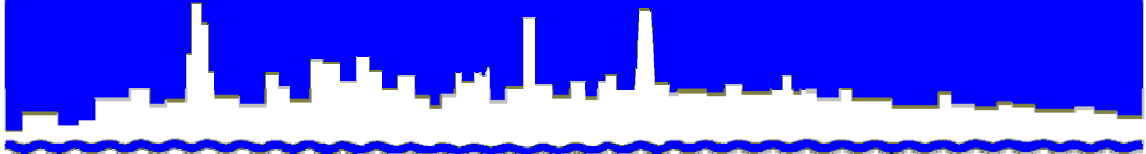


Protecting Our Water Environment



Metropolitan Water Reclamation District of Greater Chicago

***MONITORING AND RESEARCH
DEPARTMENT***

REPORT NO. 09-05

LAWNDALE AVENUE SOLIDS MANAGEMENT AREA

MONITORING REPORT FOR

THIRD QUARTER 2008

JANUARY 2009

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

312-751-5190

January 13, 2009

Mr. S. Allan 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: Lawndale Avenue Solids Management Area – Stickney Water Reclamation Plant, Contract No. 80-159-2P, IEPA Permit No. 2005-AO-4283, Monitoring Report for July, August, and September 2008

The attached ten tables contain the monitoring data for the Lawndale Avenue Solids Management Area (SMA) for July, August, and September 2008 as required by IEPA Operating Permit No. 2005-AO-4283.

The data are as follows:

- Table 1, Analysis of Water from Monitoring Wells M-11 through M-15 at the Lawndale SMA Sampled on July 23, 2008
- Table 2, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale SMA Sampled on July 1, 2008
- Table 3, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale SMA Sampled on August 14, 2008
- Table 4, Analysis of Water from Lysimeters L-1 through L-9N at the Lawndale SMA Sampled on September 10, 2008
- Table 5, Analysis of Monthly Compositated Digested Biosolids Placed in the Lawndale Solids Management Drying Area Sampled on July 2008

Subject: Lawndale Avenue Solids Management Area – Stickney Water Reclamation Plant, Contract No. 80-159-2P, IEPA Permit No. 2005-AO-4283, Monitoring Report for July, August, and September 2008

Table 5, Analysis of Monthly Composited Digested Biosolids Placed in the Lawndale Solids Management Drying Area Sampled on July 2008

Table 6, Analysis of Monthly Composited Digested Biosolids Placed in the Lawndale Solids Management Drying Area Sampled on August 2008

Table 7, Analysis of Monthly Composited Digested Biosolids Placed in the Lawndale Solids Management Drying Area Sampled on September 2008

Table 8, Analysis of Monthly Composited Digested Biosolids Removed from the Lawndale Solids Management Drying Area Sampled on July 2008

Table 9, Analysis of Monthly Composited Digested Biosolids Removed from the Lawndale Solids Management Drying Area Sampled on August 2008

Table 10, Analysis of Monthly Composited Digested Biosolids Removed from the Lawndale Solids Management Drying Area Sampled on September 2008

Biosolids were placed in and removed from the solids drying area during July, August, and September 2008.

Very truly yours,

Louis Kollias
Director
Monitoring and Research

LK:PL:kq
Attachments

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

TABLE 1: ANALYSIS¹ OF WATER FROM MONITORING WELLS
M-11 THROUGH M-15 AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JULY 23, 2008

| Parameter | Unit | Monitoring Well No. | | | | |
|--------------------------------------|------|---------------------|---------|---------|---------|---------|
| | | M-11 | M-12 | M-13 | M-14 | M-15 |
| pH ² | | 7.7 | 7.7 | 7.6 | 7.8 | 7.5 |
| EC | mS/m | 49 | 68 | 89 | 50 | 105 |
| Total Dissolved Solids | mg/L | 648 | 800 | 1,304 | 552 | 1,668 |
| Total Diss. Org. Carbon | " | 1 | 1 | 1 | 1 | 1 |
| Cl ⁻ | " | <10 | 13 | <10 | <10 | <10 |
| SO ₄ ⁼ | " | 184 | 332 | 648 | 132 | 850 |
| TKN | " | 0.7 | <0.2 | 0.4 | 0.3 | 0.5 |
| NH ₃ -N | " | 0.7 | 0.2 | 0.4 | 0.3 | 0.5 |
| NO ₂ + NO ₃ -N | " | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total P | " | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | 326 | 279 | 296 | 297 | 327 |
| Al | " | <0.035 | <0.035 | 0.040 | <0.035 | 0.054 |
| As | " | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | 1.3 | 1.7 | 1.4 | 1.2 | 1.1 |
| Ca | " | 87 | 78 | 161 | 73 | 234 |
| Cd | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | <0.0025 | <0.0025 | <0.0025 | <0.0025 | <0.0025 |
| Cu | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | <0.02 | <0.02 | <0.02 | <0.02 | 0.47 |
| Hg | µg/L | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | 8 | 9 | 10 | 8 | 10 |
| Mg | " | 42 | 37 | 76 | 40 | 105 |
| Mn | " | 0.047 | 0.005 | 0.008 | 0.003 | 0.022 |
| Na | " | 55 | 133 | 88 | 41 | 63 |
| Ni | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Pb | " | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | 0.46 | 1.9 | 0.35 | 0.48 | 2.6 |
| FC | MPN* | <1 | <1 | <1 | <1 | <1 |
| Static H ₂ O Elev. | ft | 628 | 632 | 629 | 623 | 605 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit.

²pH analyzed beyond recommended holding time of 15 minutes.

*MPN = Most probable number per 100 mL.

TABLE 2: ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JULY 1, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|---------|---------|---------|---------|
| | | L-1 | L-2 | L-3N | L-4N | L-5N |
| pH ² | | 7.5 | 7.7 | 7.4 | 7.6 | 7.6 |
| EC | mS/m | 106 | 300 | 259 | 356 | 597 |
| Total Dissolved Solids | mg/L | 1,456 | 1,148 | 1,788 | 3,040 | 5,388 |
| Total Diss. Org. Carbon | " | 8 | 1 | 22 | 6 | 3 |
| Cl ⁻ | " | 48 | 214 | 127 | 48 | 804 |
| SO ₄ ⁼ | " | 522 | 266 | 233 | 1,460 | 1,605 |
| TKN | " | 5 | 0.9 | 3 | 6 | 3 |
| NH ₃ -N | " | 4 | <0.1 | 1 | 5 | 2 |
| NO ₂ + NO ₃ -N | " | 0.4 | 0.8 | 0.7 | 1 | 0.4 |
| Total P | " | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | 489 | 188 | 1,114 | 598 | 491 |
| Al | " | 0.104 | 0.042 | 0.073 | 0.103 | 0.091 |
| As | " | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | 0.53 | 0.09 | 0.08 | 0.13 | 0.26 |
| Ca | " | 224 | 120 | 346 | 562 | 535 |
| Cd | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | <0.0025 | <0.0025 | <0.0025 | <0.0025 | <0.0025 |
| Cu | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | 2.8 | 0.04 | 7.2 | 0.44 | 7.7 |
| Hg | μg/L | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | 6 | <1 | 2 | 6 | 21 |
| Mg | " | 101 | 53 | 139 | 146 | 262 |
| Mn | " | 0.083 | 0.002 | 0.737 | 0.932 | 0.253 |
| Na | " | 45 | 128 | 79 | 146 | 479 |
| Ni | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Pb | " | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | <0.01 | <0.01 | <0.01 | 0.02 | <0.01 |

TABLE 2 (Continued): ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON JULY 1, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|---------|---------|---------|---------|
| | | L-6 | L-6N | L-7N | L-8N | L-9N |
| pH ² | | 7.7 | 7.4 | 7.8 | 7.7 | 7.9 |
| EC | mS/m | 201 | 348 | 158 | 275 | 279 |
| Total Dissolved Solids | mg/L | NA | 3,264 | 1,244 | 2,064 | 1,796 |
| Total Diss. Org. Carbon | " | NA | 50 | 8 | 12 | 25 |
| Cl ⁻ | " | NA | 78 | 174 | 348 | 205 |
| SO ₄ ⁼ | " | NA | 1,287 | 166 | 224 | 270 |
| TKN | " | NA | 19 | 0.9 | 5 | 2 |
| NH ₃ -N | " | NA | 13 | 0.2 | 4 | 0.7 |
| NO ₂ + NO ₃ -N | " | NA | 0.7 | 1 | 0.4 | 0.8 |
| Total P | " | NA | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | NA | 822 | 400 | 704 | 982 |
| Al | " | NA | 0.102 | 0.038 | 0.052 | 0.054 |
| As | " | NA | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | NA | 0.18 | 0.24 | 0.21 | 0.15 |
| Ca | " | NA | 625 | 138 | 237 | 243 |
| Cd | " | NA | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | NA | <0.0025 | <0.0025 | <0.0025 | <0.0025 |
| Cu | " | NA | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | NA | 22 | 0.35 | 1.7 | 0.78 |
| Hg | μg/L | NA | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | NA | 7 | 7 | 5 | 5 |
| Mg | " | NA | 150 | 75 | 108 | 138 |
| Mn | " | NA | 0.555 | 0.082 | 0.365 | 1.04 |
| Na | " | NA | 76 | 75 | 195 | 214 |
| Ni | " | NA | 0.006 | <0.002 | <0.002 | <0.002 |
| Pb | " | NA | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | NA | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | NA | <0.01 | <0.01 | <0.01 | <0.01 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit.

²pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 3: ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON AUGUST 14, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|---------|---------|---------|---------|
| | | L-1 | L-2 | L-3N | L-4N | L-5N |
| pH ² | | 7.4 | 7.7 | 7.3 | 7.4 | 7.4 |
| EC | mS/m | 170 | 323 | 269 | 322 | 523 |
| Total Dissolved Solids | mg/L | 1,592 | 2,660 | 2,144 | 3,160 | 5,332 |
| Total Diss. Org. Carbon | " | 7 | 1 | 22 | 4 | 2 |
| Cl ⁻ | " | 47 | 476 | 125 | 44 | 581 |
| SO ₄ ⁼ | " | 573 | 672 | 278 | 1,500 | 1,668 |
| TKN | " | 5 | 0.5 | 3 | 6 | 3 |
| NH ₃ -N | " | 4 | 0.2 | 1 | 5 | 2 |
| NO ₂ + NO ₃ -N | " | <0.1 | <0.1 | <0.1 | 0.4 | <0.1 |
| Total P | " | <0.25 | <0.25 | 0.34 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | 451 | 385 | 1,138 | 603 | 457 |
| Al | " | 0.045 | 0.047 | 0.065 | 0.078 | 0.078 |
| As | " | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | 0.45 | 0.16 | 0.04 | 0.11 | 0.24 |
| Ca | " | 229 | 269 | 369 | 553 | 523 |
| Cd | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | <0.0025 | <0.0025 | <0.0025 | <0.0025 | <0.0025 |
| Cu | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | 4.7 | 0.28 | 9.5 | 4.3 | 10 |
| Hg | μg/L | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | 5 | 4 | <1 | 6 | 19 |
| Mg | " | 95 | 121 | 135 | 131 | 250 |
| Mn | " | 0.082 | 0.024 | 0.782 | 0.859 | 0.209 |
| Na | " | 43 | 282 | 80 | 125 | 462 |
| Ni | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Pb | " | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

TABLE 3 (Continued): ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON AUGUST 14, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|---------|---------|---------|---------|
| | | L-6 | L-6N | L-7N | L-8N | L-9N |
| pH ² | | NA | 7.3 | 7.8 | 7.7 | 7.6 |
| EC | mS/m | NA | 345 | 124 | 238 | 252 |
| Total Dissolved Solids | mg/L | NA | 3,564 | 1,048 | 1,916 | 1,864 |
| Total Diss. Org. Carbon | " | NA | 50 | 8 | 11 | 29 |
| Cl ⁻ | " | NA | 74 | 147 | 347 | 173 |
| SO ₄ ⁼ | " | NA | 1,323 | 88 | 168 | 260 |
| TKN | " | 0.6 | 19 | 1 | 5 | 3 |
| NH ₃ -N | " | <0.1 | 12 | 0.4 | 3 | 0.9 |
| NO ₂ + NO ₃ -N | " | 0.5 | <0.1 | <0.1 | <0.1 | 0.3 |
| Total P | " | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | NA | 791 | 394 | 648 | 1,016 |
| Al | " | NA | 0.089 | <0.035 | 0.044 | 0.041 |
| As | " | NA | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | NA | 0.13 | 0.21 | 0.27 | 0.28 |
| Ca | " | NA | 628 | 119 | 206 | 246 |
| Cd | " | NA | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | NA | <0.0025 | <0.0025 | <0.0025 | <0.0025 |
| Cu | " | NA | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | NA | 33 | 0.82 | 5.8 | 5.4 |
| Hg | μg/L | NA | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | NA | 7 | 5 | 5 | 5 |
| Mg | " | NA | 145 | 65 | 99 | 139 |
| Mn | " | NA | 0.580 | 0.093 | 0.338 | 0.456 |
| Na | " | NA | 72 | 61 | 195 | 183 |
| Ni | " | NA | 0.007 | <0.002 | <0.002 | <0.002 |
| Pb | " | NA | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | NA | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | NA | <0.01 | <0.01 | <0.01 | <0.01 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit.

²pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 4: ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON SEPTEMBER 10, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|--------|--------|--------|--------|
| | | L-1 | L-2 | L-3N | L-4N | L-5N |
| pH ² | | 7.5 | 7.8 | 7.4 | 7.5 | 7.6 |
| EC | mS/m | 168 | 161 | 232 | 293 | 489 |
| Total Dissolved Solids | mg/L | 1,612 | 1,412 | 2,276 | 3,328 | 5,324 |
| Total Diss. Org. Carbon | " | 7 | 1 | 22 | 9 | 2 |
| Cl ⁻ | " | 47 | 223 | 120 | 43 | 583 |
| SO ₄ ⁼ | " | 507 | 283 | 306 | 1,500 | 1,704 |
| TKN | " | 5 | 0.3 | 2 | 5 | 3 |
| NH ₃ -N | " | 4 | <0.1 | 1 | 4 | 2 |
| NO ₂ + NO ₃ -N | " | <0.1 | <0.1 | <0.1 | 1 | <0.1 |
| Total P | " | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | 436 | 201 | 1,100 | 587 | 444 |
| Al | " | 0.041 | <0.035 | 0.048 | 0.057 | 0.047 |
| As | " | <0.05 | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | 0.48 | 0.12 | 0.08 | 0.15 | 0.28 |
| Ca | " | 215 | 123 | 372 | 585 | 531 |
| Cd | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Cr | " | <0.003 | <0.003 | <0.003 | <0.003 | <0.003 |
| Cu | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | 4.7 | <0.02 | 8.2 | 4.2 | 4.5 |
| Hg | μg/L | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | 5 | <1 | 2 | 6 | 19 |
| Mg | " | 93 | 55 | 133 | 128 | 247 |
| Mn | " | 0.068 | 0.016 | 0.762 | 0.801 | 0.213 |
| Na | " | 41 | 127 | 81 | 117 | 446 |
| Ni | " | <0.002 | <0.002 | <0.002 | <0.002 | <0.002 |
| Pb | " | <0.02 | <0.02 | <0.02 | <0.02 | <0.02 |
| Se | " | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | <0.01 | <0.01 | <0.01 | <0.01 | <0.01 |

TABLE 4 (Continued): ANALYSIS¹ OF WATER FROM LYSIMETERS
L-1 THROUGH L-9N AT THE LAWNDALE AVENUE
SOLIDS MANAGEMENT AREA SAMPLED ON SEPTEMBER 10, 2008

| Parameter | Unit | Lysimeter No. | | | | |
|--------------------------------------|------|---------------|--------|--------|--------|--------|
| | | L-6 | L-6N | L-7N | L-8N | L-9N |
| pH ² | | | 7.5 | 7.8 | 7.8 | 7.8 |
| EC | mS/m | | 345 | 159 | 223 | 254 |
| Total Dissolved Solids | mg/L | | NA | 1,228 | 1,920 | 1,944 |
| Total Diss. Org. Carbon | " | | 53 | 9 | 8 | 25 |
| Cl ⁻ | " | | 108 | 121 | 348 | 189 |
| SO ₄ ⁼ | " | | 1,449 | 126 | 172 | 275 |
| TKN | " | | 18 | 1 | 4 | 2 |
| NH ₃ -N | " | | 12 | 0.7 | 3 | 0.7 |
| NO ₂ + NO ₃ -N | " | | <0.1 | <0.1 | <0.1 | 0.3 |
| Total P | " | L | <0.25 | <0.25 | <0.25 | <0.25 |
| Alkalinity as CaCO ₃ | " | Y | 714 | 389 | 565 | 900 |
| | | S | | | | |
| Al | " | I | 0.059 | <0.035 | <0.035 | <0.035 |
| As | " | M | <0.05 | <0.05 | <0.05 | <0.05 |
| B | " | E | 0.22 | 0.25 | 0.21 | 0.15 |
| Ca | " | T | 661 | 132 | 193 | 223 |
| Cd | " | E | <0.002 | <0.002 | <0.002 | <0.002 |
| | | R | | | | |
| Cr | " | | <0.003 | <0.003 | <0.003 | <0.003 |
| Cu | " | D | <0.01 | <0.01 | <0.01 | <0.01 |
| Fe | " | R | 11 | 0.84 | 0.24 | 0.41 |
| Hg | μg/L | Y | <0.25 | <0.25 | <0.25 | <0.25 |
| K | mg/L | | 8 | 6 | 5 | 5 |
| | | | | | | |
| Mg | " | | 156 | 62 | 90 | 125 |
| Mn | " | | 0.582 | 0.093 | 0.290 | 0.357 |
| Na | " | | 99 | 52 | 190 | 188 |
| Ni | " | | 0.006 | <0.002 | <0.002 | <0.002 |
| Pb | " | | <0.02 | <0.02 | <0.02 | <0.02 |
| | | | | | | |
| Se | " | | <0.1 | <0.1 | <0.1 | <0.1 |
| Zn | " | | <0.01 | <0.01 | <0.01 | <0.01 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit.

²pH analyzed beyond recommended holding time of 15 minutes.

NA = No analysis; insufficient sample.

TABLE 5: ANALYSIS¹ OF MONTHLY COMPOSITED DIGESTED
 BIOSOLIDS PLACED IN THE LAWNSDALE AVENUE
 SOLIDS MANAGEMENT DRYING AREA DURING JULY 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 8.2 |
| Total Solids | % | 20.6 |
| Total Volatile Solids ² | % | 45.6 |
| TKN | mg/kg | 45,426 |
| NH ₃ -N | „ | 14,628 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of four samples.

²Total volatile solids as a percentage of total solids.

TABLE 6: ANALYSIS¹ OF MONTHLY COMPOSITED DIGESTED
 BIOSOLIDS PLACED IN THE LAWNSDALE AVENUE
 SOLIDS MANAGEMENT DRYING AREA DURING AUGUST 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 7.9 |
| Total Solids | % | 24.0 |
| Total Volatile Solids ² | % | 43.1 |
| TKN | mg/kg | 41,037 |
| NH ₃ -N | „ | 13,036 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of eight samples.

²Total volatile solids as a percentage of total solids.

TABLE 7: ANALYSIS¹ OF MONTHLY COMPOSITED DIGESTED
BIOSOLIDS PLACED IN THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT DRYING AREA DURING SEPTEMBER 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 7.6 |
| Total Solids | % | 16.6 |
| Total Volatile Solids ² | % | 44.8 |
| TKN | mg/kg | 36,811 |
| NH ₃ -N | " | 11,555 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of five samples.

²Total volatile solids as a percentage of total solids.

TABLE 8: ANALYSIS¹ OF MONTHLY COMPOSITED PROCESSED DIGESTED
BIOSOLIDS REMOVED FROM THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT DRYING AREA DURING JULY 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 6.6 |
| Total Solids | % | 75.7 |
| Total Volatile Solids ² | % | 33.8 |
| TKN | mg/kg | 17,517 |
| NH ₃ -N | " | 1,702 |
| Total P | " | 18,071 |
| Al | " | 18,396 |
| As | " | <14.29 |
| Ca | " | 45,520 |
| Cd | " | 5 |
| Cr | " | 203 |
| Cu | " | 400 |
| Fe | " | 18,287 |
| Hg | " | <0.20 |
| K | " | 2,646 |
| Mg | " | 21,040 |
| Mn | " | 551 |
| Mo | " | 14 |
| Na | " | <800 |
| Ni | " | 50 |
| Pb | " | 135 |
| Se | " | <28.57 |
| Zn | " | 879 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of eighteen samples.

²Total volatile solids as a percentage of total solids.

TABLE 9: ANALYSIS¹ OF MONTHLY COMPOSITED PROCESSED DIGESTED
BIOSOLIDS REMOVED FROM THE LAWNSDALE AVENUE
SOLIDS MANAGEMENT DRYING AREA DURING AUGUST 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 6.7 |
| Total Solids | % | 59.6 |
| Total Volatile Solids ² | % | 37.1 |
| TKN | mg/kg | 26,502 |
| NH ₃ -N | " | 3,883 |
| Total P | " | 20,513 |
| Al | " | 18,720 |
| As | " | <20 |
| Ca | " | 40,430 |
| Cd | " | 4 |
| Cr | " | 166 |
| Cu | " | 412 |
| Fe | " | 17,247 |
| Hg | " | <0.20 |
| K | " | 2,618 |
| Mg | " | 18,339 |
| Mn | " | 548 |
| Mo | " | 15 |
| Na | " | <800 |
| Ni | " | 46 |
| Pb | " | 133 |
| Se | " | <28.57 |
| Zn | " | 875 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of seventeen samples.

²Total volatile solids as a percentage of total solids.

TABLE 10: ANALYSIS¹ OF MONTHLY COMPOSITED PROCESSED DIGESTED BIOSOLIDS REMOVED FROM THE LAWNSDALE AVENUE SOLIDS MANAGEMENT DRYING AREA DURING SEPTEMBER 2008

| Parameter | Unit | Concentration |
|------------------------------------|-------|---------------|
| pH | | 7.1 |
| Total Solids | % | 51.8 |
| Total Volatile Solids ² | % | 42.7 |
| TKN | mg/kg | 25,766 |
| NH ₃ -N | " | 4,527 |
| Total P | " | 19,170 |
| Al | " | 20,184 |
| As | " | <10 |
| Ca | " | 41,955 |
| Cd | " | 3 |
| Cr | " | 166 |
| Cu | " | 392 |
| Fe | " | 17,826 |
| Hg | " | <0.20 |
| K | " | 2,850 |
| Mg | " | 18,953 |
| Mn | " | 541 |
| Mo | " | ND |
| Na | " | <800 |
| Ni | " | 46 |
| Pb | " | 144 |
| Se | " | <8 |
| Zn | " | 874 |

¹Limit of quantitation (LOQ) instead of MDL was used as reporting limit. Values are the means of ten samples.

²Total volatile solids as a percentage of total solids.

ND = No data.