	Quantity (dry tons) Cumulative 2008	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
8.	Cypress Cove Park Woodridge Park District 2600 Center Dr. Woodridge, IL 60517	Calumet WRP- West Drying Area	17, 31	27.9	57.9	Nutrient source for enhancing turf growth on soccer field.	6	4.7	Table 9
9.	Glenwoodie Golf Course 19301 State St. Glenwood, IL 60425	Calumet WRP- West Drying Area	17	14.9	14.9	Nutrient source for turf growth on golf course roughs.	2	7.5	Table 10
10.	Memorial Park Midlothian Park District 14500 S. Kostner Ave. Midlothian, IL 60445	Calumet WRP- West Drying Area	23	29.3	29.3	Top dressing as fertilizer for turf around recreational fields.	30	1.0	Table 11
11.	Veterans Park Westmont Park District 350 W. 59th St. Westmont, IL 60554	Calumet WRP- West Drying Area	31	67.0	67.0	Top dressing as fertilizer for established turf around recreational fields.	6	11.2	Table 12
12.	E. C. Rizzi & Associates Tree Nursery Fraser Rd. and Rt. 59 Plainfield, IL 60544	Calumet WRP- West Drying Area	31	27.5	27.5	Blended with soil as nutrient source to grow trees in nursery.	1	27.5	Table 13
13.	Chicago Park District 541 N. Fairbanks Ave. Chicago, IL 60611	Calumet WRP- West Drying Area	17, 18	1,104	1,104	Blended with sediment as nutrient source to establish turfgrass for site reclamation.	8	138	Table 14

TABLE 1 (Continued): CONTROLLED SOLIDS DISTRIBUTION PROGRAM USER INFORMATION REPORT
FOR AGITATION DRIED ANAEROBICALLY DIGESTED SOLIDS

No.	Name and Address of User	Source	Dates Shipped	Quantity (dry tons) October 2008	Quantity (dry tons) Cumulative 2008	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
	Chicago Park District (Cont.)	Stickney WRP-LASMA & Vulcan Drying Areas	13, 18	754	1,858	Blended with sediment as nutrient source to establish turfgrass for site reclamation.	5	151	Table 15
14.	Joliet Country Club 1009 Spencer Rd. Joliet, IL 60433	Stickney WRP-LASMA Drying Area	7	36	36	Nutrient source for turf growth growth on golf course roughs, practice tee and fairways.	4	9.0	Table 16
15.	Volunteer Park Village of Romeoville 1100 Murphy Dr. Romeoville, IL 60441	Stickney WRP-Vulcan Drying Area	21	137	429	Soil amendment for turf growth on soccer fields.	3	45.7	Table 17
16.	Cinder Ridge Golf Course 24801 Lakepoint Dr. Wilmington, IL 60481	Stickney WRP-Vulcan Drying Area	1, 2	226	429	Top dressing as fertilizer for turf growth on golf course.	32	7.1	Table 18
17.	Metropolitan Water Reclamation District of Greater Chicago 3500 N. Howard St. Skokie, IL 60076	Stickney WRP-Vulcan Drying Area	21	63	63	Soil amendment for reclamation of nutrient-deficient land.	0.5	126	Table 19

TABLE 2: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE SUMMIT PARK DISTRICT ATHLETIC FIELD, LOCATED AT 5700 S. ARCHER AVE., SUMMIT, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	72.7
Total Volatile Solids	"	45.4
Volatile Acids as Acetic Acid	mg/dry kg	262
Total Kjeldahl-N	"	25,145
NH_3-N	"	1,310
Total P	"	24,810
K	"	3,837
Cd	"	4.1
Cr	"	103
Cu	"	468
Pb	"	121
Hg	"	1.31
Mo	"	16.1
As	"	10.1
Mn	"	1,064
Ni	"	39.9
Se	"	5.4
Zn	"	1,132

[1]Results based on three samples.

TABLE 3: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT COYOTE RUN GOLF COURSE LOCATED AT 720 KEDZIE AVE., FLOSSMOOR, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.1
Total Solids	%	69.0
Total Volatile Solids	"	40.7
Volatile Acids as Acetic Acid	mg/dry kg	212
Total Kjeldahl-N	"	26,536
NH_3-N	"	1,541
Total P	"	25,474
K	"	4,150
Cd	"	4.1
Cr	"	105
Cu	"	464
Pb	"	120
Hg	"	1.12
Mo	"	16.1
As	"	9.6
Mn	"	1,059
Ni	"	40.7
Se	"	5.6
Zn	"	1,121

[1]Results based on four samples.

TABLE 4: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT SULLIVAN PARK LOCATED AT 99TH ST. AND KOSTNER AVE., OAK LAWN, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	78.0
Total Volatile Solids	"	41.1
Volatile Acids as Acetic Acid	mg/dry kg	341
Total Kjeldahl-N	"	24,819
NH_3-N	"	913
Total P	"	26,626
K	"	4,992
Cd	"	4.20
Cr	"	111.2
Cu	"	462.0
Pb	"	120
Hg	"	1.45
Mo	"	16.7
As	"	9.2
Mn	"	1,049
Ni	"	42.6
Se	"	5.1
Zn	"	1,109

[1]Results based on one sample.

TABLE 5: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE RICHARDS HIGH SCHOOL BASEBALL FIELD LOCATED AT 10601 S. CENTRAL AVE., OAK LAWN, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	78.0
Total Volatile Solids	"	41.1
Volatile Acids as Acetic Acid	mg/dry kg	341
Total Kjeldahl-N	"	24,819
NH_3-N	"	913
Total P	"	26,626
K	"	4,992
Cd	"	4.2
Cr	"	111
Cu	"	462
Pb	"	120
Hg	"	1.45
Mo	"	16.7
As	"	9.2
Mn	"	1,049
Ni	"	42.6
Se	"	5.1
Zn	"	1,109

[1]Results based on one sample.

TABLE 6: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT WHITE PINES GOLF CLUB, LOCATED AT 500 W. JEFFERSON ST., BENSENVILLE, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	78.0
Total Volatile Solids	"	41.1
Volatile Acids as Acetic Acid	mg/dry kg	341
Total Kjeldahl-N	"	24,819
NH_3-N	"	913
Total P	"	26,626
K	"	4,992
Cd	"	4.2
Cr	"	111
Cu	"	462
Pb	"	120
Hg	"	1.45
Mo	"	16.7
As	"	9.2
Mn	"	1,049
Ni	"	42.6
Se	"	5.1
Zn	"	1,109

[1]Results based on one sample.

TABLE 7: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE BLUE ISLAND LITTLE LEAGUE BASEBALL FIELD LOCATED AT 127TH ST. AND DIVISION RD., BLUE ISLAND, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.1
Total Solids	%	70.4
Total Volatile Solids	"	40.6
Volatile Acids as Acetic Acid	mg/dry kg	85
Total Kjeldahl-N	"	27,422
NH_3-N	"	1,269
Total P	"	24,257
K	"	3,897
Cd	"	4.4
Cr	"	110
Cu	"	471
Pb	"	123
Hg	"	0.85
Mo	"	16.0
As	"	10.8
Mn	"	1,085
Ni	"	42.7
Se	"	5.3
Zn	"	1,165

[1]Results based on one sample.

TABLE 8: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT CENTENNIAL PARK LOCATED AT 12901 WOOD ST., BLUE ISLAND, IL, FROM THE STICKNEY WATER RECLAMATION PLANT VULCAN DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.5
Total Solids	%	59.5
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	466
Total Kjeldahl-N	"	27,633
NH_3-N	"	3,705
Total P	"	25,062
K	"	2,114
Cd	"	4.1
Cr	"	184
Cu	"	446
Pb	"	150
Hg	"	1.07
Mo	"	14.3
As	"	<10.0
Mn	"	578
Ni	"	50.3
Se	"	11.6
Zn	"	961

[1]Results based on one sample.

TABLE 9: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT CYPRESS COVE PARK LOCATED AT 8325 S. JANES AVE., WOODRIDGE, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.3
Total Solids	%	66.9
Total Volatile Solids	"	40.3
Volatile Acids as Acetic Acid	mg/dry kg	182
Total Kjeldahl-N	"	26,359
NH_3-N	"	1,812
Total P	"	24,978
K	"	3,570
Cd	"	4.3
Cr	"	106
Cu	"	476
Pb	"	123
Hg	"	1.00
Mo	"	16.2
As	"	10.7
Mn	"	1,085
Ni	"	41.1
Se	"	6.4
Zn	"	1,163

[1]Results based on two samples.

TABLE 10: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT GLENWOODIE GOLF COURSE LOCATED AT 19301 STATE ST., GLENWOOD, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.1
Total Solids	%	70.4
Total Volatile Solids	"	40.6
Volatile Acids as Acetic Acid	mg/dry kg	85
Total Kjeldahl-N	"	27,422
NH_3-N	"	1,269
Total P	"	24,257
K	"	3,897
Cd	"	4.4
Cr	"	110
Cu	"	471
Pb	"	123
Hg	"	0.85
Mo	"	16.0
As	"	10.8
Mn	"	1,085
Ni	"	42.7
Se	"	5.3
Zn	"	1,165

[1]Results based on one sample.

TABLE 11: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT MEMORIAL PARK LOCATED AT 145TH ST. AND KEDZIE AVE., MIDLOTHIAN, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.0
Total Solids	%	64.1
Total Volatile Solids	"	41.3
Volatile Acids as Acetic Acid	mg/dry kg	141
Total Kjeldahl-N	"	28,608
NH_3-N	"	1,627
Total P	"	25,315
K	"	4,468
Cd	"	3.7
Cr	"	97
Cu	"	441
Pb	"	112
Hg	"	1.05
Mo	"	15.4
As	"	8.0
Mn	"	1,018
Ni	"	38.0
Se	"	4.3
Zn	"	1,050

[1]Results based on one sample.

TABLE 12: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT VETERANS PARK LOCATED AT 350 W. 59TH ST., WESTMONT, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	63.3
Total Volatile Solids	"	40.0
Volatile Acids as Acetic Acid	mg/dry kg	280
Total Kjeldahl-N	"	25,295
NH_3-N	"	2,356
Total P	"	25,699
K	"	3,244
Cd	"	4.1
Cr	"	101
Cu	"	480
Pb	"	123
Hg	"	1.15
Mo	"	16.4
As	"	10.5
Mn	"	1,084
Ni	"	39.4
Se	"	7.6
Zn	"	1,161

[1]Results based on one sample.

TABLE 13: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE E. C. RIZZI & ASSOCIATES TREE NURSERY LOCATED AT RT. 59 AND FRASER RD., PLAINFIELD, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.5
Total Solids	%	63.3
Total Volatile Solids	"	40.0
Volatile Acids as Acetic Acid	mg/dry kg	280
Total Kjeldahl-N	"	25,295
NH_3-N	"	2,356
Total P	"	25,699
K	"	3,244
Cd	"	4.1
Cr	"	101
Cu	"	480
Pb	"	123
Hg	"	1.15
Mo	"	16.4
As	"	10.5
Mn	"	1,084
Ni	"	39.4
Se	"	7.6
Zn	"	1,161

[1]Results based on one sample.

TABLE 14: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE CHICAGO PARK DISTRICT PARK 23, LOCATED BETWEEN 87TH & 89TH STS. ALONG THE LAKE FRONT, CHICAGO, IL, FROM THE CALUMET WEST DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		7.4
Total Solids	%	65.5
Total Volatile Solids	"	39.9
Volatile Acids as Acetic Acid	mg/dry kg	153
Total Kjeldahl-N	"	27,357
NH_3-N	"	1,886
Total P	"	24,040
K	"	4,171
Cd	"	4.4
Cr	"	110
Cu	"	469
Pb	"	124
Hg	"	1.28
Mo	"	16.4
As	"	11.0
Mn	"	1,211
Ni	"	42.8
Se	"	5.2
Zn	"	1,165

[1]Results based on three samples.

TABLE 15: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE CHICAGO PARK DISTRICT PARK 23, LOCATED BETWEEN 87TH & 89TH STS. ALONG THE LAKE FRONT, CHICAGO, IL, FROM THE STICKNEY WATER RECLAMATION PLANT LASMA & VULCAN DRYING AREAS DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.4
Total Solids	%	63.7
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	255
Total Kjeldahl-N	"	21,434
NH_3-N	"	2,715
Total P	"	18,235
K	"	2,060
Cd	"	4.1
Cr	"	177
Cu	"	439
Pb	"	154
Hg	"	1.21
Mo	"	14.0
As	"	<10.0
Mn	"	554
Ni	"	48.2
Se	"	14.4
Zn	"	967

[1]Results based on two samples.

TABLE 16: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE JOLIET COUNTRY CLUB LOCATED AT 1009 SPENCER RD., JOLIET, IL, FROM THE STICKNEY WATER RECLAMATION PLANT LASMA DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.9
Total Solids	%	83.2
Total Volatile Solids	"	41.8
Volatile Acids as Acetic Acid	mg/dry kg	130
Total Kjeldahl-N	"	16,082
NH_3-N	"	2,714
Total P	"	11,362
K	"	3,221
Cd	"	4.3
Cr	"	223
Cu	"	434
Pb	"	168
Hg	"	1.36
Mo	"	16.4
As	"	<10.0
Mn	"	571
Ni	"	47.5
Se	"	11.2
Zn	"	1,007

[1]Results based on one sample.

TABLE 17: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT VOLUNTEER PARK LOCATED AT 1100 MURPHY DR., ROMEOVILLE, IL, FROM THE STICKNEY WATER RECLAMATION PLANT VULCAN DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.0
Total Solids	%	68.3
Total Volatile Solids	"	41.0
Volatile Acids as Acetic Acid	mg/dry kg	88
Total Kjeldahl-N	"	28,294
NH_3-N	"	1,310
Total P	"	25,028
K	"	3,412
Cd	"	4.2
Cr	"	186
Cu	"	424
Pb	"	153
Hg	"	1.28
Mo	"	17.0
As	"	<10.0
Mn	"	533
Ni	"	47.9
Se	"	12.6
Zn	"	963

[1]Results based on one sample.

TABLE 18: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE CINDER RIDGE GOLF COURSE LOCATED AT 24801 LAKEPOINT DR., WILMINGTON, IL, FROM THE STICKNEY WATER RECLAMATION PLANT VULCAN DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.5
Total Solids	%	59.5
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	466
Total Kjeldahl-N	"	27,633
NH_3-N	"	3,705
Total P	"	25,062
K	"	2,114
Cd	"	4.1
Cr	"	184
Cu	"	446
Pb	"	150
Hg	"	1.07
Mo	"	14.3
As	"	<10.0
Mn	"	578
Ni	"	50.3
Se	"	11.6
Zn	"	961

[1]Results based on one sample.

TABLE 19: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO LOCATED AT 3500 N. HOWARD ST., FROM THE STICKNEY WATER RECLAMATION PLANT VULCAN DRYING AREA DURING OCTOBER 2008

Constituent	Units	Concentration
pH		6.5
Total Solids	%	59.5
Total Volatile Solids	"	39.2
Volatile Acids as Acetic Acid	mg/dry kg	466
Total Kjeldahl-N	"	27,633
NH_3-N	"	3,705
Total P	"	25,062
K	"	2,114
Cd	"	4.1
Cr	"	184
Cu	"	446
Pb	"	150
Hg	"	1.07
Mo	"	14.3
As	"	<10.0
Mn	"	578
Ni	"	50.3
Se	"	11.6
Zn	"	961

[1]Results based on one sample.