

Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 18-08

CONTROLLED SOLIDS DISTRIBUTION REPORT

FOR FOURTH QUARTER 2017

February 2018

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**CECIL LUE-HING RESEARCH AND DEVELOPMENT COMPLEX
6001 WEST PERSHING ROAD CICERO, ILLINOIS 60804-4112**

February 28, 2018

Mr. Roger Callaway
Illinois Environmental Protection Agency
Bureau of Water
DWPC Compliance Section #19
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9274

Dear Mr. Keller:

Subject: Metropolitan Water Reclamation District of Greater Chicago – Controlled Solids Distribution Program Illinois Environmental Protection Agency Permit No. 2015-SC-59620, Fourth Quarter (October - December 2017)

This letter transmits information and data for the Metropolitan Water Reclamation District of Greater Chicago – Controlled Solids Distribution Program for the fourth quarter (October – December 2017), as required by Illinois Environmental Protection Agency Permit No. 2015-SC-59620.

Sludge flow schematic diagrams for solids processed during October - December 2017 are shown in Figure 1 – John E. Egan Water Reclamation Plant (WRP), Figure 2 – Calumet WRP, and Figure 3 – Stickney WRP.

Air-dried and composted biosolids were distributed to 14 sites during the fourth quarter of 2017. The user information reports for these sites are presented in Tables 1 and 2, and the analyses of biosolids delivered to these sites are presented in Tables 3 and 4.

Very truly yours,

Albert E. Cox, Ph.D.
Environmental Monitoring and Research Manager
Monitoring and Research Department

AC:OO:cm

Attachments

cc/att: Mr. J. Colletti (USEPA)/Mr. J. Patel (IEPA)
Mr. E. Podczerwinski/Mr. J. Murray
Mr. B. Garelli/Mr. T. Conway
Mr. A. Laban/Dr. H. Zhang
Dr. G. Tian/Dr. O. Oladeji

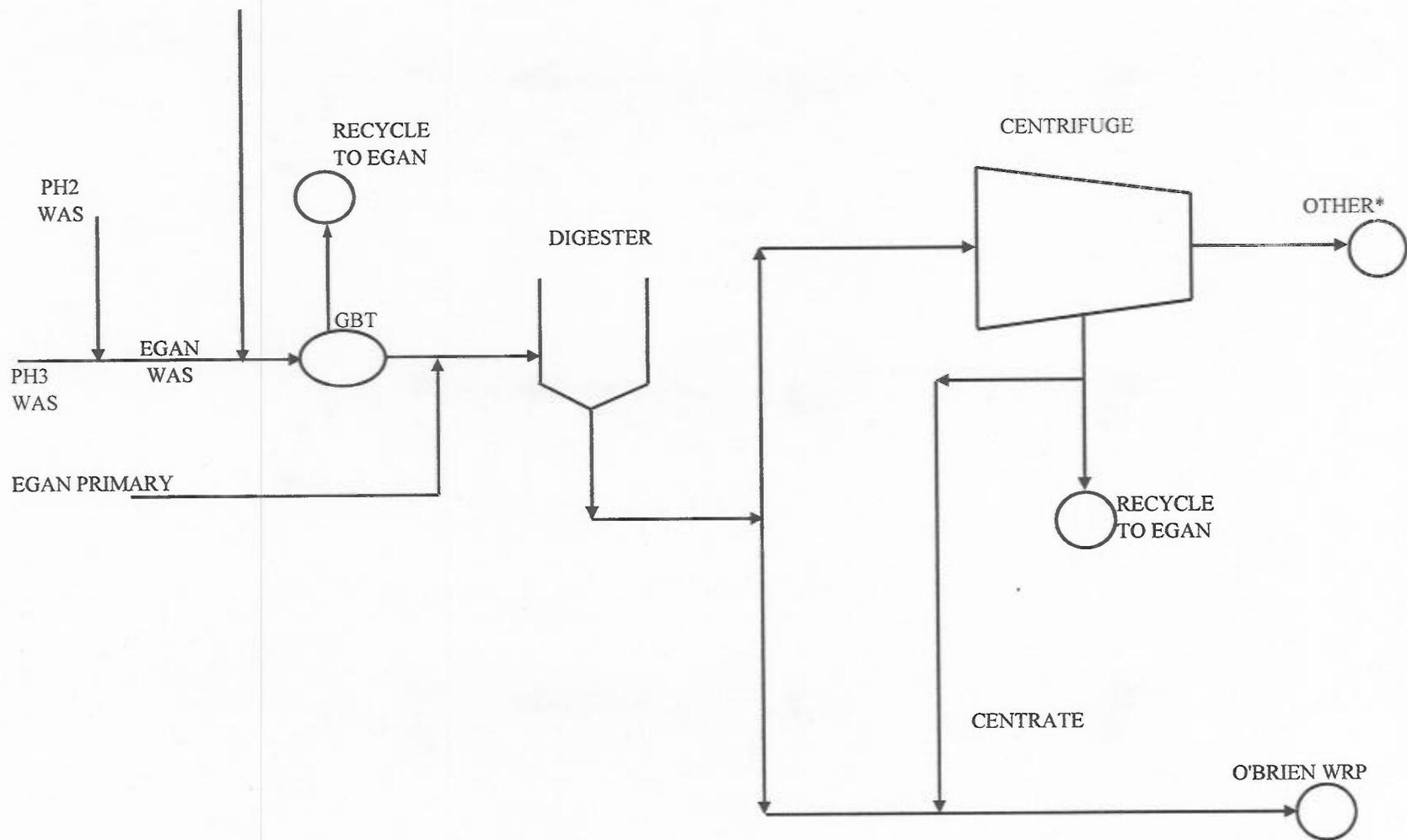
Metropolitan Water Reclamation District of Greater Chicago
100 East Erie Street Chicago, Illinois 60611-2803 312-751-5600

**CONTROLLED SOLIDS DISTRIBUTION REPORT
FOR FOURTH QUARTER 2017**

Monitoring and Research Department
Edward W. Podczewinski, Director

February 2018

FIGURE 1: JOHN E. EGAN WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR FOURTH QUARTER 2017



*Sent to either Stickney WRP or Calumet WRP drying sites for further processing or storage prior to farmland application.

FIGURE 2: CALUMET WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR FOURTH QUARTER 2017

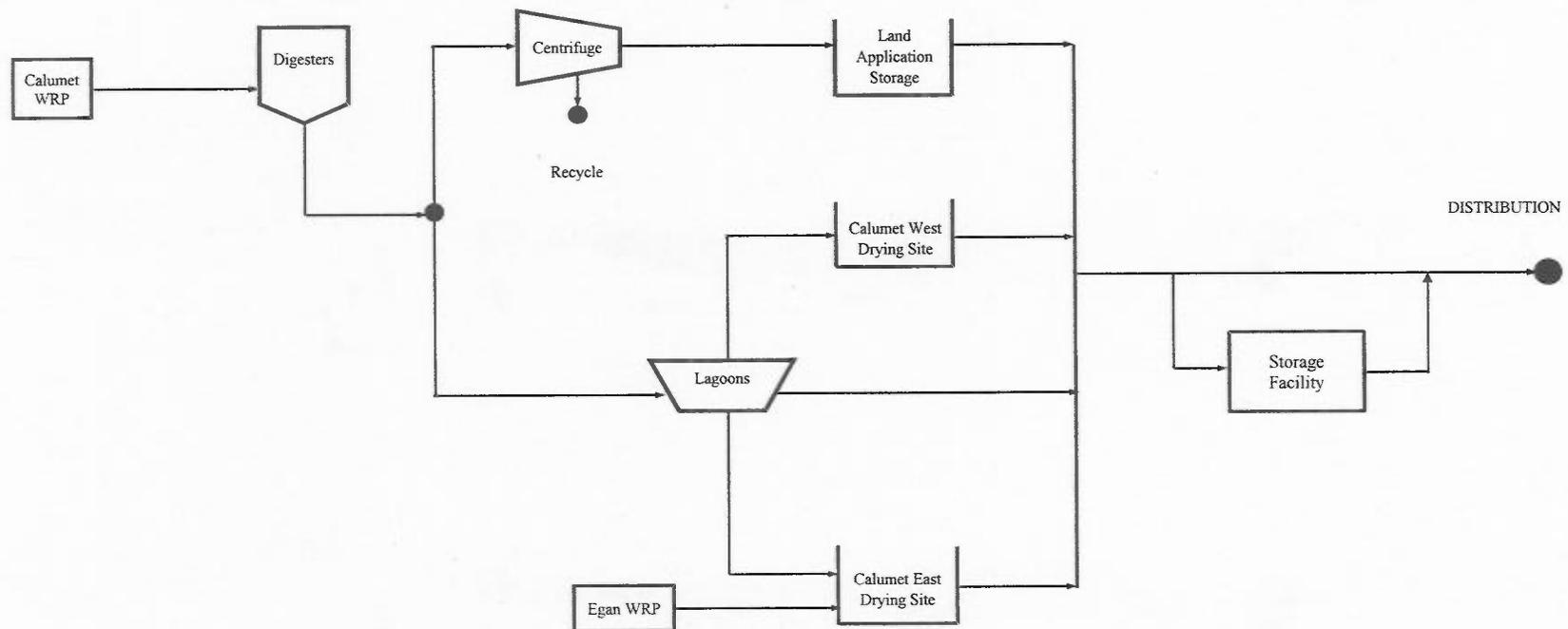


FIGURE 3: STICKNEY WATER RECLAMATION PLANT OPERATIONAL FLOW CHART FOR FOURTH QUARTER 2017

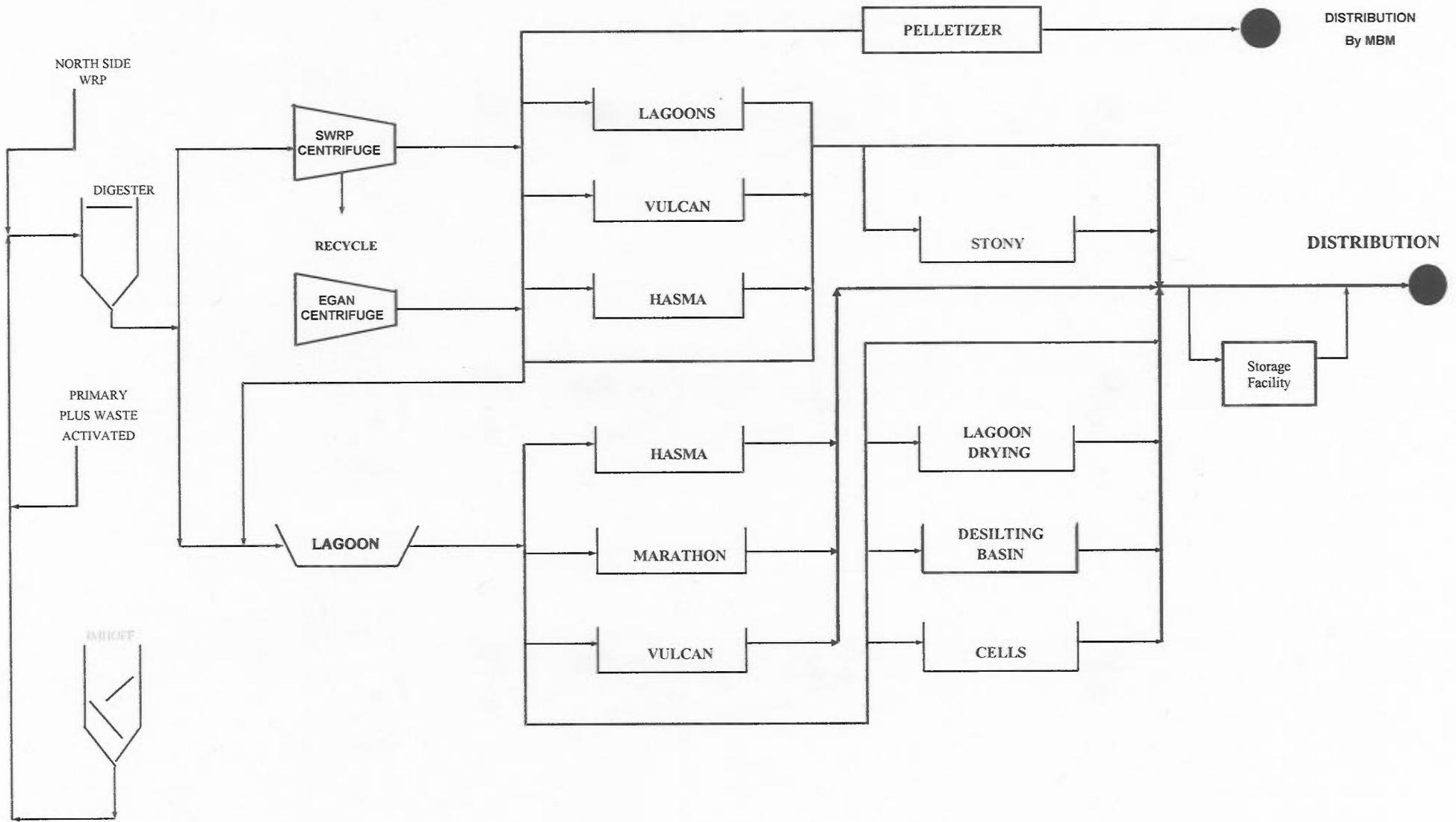


TABLE 1: USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Fourth Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
Composted Biosolids							
1	Skokie Park District Sports Park 3459 Oakton St. Skokie, IL 60076	10/03	16.8	328.7	Compost as soil amendment for flower beds and trees	NA ¹	NA
2	Joe Miller 8922 W. 83 rd Pl. Justice, IL 60458	01/03, 10/04	28.4	28.4	Compost as soil amendment for trees	NA	NA
3	Michael Politis 7820 Long Ave. Morton Grove, IL 60053	10/04	8.1	8.1	Compost as soil amendment for flower beds and trees	NA	NA
4	Village of La Grange Park 447 N. Catherine Ave. La Grange Park, IL 60526	10/17, 10/27, 10/30, 11/03, 11/13, 11/14, 11/16, 11/17, 11/22, 11/27-12/01, 12/04, 12/11, 12/15	108.3	108.3	Compost as soil amendment for landscaping	NA	NA

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Fourth Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
Composted Biosolids							
5	Northeastern Illinois University 5500 N. St. Louis Ave. Chicago, IL 60625	11/01	25.9	47.5	Compost as soil amendment for flower beds and trees	NA	NA
6	Naperville Park District 731 S. West St. Naperville, IL 60540	11/09, 11/14, 11/17	127.8	159.9	Compost as soil amendment for landscaping	NA	NA
7	Metropolitan Water Reclamation District of Greater Chicago 1220 Sycamore Ave. Hanover Park, IL 60133	12/18	8.2	8.2	Compost as soil amendment for landscaping	NA	NA
Air-Dried Biosolids							
8	Village Greens of Woodridge 1575 75 th St. Woodridge, IL 60517	10/02, 10/03	187.2	365.2	Topdressing for turf growth	26	14.0

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Fourth Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
Air-Dried							
9	Harvey Park District Martin L. King Jr. Park 39 E. 150 th St. Harvey, IL 60426	10/10	64.9	64.9	Topdressing for turf growth	5	13.0
10	Harvey Park District Lexington Park 302 W. 151 st St. Harvey, IL 60426	10/10	68.4	68.4	Topdressing for turf growth	5	13.7
11	Harvey Park District Medgar Evers Park 51 W. 149 th St. Harvey, IL 60426	10/10	68.4	68.4	Topdressing or turf growth	5	13.7
12	Twin Oaks Landscaping Co. 997 Harvey Rd. Oswego, IL 62543	10/10	252.7	252.7	Soil amendments for turf and tree establishments	8	31.6

TABLE 1 (Continued): USER INFORMATION FOR THE STICKNEY WATER RECLAMATION PLANT'S AIR-DRIED AND COMPOSTED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Fourth Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
Air-Dried							
13	Tim Cooling & Sons Inc 4400 Wheeler Rd. Cherry Valley, IL 61016	12/19, 12/21, 12/22	74.0	74.0	Topdressing for turf growth	5	14.8

¹Not applicable

TABLE 2: USER INFORMATION FOR THE CALUMET WATER RECLAMATION PLANT'S AIR-DRIED BIOSOLIDS DISTRIBUTED UNDER THE CONTROLLED SOLIDS DISTRIBUTION PROGRAM DURING THE FOURTH QUARTER OF 2017

Site No.	Name and Address of User	Dates	Quantity, Dry Ton		Application		
			Fourth Quarter	Cumulative	Purpose	Area (acre)	Rate (ton/acre)
1	Wilmette Golf Course 3900 Fairway Dr. Wilmette, IL 60091	12/05, 12/07	303.7	317.1	Topdressing for turf growth	22	14.4

TABLE 3: ANALYSIS OF AIR-DRIED AND COMPOSTED BIOSOLIDS APPLIED TO LAND FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE FOURTH QUARTER OF 2017

Sampling Date		3-Oct	6-Nov	14-Nov	3-Oct	10-Oct
Site No. ¹		1, 2, 3, 4, 5	7	6	8	9, 10, 11, 12, 13
Constituent	Unit	Composted Biosolids			Air-Dried Biosolids	
pH		6.6	6.8	6.8	6.0	6.8
Total Solids	%	58	41	51	73	74
Total Volatile Solids	"	46	50	38	37	34
Volatile Acids as Acetic Acid	mg/kg	73	29	49	72	149
Total Kjeldahl Nitrogen	"	15,487	15,436	14,447	17,896	22,197
NH ₃ -N	"	23	3	28	3,206	4,045
Total P	"	10,434	10,064	9,158	18,448	22,915
As	"	6	8	7	10	10
Cd	"	3	3	2	5	6
Cr	"	83	58	57	171	174
Cu	"	217	221	219	431	445
Hg	"	0.3	0.3	0.5	0.6	0.9
K	"	3,817	3,653	3,978	2,305	2,222
Mn	"	1,424	434	394	546	555
Mo	"	4	4	5	13	3

TABLE 3 (Continued): ANALYSIS OF AIR-DRIED AND COMPOSTED BIOSOLIDS APPLIED TO LAND FROM THE STICKNEY WATER RECLAMATION PLANT'S SOLIDS DRYING AREAS DURING THE FOURTH QUARTER OF 2017

Sampling Date		3-Oct	6-Nov	14-Nov	3-Oct	10-Oct
Site No. ¹		1, 2, 3, 4, 5	7	6	8	9, 10, 11, 12, 13
<u>Constituent</u>	<u>Unit</u>	<u>Composted Biosolids</u>			<u>Air-Dried Biosolids</u>	
Ni	"	23	23	24	45	44
Pb	"	217	72	72	113	118
Se	"	<5	<5	<5	<5	<5
Zn	"	432	433	429	912	930

¹Batches of composted biosolids applied to sites are listed in Table 1.

TABLE 4: ANALYSIS OF AIR-DRIED BIOSOLIDS APPLIED TO
 LAND FROM THE CALUMET WATER RECLAMATION
 PLANT'S SOLIDS DRYING AREAS DURING THE FOURTH
 QUARTER OF 2017

Sampling Date		7-Dec
Site No. ¹		1
<u>Constituent</u>	<u>Unit</u>	
pH		6.5
Total Solids	%	68
Total Volatile Solids	"	37
Volatile Acids as Acetic Acid	mg/kg	974
Total Kjeldahl Nitrogen	"	28,145
NH ₃ -N	"	3,229
Total P	"	22,897
As	"	12
Cd	"	3
Cr	"	53
Cu	"	418
Hg	"	0.4
K	"	2,044
Mn	"	1,262
Mo	"	14
Ni	"	29
Pb	"	76
Se	"	<5
Zn	"	1,271

¹Batch of biosolids applied to sites listed in Table 2.