Metropolitan Water Reclamation District of Greater Chicago

MONITORING AND RESEARCH DEPARTMENT

REPORT NO. 10-02

MONTHLY CONTROLLED SOLIDS

DISTRIBUTION REPORT

SEPTEMBER 2009

JANUARY 2010

Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-3154 312.751.5190

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Louis Kollias, P.E., BCEE
Director of Monitoring and Research
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January 4, 2010

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 – Controlled Solids Distribution Program Illinois Environmental Protection Agency Permit No. 2005-SC-3793, September 2009

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago - Controlled Solids Distribution Program for September 2009, as required by Illinois Environmental Protection Agency Permit No. 2005-SC-3793

Sludge flow schematic diagrams for solids processed during September 2009 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 thirteen sites in September. The user information report for those sites are presented in Table 1, and the analyses of composited biosolids delivered to those sites are presented in Tables 2 - 14.

Very truly yours,

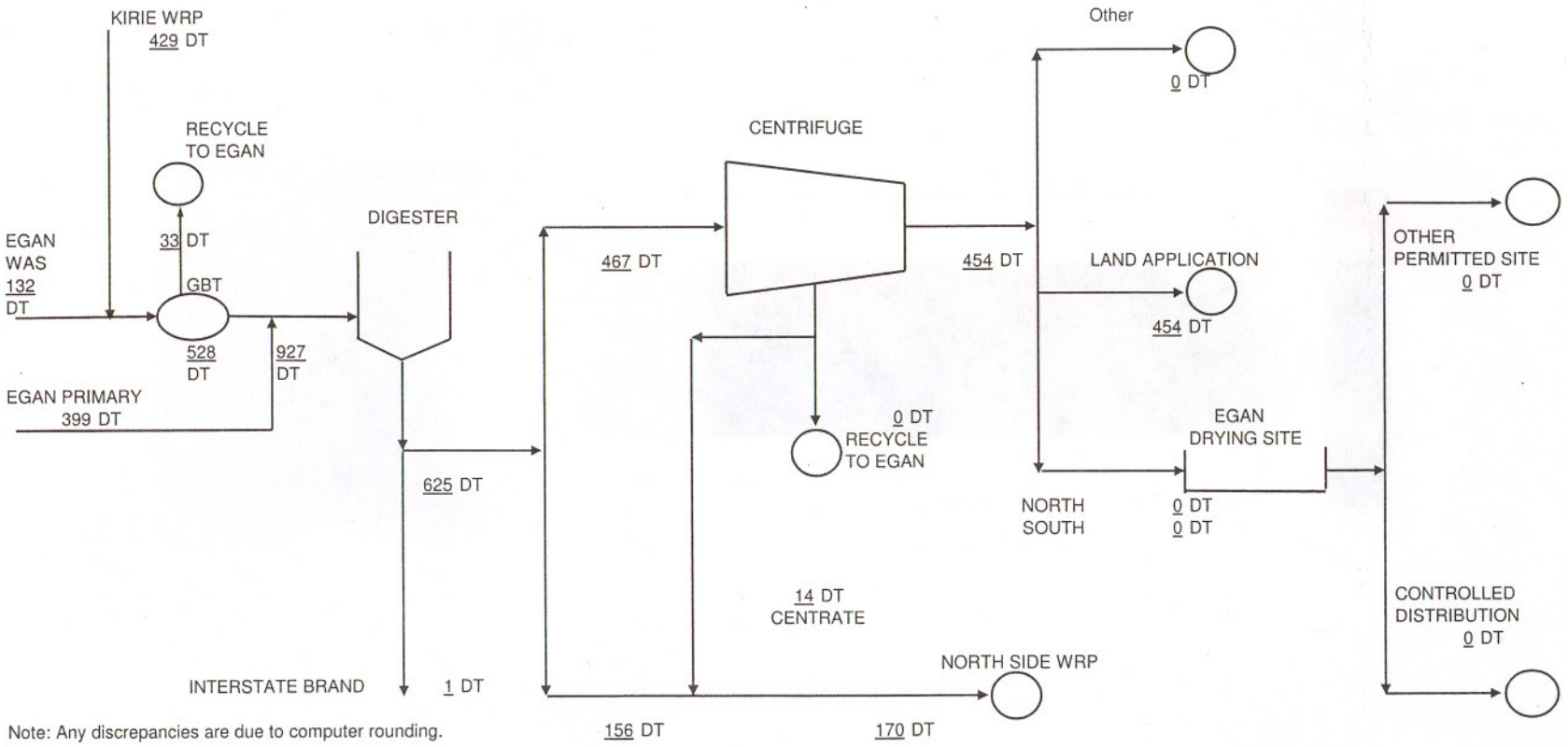
Louis Kollias
Director
Monitoring and Research

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

J.E. EGAN WRP SOLIDS DISTRIBUTION-

September-09

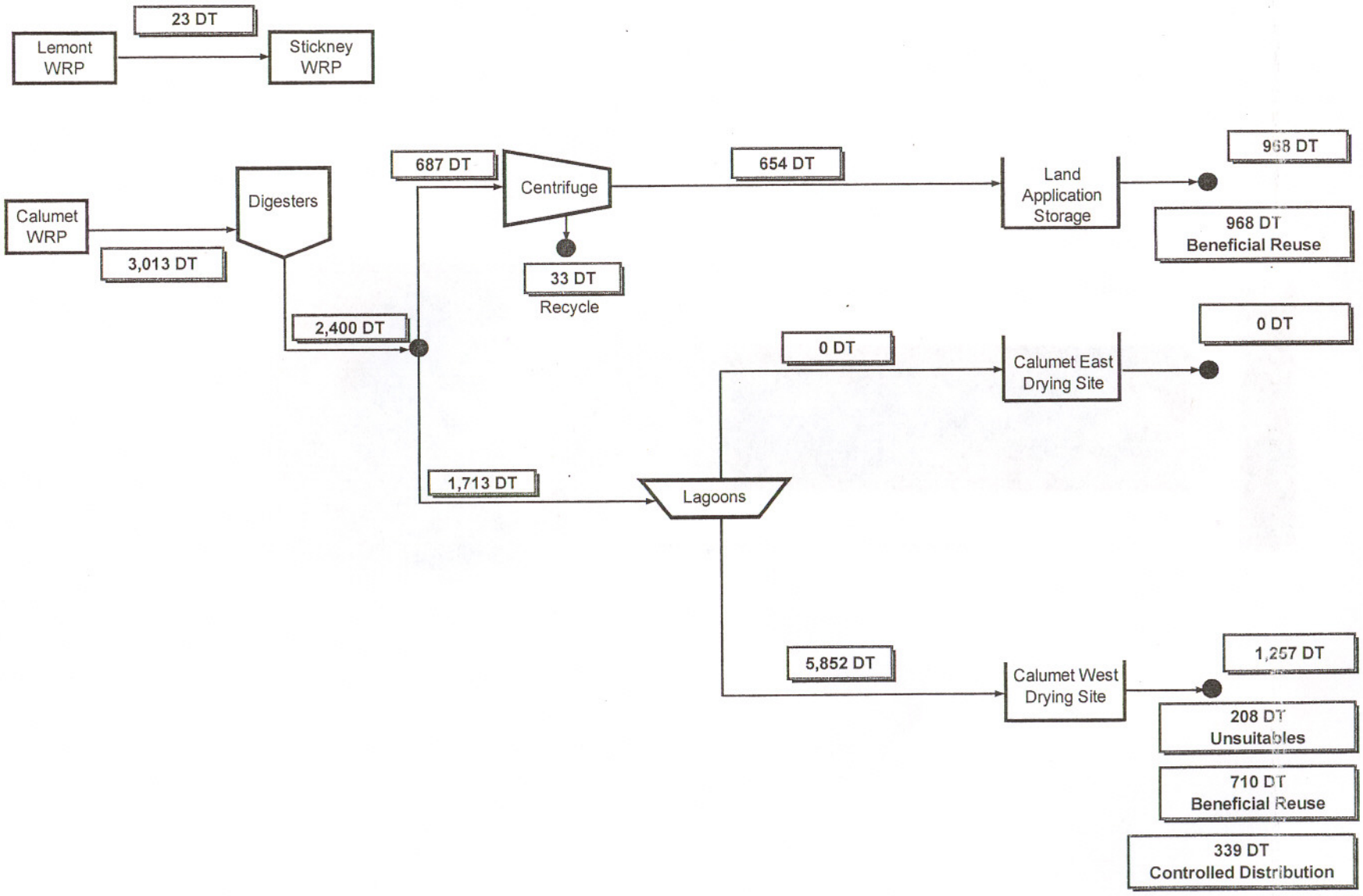
FIGURE 1



Note: Any discrepancies are due to computer rounding.

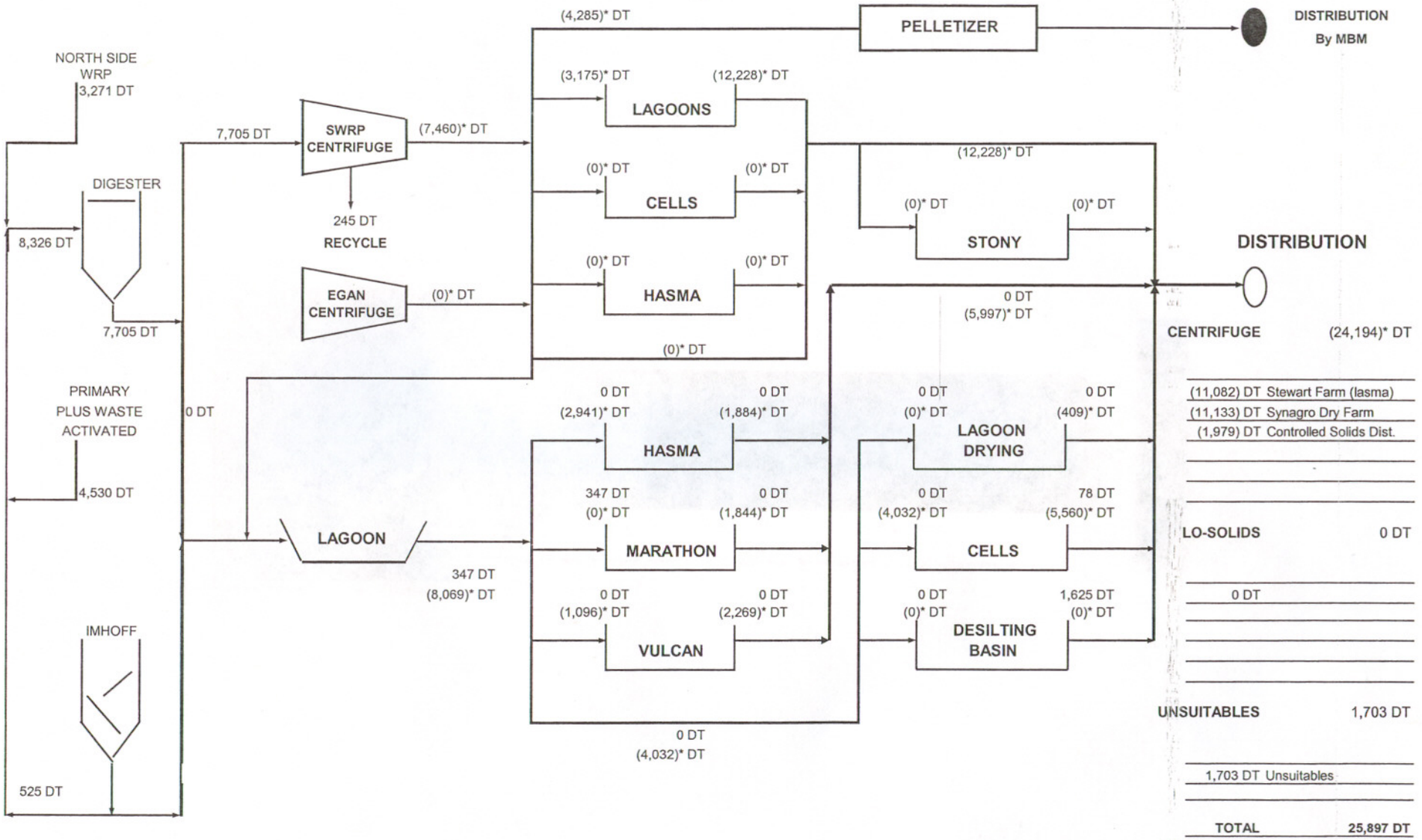
CALUMET WRP SOLIDS DISTRIBUTION - September 2009

Figure 2



STICKNEY WATER RECLAMATION PLANT SOLIDS DISTRIBUTION FOR SEPTEMBER 2009

Figure 3



\\Eagle\Stickney\M&O\LASMA\JSG Files\2009 EPA Rpt. - Monthly\2009 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	Quantity (dry tons) 2009 September	Quantity (dry tons) 2009 Cumulative	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
1.	Cinder Ridge 24801 Lakepoint Dr. Wilmington, IL 60481	Calumet WRP[1] - West drying area	16, 17, 18	159.3	159.3	Topdressing as fertilizer for turf growth on golf course	12.0	13.3	Table 2
2.	Turf Care Landscaping, Inc. 8126 S. Hoyne Ave. Chicago, IL 60628	Calumet WRP - West drying area	16, 17	179.8	179.8	Biosolids amended soil to cover burlapped roots of trees	2.0	89.9	Table 3
3.	Jane Adams Middle School 905 Lily Cache Ln. Bolingbrook, IL 60440	Stickney WRP - HASMA drying area	5	374.7	374.7	Soil amendment and nutrient source for turf	5.0	74.9	Table 4
4.	Lombard Park District 227 W. Parkside Ave. Lombard, IL 60148	Stickney WRP - HASMA drying area	9	149.2	149.2	Topdressing as fertilizer for turf growth on soccer fields and other parks	8.0	18.6	Table 5
5.	Heritage Bluffs Golf Course 24355 W. Bluff Rd. Channahon, IL 60410	Stickney WRP - HASMA drying area	10	31.9	31.9	Topdressing as fertilizer for turf growth on golf course	2.5	12.8	Table 6
6.	Summit Park District 5700 S. Archer Ave. Summit, IL 60501	Stickney WRP - HASMA drying area	10	102	102	Topdressing as fertilizer for turf growth on established athletic fields	8.0	12.8	Table 7
7.	River Forest Park District Priory Park 7354 Division St. River Forest, IL 60305	Stickney WRP - HASMA drying area	10	29.0	29.0	Topdressing as fertilizer for turf growth on established athletic fields	4.0	7.2	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	Quantity (dry tons) 2009 September	Quantity (dry tons) 2009 Cumulative	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
8.	August Lukso Farm 22807 S. 80th Ave. Frankfort, IL 60423	Stickney WRP - HASMA drying area	11	17.2	17.2	Fertilizer for turf growth on farm landscaping	3.0	5.7	Table 9
9.	Frankfort Park District Commissioners Park - 80th Ave. & Laraway Rd. Main Park - 400 W. Nebraska Ave. Grand Prairie Park - Nebraska & Elsner Rds. Lakeview Estates Park - Madeline & 80th Avenues Frankfort, IL 60423	Stickney WRP - HASMA drying area	9, 10, 11	493	493	Topdressing as fertilizer for turf growth on recreational fields	50.0	9.9	Table 10
10.	Maywood Prairie Path Project I 1st, 11th and 17th Avenues Maywood, IL 60153	Stickney WRP - LASMA drying area	15, 17	44.8	44.8	Soil amendment to establish turf/landscape plants	0.2	224.0	Table 11
11.	Chicago Highlands Golf Club 22nd and 31st Streets Westchester, IL 60154	Stickney WRP - HASMA & LASMA drying areas	10, 11, 15, 24	422	422	Soil amendment to establish new turf growth in rough areas	6.0	54.8	Table 12
12.	Midlothian Park District Howie Minas Field 144 St. and Homan Ave. Midlothian, IL 60445	Stickney WRP - LASMA drying area	28, 30	26.6	26.6	Topdressing as fertilizer for turf growth on baseball fields	3.0	8.9	Table 13

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

No.	Name and Address of User	Source	Dates	Quantity (dry tons) 2009 September	Quantity (dry tons) 2009 Cumulative	Biosolids Use	Application Area (acres)	Application Rate (tons/acre)	Analysis
13.	Greener Gardens Sod Farm 9841 W. Dralle Rd. Frankfort, IL 60423	Stickney WRP - LASMA drying area	30	289	289	Nutrient source for sod farm	20.0	14.4	Table 14

[1]WRP – Water Reclamation Plant.

TABLE 2: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT CINDER RIDGE, 24801 LAKE POINT DR., WILMINGTON, IL, FROM THE CALUMET WATER RECLAMATION PLANT WEST DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.6
Total Solids	%	84.5
Total Volatile Solids	"	41.0
Volatile Acids as Acetic Acid	mg/dry kg	9
Total Kjeldahl-N	"	26,031
NH_3-N	"	1,011
Total P	"	16,649
K	"	2,713
Cd	"	6.7
Cr	"	91
Cu	"	491
Pb	"	116
Hg	"	1.18
Mo	"	15.5
As	"	9.3
Mn	"	1,020
Ni	"	40.3
Se	"	6.4
Zn	"	1,117

[1]Results based on one sample.

TABLE 3: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT TURF CARE LANDSCAPING, INC., 8126 S. HOYNE AVE., CHICAGO, IL, FROM THE CALUMET WATER RECLAMATION PLANT WEST DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.6
Total Solids	%	84.5
Total Volatile Solids	"	41.0
Volatile Acids as Acetic Acid	mg/dry kg	9
Total Kjeldahl-N	"	26,031
NH_3-N	"	1,011
Total P	"	16,649
K	"	2,713
Cd	"	6.7
Cr	"	91
Cu	"	491
Pb	"	116
Hg	"	1.18
Mo	"	15.5
As	"	9.3
Mn	"	1,020
Ni	"	40.3
Se	"	6.4
Zn	"	1,117

[1]Results based on one sample.

TABLE 4: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT JANE ADAMS MIDDLE SCHOOL, 905 LILY CACHE LN., BOLINGBROOK, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.1
Total Solids	%	62.8
Total Volatile Solids	"	37.7
Volatile Acids as Acetic Acid	mg/dry kg	573
Total Kjeldahl-N	"	21,127
NH_3-N	"	1,794
Total P	"	18,672
K	"	2,536
Cd	"	3.8
Cr	"	165
Cu	"	441
Pb	"	132
Hg	"	1.35
Mo	"	13.4
As	"	<10.0
Mn	"	543
Ni	"	46.3
Se	"	<8.0
Zn	"	955

[1]Results based on two samples.

TABLE 5: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE LOMBARD PARK DISTRICT, 227 W. PARKSIDE AVE., LOMBARD, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	71.4
Total Volatile Solids	"	36.2
Volatile Acids as Acetic Acid	mg/dry kg	345
Total Kjeldahl-N	"	27,086
NH_3-N	"	1,337
Total P	"	24,337
K	"	2,209
Cd	"	3.6
Cr	"	156
Cu	"	423
Pb	"	125
Hg	"	1.29
Mo	"	10.4
As	"	<10.0
Mn	"	536
Ni	"	43.0
Se	"	<8.0
Zn	"	917

[1]Results based on one sample.

TABLE 5: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE LOMBARD PARK DISTRICT, 227 W. PARKSIDE AVE., LOMBARD, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	71.4
Total Volatile Solids	"	36.2
Volatile Acids as Acetic Acid	mg/dry kg	345
Total Kjeldahl-N	"	27,086
NH_3-N	"	1,337
Total P	"	24,337
K	"	2,209
Cd	"	3.6
Cr	"	156
Cu	"	423
Pb	"	125
Hg	"	1.29
Mo	"	10.4
As	"	<10.0
Mn	"	536
Ni	"	43.0
Se	"	<8.0
Zn	"	917

[1]Results based on one sample.

TABLE 6: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT HERITAGE BLUFFS GOLF COURSE, 24355 W. BLUFF RD., CHANNAHON, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	77.3
Total Volatile Solids	"	39.7
Volatile Acids as Acetic Acid	mg/dry kg	248
Total Kjeldahl-N	"	17,183
NH_3-N	"	1,883
Total P	"	18,335
K	"	2,135
Cd	"	3.8
Cr	"	157
Cu	"	429
Pb	"	125
Hg	"	1.10
Mo	"	10.7
As	"	<10.0
Mn	"	533
Ni	"	42.8
Se	"	<8.0
Zn	"	920

[1]Results based on two samples.

TABLE 7: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE SUMMIT PARK DISTRICT, 5700 S. ARCHER AVE., SUMMIT, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	77.3
Total Volatile Solids	"	39.7
Volatile Acids as Acetic Acid	mg/dry kg	248
Total Kjeldahl-N	"	17,183
NH_3-N	"	1,883
Total P	"	18,335
K	"	2,135
Cd	"	3.8
Cr	"	157
Cu	"	429
Pb	"	125
Hg	"	1.10
Mo	"	10.7
As	"	<10.0
Mn	"	533
Ni	"	42.8
Se	"	<8.0
Zn	"	920

[1]Results based on two samples.

TABLE 8: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE RIVER FOREST PARK DISTRICT, PRIORY PARK, RIVER FOREST, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	76.1
Total Volatile Solids	"	39.6
Volatile Acids as Acetic Acid	mg/dry kg	279
Total Kjeldahl-N	"	21,883
NH_3-N	"	2,219
Total P	"	25,020
K	"	1,997
Cd	"	3.7
Cr	"	155
Cu	"	419
Pb	"	122
Hg	"	1.19
Mo	"	10.4
As	"	<10.0
Mn	"	541
Ni	"	41.6
Se	"	<8.0
Zn	"	909

[1]Results based on one sample.

TABLE 9: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT AUGUST LUKSO FARM, 22807 S. 80th AVE., FRANKFORT, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	78.5
Total Volatile Solids	"	39.8
Volatile Acids as Acetic Acid	mg/dry kg	217
Total Kjeldahl-N	"	12,482
NH_3-N	"	1,548
Total P	"	11,649
K	"	2,273
Cd	"	4.0
Cr	"	159
Cu	"	439
Pb	"	127
Hg	"	1.01
Mo	"	11.1
As	"	<10.0
Mn	"	526
Ni	"	44.0
Se	"	<8.0
Zn	"	931

[1]Results based on one sample.

TABLE 10: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE FRANKFORT PARK DISTRICT, COMMISSIONERS, MAIN, GRAND PRAIRIE, AND LAKEVIEW ESTATES PARKS, FRANKFORT, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.4
Total Solids	%	75.3
Total Volatile Solids	"	38.6
Volatile Acids as Acetic Acid	mg/dry kg	280
Total Kjeldahl-N	"	20,484
NH_3-N	"	1,701
Total P	"	20,335
K	"	2,160
Cd	"	3.8
Cr	"	157
Cu	"	427
Pb	"	125
Hg	"	1.16
Mo	"	10.6
As	"	<10.0
Mn	"	534
Ni	"	10.6
Se	"	<8.0
Zn	"	919

[1]Results based on three samples.

TABLE 11: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE MAYWOOD PRAIRIE PATH PROJECT I, 1st, 11th & 17th AVENUES, MAYWOOD, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.5
Total Solids	%	83.4
Total Volatile Solids	"	34.6
Volatile Acids as Acetic Acid	mg/dry kg	125
Total Kjeldahl-N	"	26,336
NH_3-N	"	2,136
Total P	"	24,906
K	"	3,673
Cd	"	4.2
Cr	"	169
Cu	"	473
Pb	"	132
Hg	"	1.35
Mo	"	14.9
As	"	<10.0
Mn	"	493
Ni	"	49.1
Se	"	<8.0
Zn	"	954

[1]Results based on one sample.

TABLE 12: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT CHICAGO HIGHLANDS GOLF CLUB, 22ND AND 31ST STREETS, WESTCHESTER, IL, FROM THE STICKNEY WATER RECLAMATION PLANT HASMA & LASMA DRYING AREAS DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		6.7
Total Solids	%	79.7
Total Volatile Solids	"	37.4
Volatile Acids as Acetic Acid	mg/dry kg	296
Total Kjeldahl-N	"	18,573
NH_3-N	"	2,296
Total P	"	17,150
K	"	2,902
Cd	"	4.1
Cr	"	159
Cu	"	441
Pb	"	127
Hg	"	1.12
Mo	"	12.3
As	"	<10.0
Mn	"	510
Ni	"	45.1
Se	"	<8.0
Zn	"	910

[1]Results based on three samples.

TABLE 13: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT THE MIDLOTHIAN PARK DISTRICT, HOWIE MINAS FIELD, 144 ST. & HOMAN AVE., MIDLOTHIAN, IL, FROM THE STICKNEY WATER RECLAMATION PLANT LASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		7.2
Total Solids	%	62.9
Total Volatile Solids	"	41.4
Volatile Acids as Acetic Acid	mg/dry kg	858
Total Kjeldahl-N	"	30,452
NH_3-N	"	5,973
Total P	"	22,043
K	"	2,769
Cd	"	4.2
Cr	"	160
Cu	"	451
Pb	"	134
Hg	"	1.21
Mo	"	12.7
As	"	<10.0
Mn	"	541
Ni	"	45.0
Se	"	<8.0
Zn	"	913

[1]Results based on one sample.

TABLE 14: ANALYSIS[1] OF DIGESTED BIOSOLIDS APPLIED TO LAND AT GREENER GARDENS SOD FARM, 9841 W. DRALLE RD., FRANKFORT, IL, FROM THE STICKNEY WATER RECLAMATION PLANT LASMA DRYING AREA DURING SEPTEMBER 2009

Constituent	Units	Concentration
pH		7.2
Total Solids	%	62.9
Total Volatile Solids	"	41.4
Volatile Acids as Acetic Acid	mg/dry kg	858
Total Kjeldahl-N	"	30,452
NH_3-N	"	5,973
Total P	"	22,043
K	"	2,769
Cd	"	4.2
Cr	"	160
Cu	"	451
Pb	"	134
Hg	"	1.21
Mo	"	12.7
As	"	<10.0
Mn	"	541
Ni	"	45.0
Se	"	<8.0
Zn	"	913

[1]Results based on one sample.