

#### IV. Metro Biosolids Center (MBC) Data

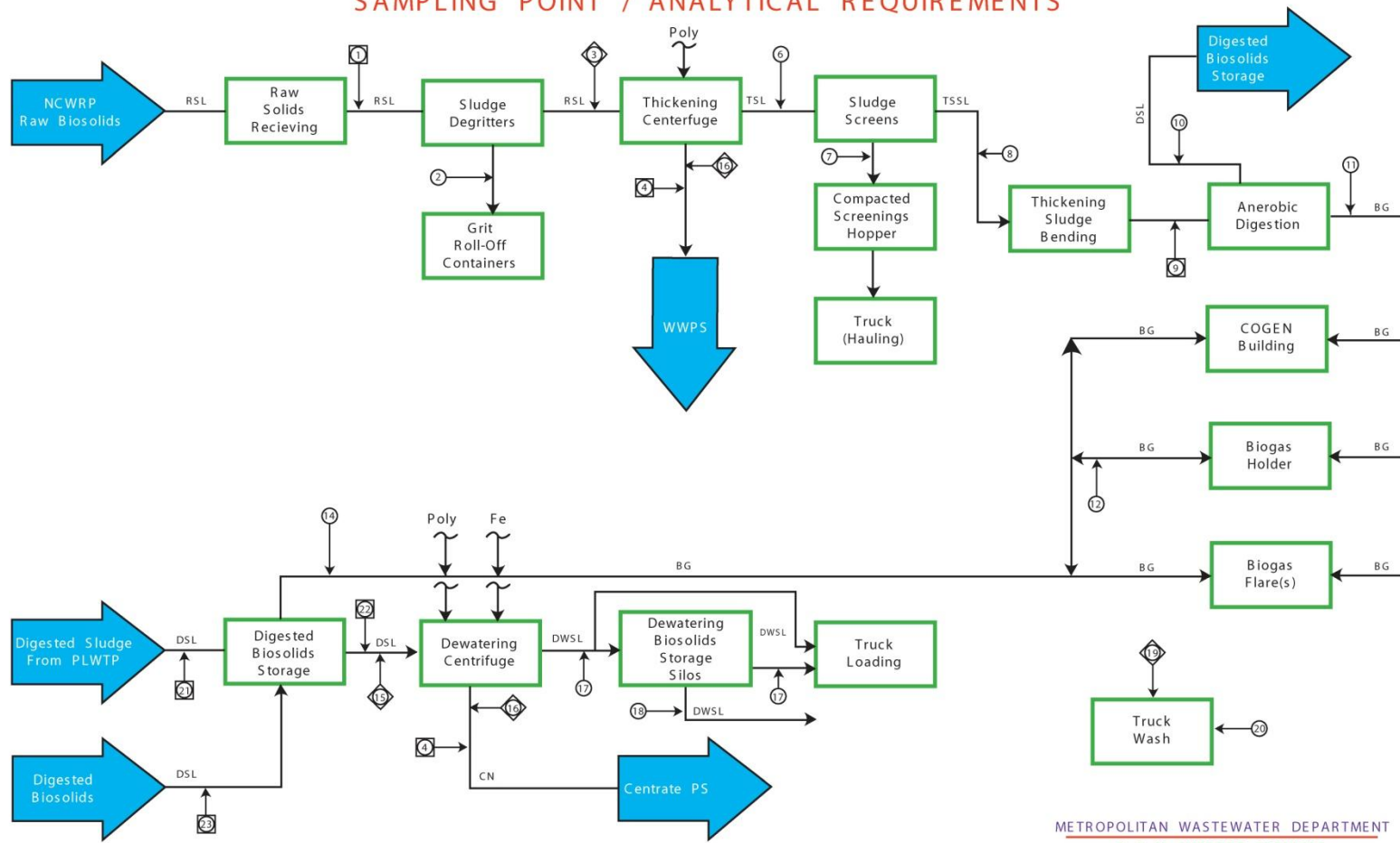
- A. MBC Diagrams
- B. Return Stream Data Summary
- C. Digester and Digested Sludge Data Summary
- D. Gas Production
- E. Chemical Usage
- F. Graphs of Chemical Usage
- G. Solids Handling Annual Report
- H. Results of "Title 22" Sludge Hazardous Waste Tests

A. MBC Diagrams

# Metro Biosolids Center



# METROPOLITAN BIOSOLIDS CENTER PROCESS FLOW DIAGRAM SAMPLING POINT / ANALYTICAL REQUIREMENTS



METROPOLITAN WASTEWATER DEPARTMENT  
O & M SUPPORT SERVICES

- GRAB SAMPLER
- ◻ AUTOSAMPLER
- ◇ ANALYZER/METER

LOCATION	DESCRIPTION	LOCATION	DESCRIPTION	LOCATION	DESCRIPTION
1	Raw Solids Sampler (73 AU 9040): Volatile Solids, Total Solids, pH, Alkalinity	9	Thickened Sludge (73 AU 9050): Total Solids, Volatile Solids, Temperature, pH, Alkalinity, Volatile Acids, Iron	16	Centrate (Dewatering & Thickening) Analyzers: Total Suspended Solids
2	Grit Volatile Solids, % Moisture	10	Aerobically Digested Sludge: % Total Solids, % Volatile Solids, Temperature, pH, Alkalinity, Volatile Acids	17	Dewatered Biosolids: Total Solids, Volatile Solids, pH, TKN, PCB, Trace Metals
3	Thickened Sludge Feed Loop (76 DE 2140): Total Solids, Volatile Solids	11	Biogas from Digestion: Methane (CH <sub>4</sub> ), Carbon Dioxide (CO <sub>2</sub> ), Hydrogen Sulfide (H <sub>2</sub> S)	18	Dewatered Biosolids Cake: Total Solids, Volatile Solids, pH, TKN, PCB, Trace Metals
4	Centrate (Dewatering & Thickening) Sampler (76 AU 2635): Total Suspended Solids, pH, BOD <sub>5</sub>	12	Biogas to Biogas Holder: Methane (CH <sub>4</sub> ), Carbon Dioxide (CO <sub>2</sub> ), H <sub>2</sub> S	19	Truck Wash: (87 AIT 901): Cl <sub>2</sub> Residue
5	Thickened Biosolids: Total Solids, Volatile Solids, pH	13	Biogas from Digestion: Methane (CH <sub>4</sub> ), Carbon Dioxide (CO <sub>2</sub> )	20	Truck Wash: BOD <sub>5</sub> , Coliform
6	Sludge Screening: Volatile Solids, % Moisture	14	Biogas from Digestion: Methane (CH <sub>4</sub> ), Carbon Dioxide (CO <sub>2</sub> )	21	Digested Sludge from PLWTP (80 AU 9009): Total Solids, Volatile Solids, pH, Iron
7	Thickened Screen Sludge: Total Sludge, Volatile Solids	15	Dewatering Centrifuge Feed Loop (76 DE 2502): Total Solids	22	Digested Sludge from DBST (80 AU 2115): Total Solids, Volatile Solids, pH
8				23	Digester Samplers: Digester#1 (80 AU 9006), Digester#2 (9007), Digester#3 (9008): Total Solids, Volatile Solids, pH, Alkalinity, Iron

Revision Date: 02/11/04

## B. Return Stream Data Summary

This section presents the results of analyses of the Metro Biosolids Center (MBC) return stream (MBC\_COMBCN) for 2011. This return stream is continuously sampled by a flow proportioned, autosampler connected to the return stream lines at MBC. Each 24-hour<sup>13</sup> composite is collected and analyzed for pH, BOD, TSS, TVSS, TS, and TVS daily. An aliquot is preserved and added to a monthly (calendar month) composite for analysis of trace metals.

The data is presented in tables of monthly averages and graphs of the monthly averages of select parameters. Tables of daily values for select parameters (such as TSS, Flow, etc.) along with graphs are also provided.



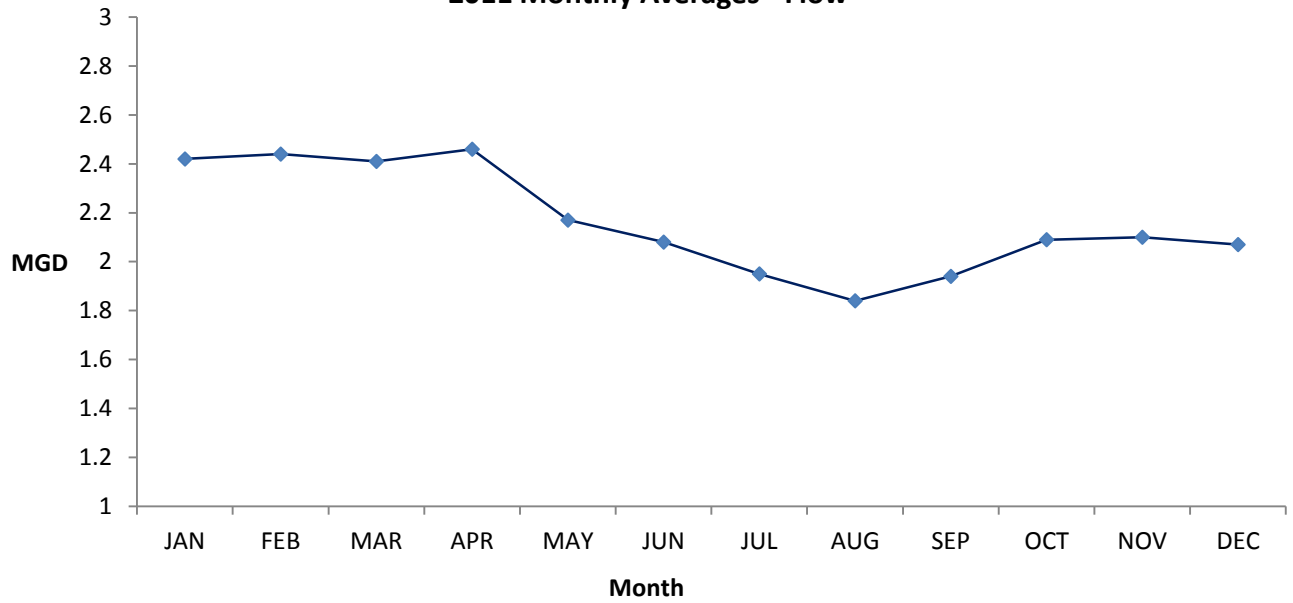
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<sup>13</sup> approximately midnight to midnight each day.

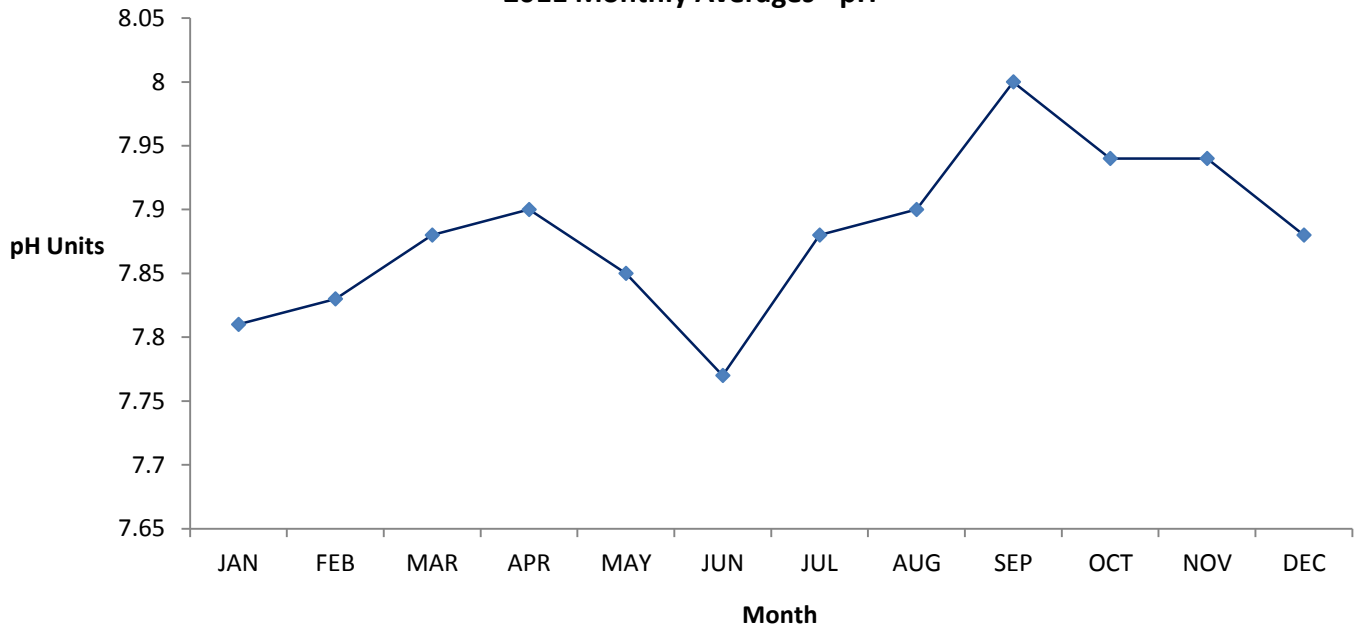
Metro Biosolids Center  
 Sludge Project - Annual Summary  
 Combined Sludge Centrate  
 From 01-JAN-2011 To 31-DEC-2011

	FLOW	PH	BOD	TSS	VSS	TS	TVS	TSS Mass Emmissions (lbs/Day)
	MGD	pH Units	mg/L	mg/L	mg/L	Wt%	Wt%	
JANUARY -2011	2.42	7.81	313	663	456	0.28	40	13381
FEBRUARY -2011	2.44	7.83	345	597	434	0.28	42	12149
MARCH -2011	2.41	7.88	424	871	651	0.31	44	17507
APRIL -2011	2.46	7.90	387	629	474	0.29	44	12905
MAY -2011	2.17	7.85	326	701	519	0.35	45	12687
JUNE -2011	2.08	7.77	330	1250	890	0.45	52	21684
JULY -2011	1.95	7.88	263	732	544	0.41	51	11905
AUGUST -2011	1.84	7.90	377	1200	852	0.42	52	18415
SEPTEMBER-2011	1.94	8.00	372	1170	851	0.42	53	18930
OCTOBER -2011	2.09	7.94	336	958	714	0.38	50	16699
NOVEMBER -2011	2.10	7.94	263	699	529	0.34	43	12242
DECEMBER -2011	2.07	7.88	258	655	504	0.33	39	11308
Average	2.16	7.88	333	844	618	0.36	46	14984

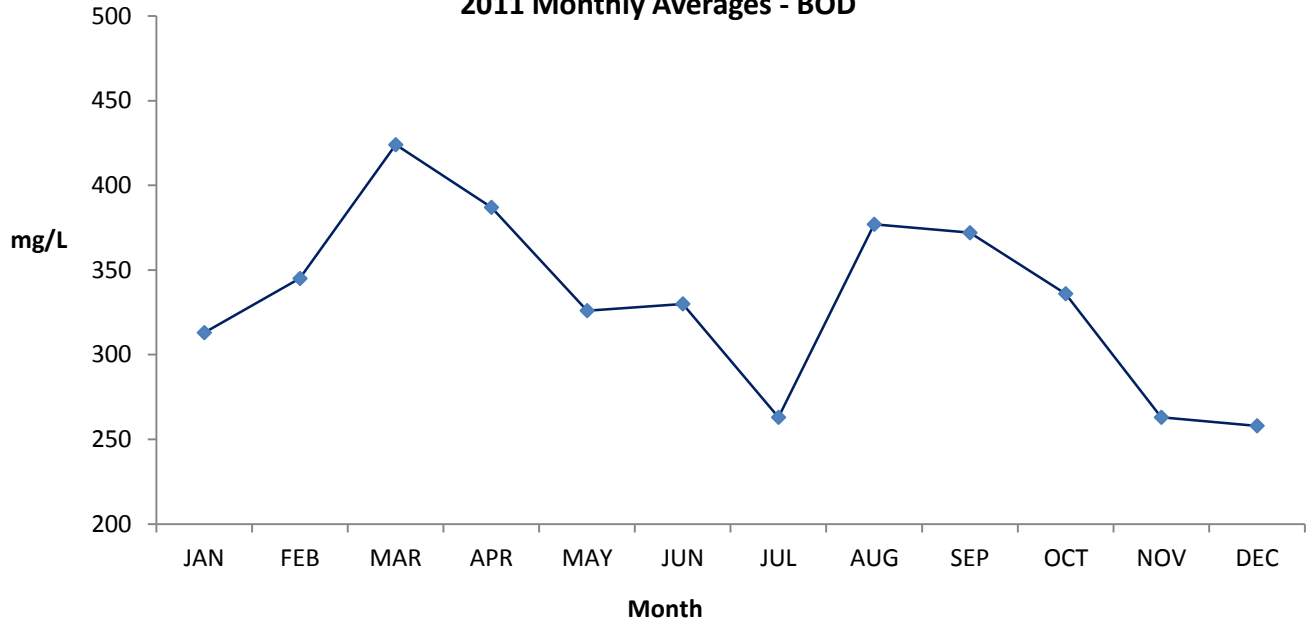
**MBC Combined Centrate  
2011 Monthly Averages - Flow**



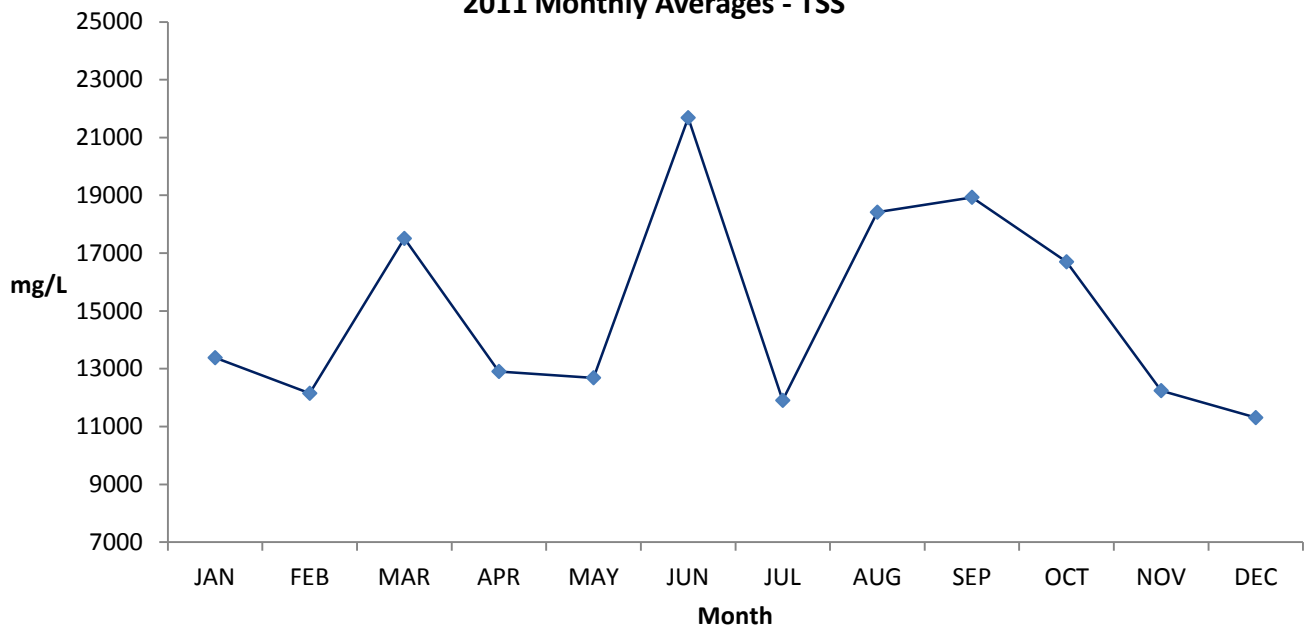
**MBC Combined Centrate  
2011 Monthly Averages - pH**



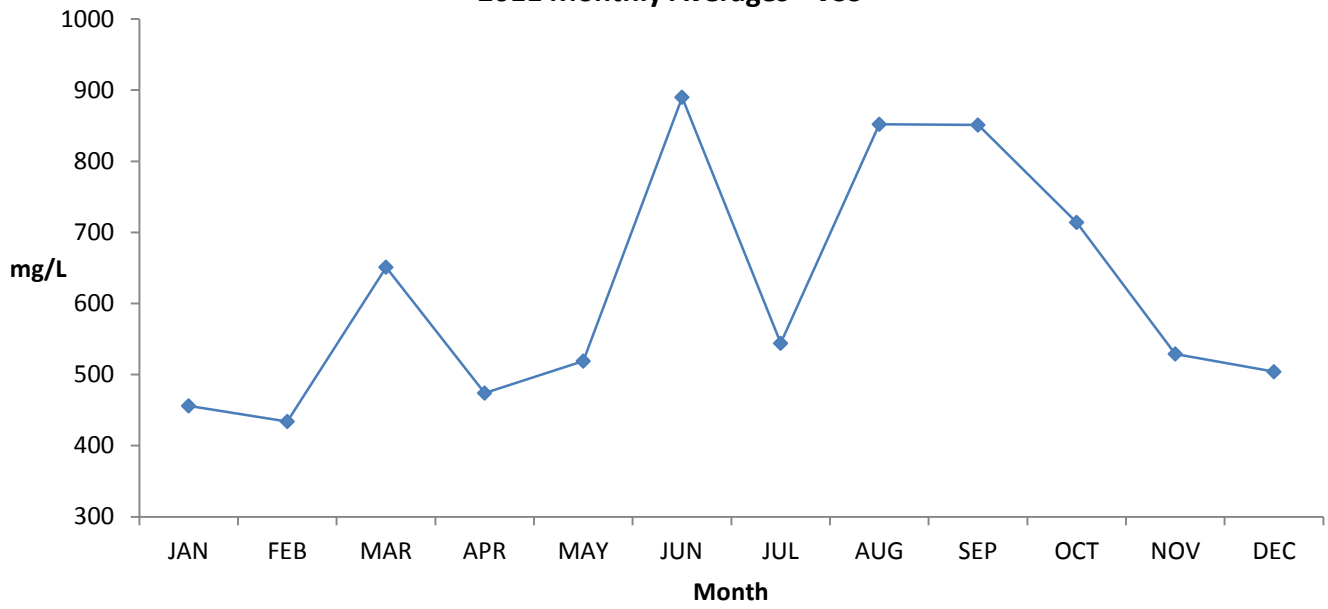
**MBC Combined Centrate  
2011 Monthly Averages - BOD**



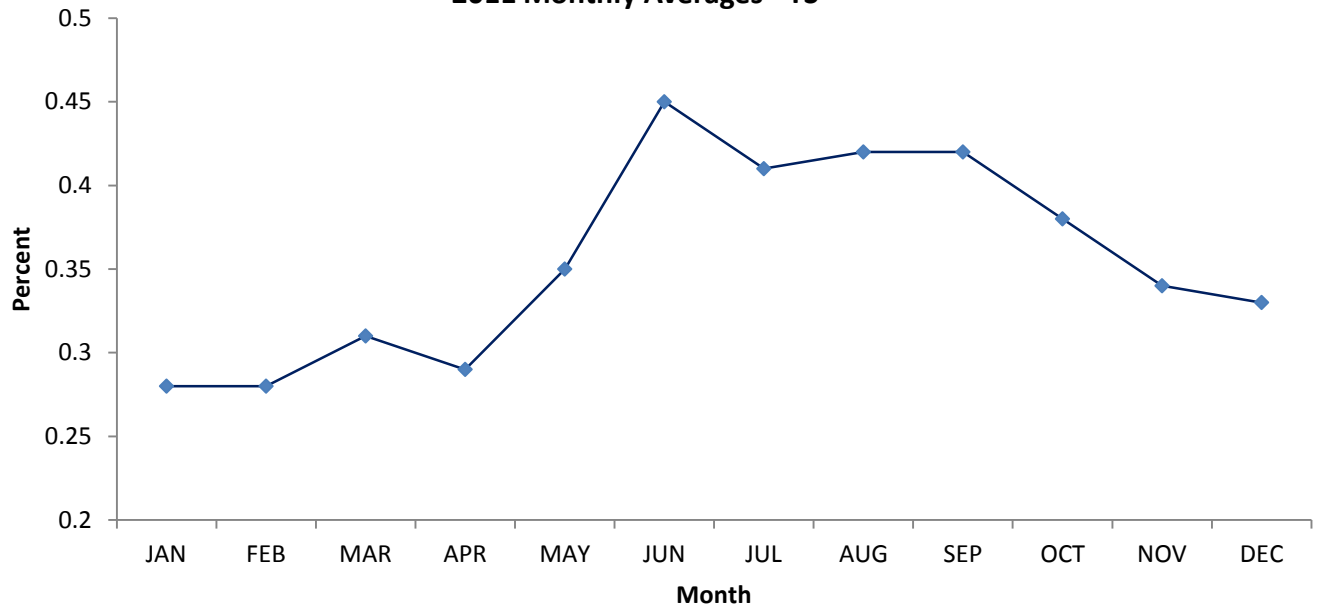
**MBC Combined Centrate  
2011 Monthly Averages - TSS**



**MBC Combined Centrate  
2011 Monthly Averages - VSS**

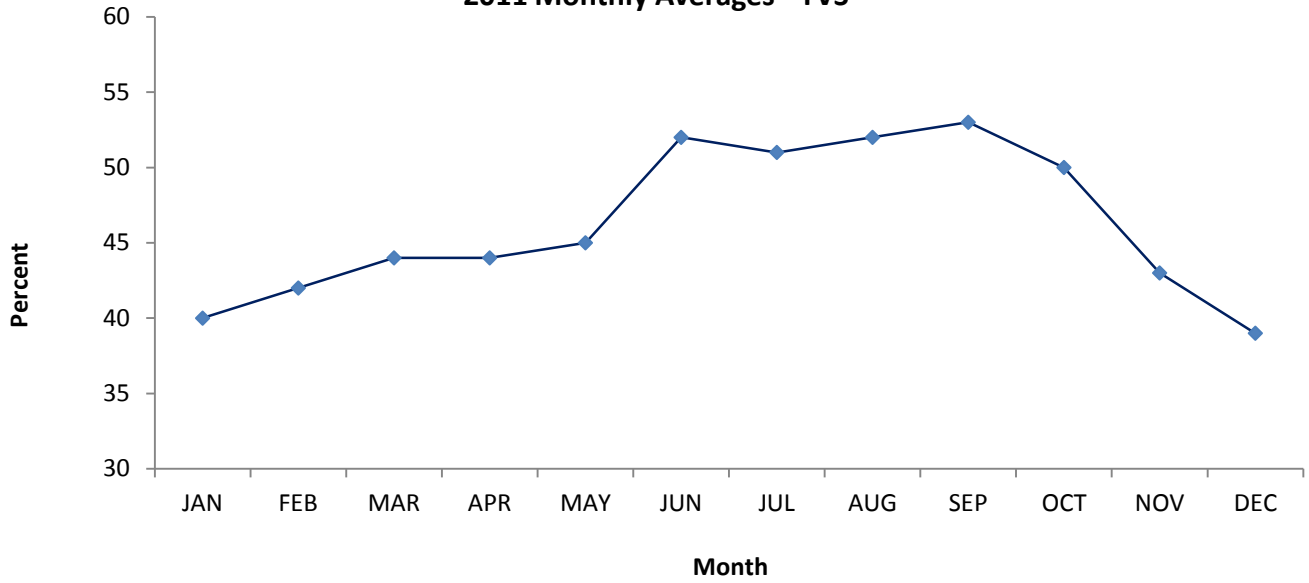


**MBC Combined Centrate  
2011 Monthly Averages - TS**

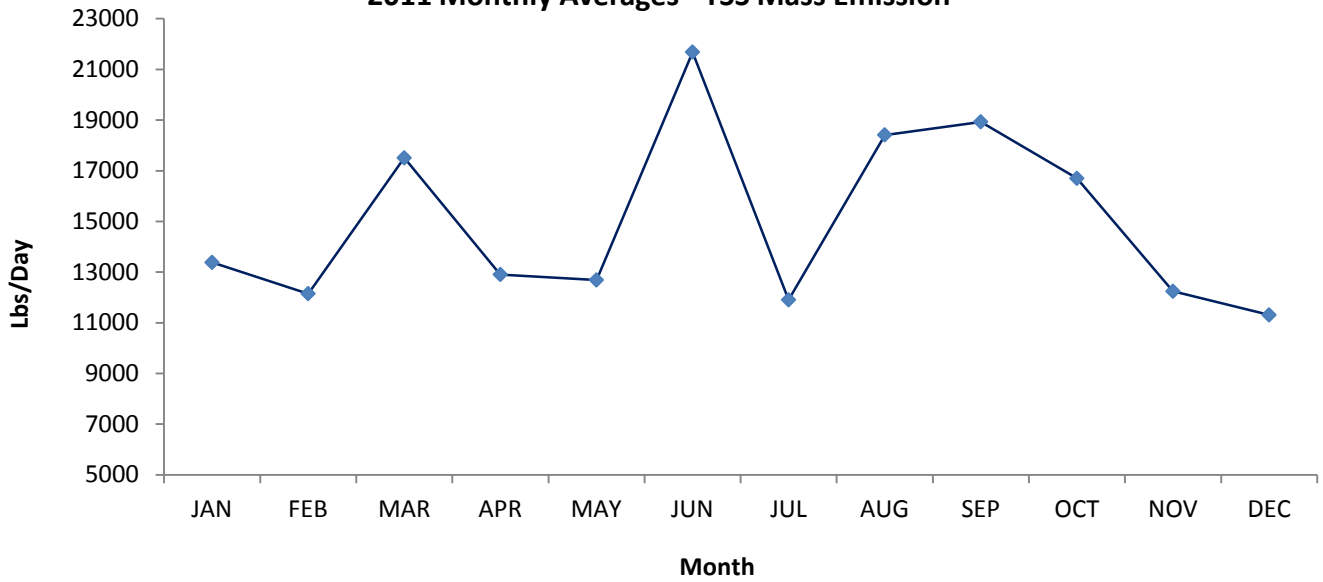




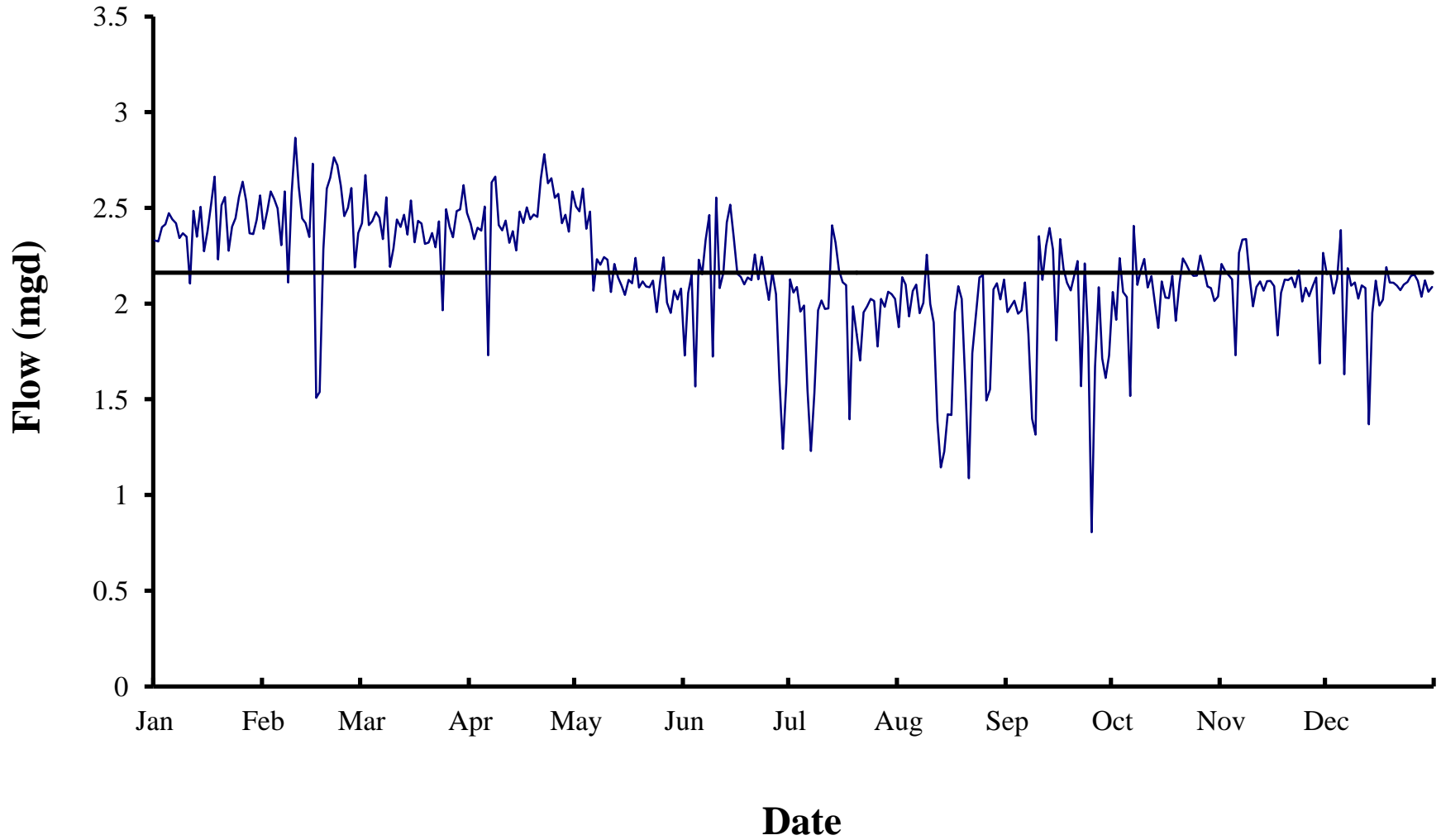
**MBC Combined Centrate  
2011 Monthly Averages - TVS**



**MBC Combined Centrate  
2011 Monthly Averages - TSS Mass Emission**



## 2011 MBC Return Stream Flow (mgd)



Metro Biosolids Center  
**2011 MBC Return Stream Daily Flows (mgd)**

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.330	2.391	2.419	2.416	2.508	1.728	2.127	1.876	1.955	2.061	2.207	2.154
2	2.324	2.483	2.671	2.337	2.482	2.055	2.058	2.138	1.985	1.915	2.172	2.162
3	2.399	2.585	2.411	2.397	2.601	2.151	2.087	2.100	2.015	2.237	2.150	2.053
4	2.415	2.547	2.430	2.381	2.390	1.567	1.958	1.933	1.946	2.060	2.127	2.130
5	2.473	2.497	2.478	2.506	2.480	2.229	1.990	2.066	1.964	2.035	1.730	2.384
6	2.441	2.305	2.449	1.730	2.068	2.152	1.549	2.099	2.111	1.517	2.265	1.630
7	2.420	2.586	2.337	2.633	2.232	2.333	1.230	1.949	1.841	2.405	2.333	2.185
8	2.342	2.111	2.555	2.662	2.202	2.462	1.531	2.004	1.399	2.098	2.336	2.094
9	2.368	2.573	2.191	2.410	2.243	1.723	1.964	2.255	1.315	2.175	2.141	2.110
10	2.350	2.866	2.288	2.383	2.229	2.554	2.016	1.998	2.352	2.233	1.986	2.026
11	2.105	2.611	2.439	2.434	2.061	2.081	1.972	1.901	2.124	2.084	2.087	2.094
12	2.484	2.444	2.401	2.318	2.207	2.159	1.975	1.387	2.303	2.143	2.116	2.082
13	2.349	2.420	2.464	2.378	2.137	2.423	2.409	1.144	2.394	2.006	2.068	1.369
14	2.506	2.349	2.361	2.278	2.095	2.516	2.319	1.227	2.281	1.872	2.117	1.951
15	2.273	2.730	2.539	2.480	2.045	2.349	2.176	1.421	1.807	2.116	2.119	2.119
16	2.377	1.508	2.320	2.421	2.124	2.156	2.112	1.418	2.337	2.031	2.091	1.990
17	2.512	1.537	2.432	2.503	2.106	2.139	2.097	1.955	2.181	2.028	1.834	2.020
18	2.662	2.283	2.419	2.441	2.239	2.100	1.396	2.091	2.109	2.145	2.056	2.191
19	2.231	2.601	2.312	2.465	2.084	2.137	1.985	2.024	2.068	1.910	2.126	2.110
20	2.514	2.658	2.318	2.453	2.115	2.122	1.840	1.571	2.145	2.103	2.122	2.109
21	2.557	2.763	2.368	2.652	2.089	2.257	1.702	1.087	2.223	2.236	2.136	2.093
22	2.276	2.723	2.293	2.781	2.085	2.127	1.954	1.742	1.568	2.204	2.086	2.070
23	2.402	2.617	2.430	2.629	2.119	2.244	1.984	1.931	2.210	2.167	2.174	2.099
24	2.447	2.457	1.965	2.655	1.955	2.122	2.024	2.136	1.825	2.145	2.011	2.112
25	2.557	2.499	2.492	2.553	2.116	2.019	2.013	2.149	0.805	2.146	2.083	2.145
26	2.637	2.603	2.401	2.573	2.242	2.164	1.775	1.494	1.671	2.252	2.038	2.152
27	2.538	2.189	2.346	2.420	2.005	2.049	2.024	1.552	2.085	2.178	2.092	2.118
28	2.367	2.369	2.483	2.464	1.951	1.600	1.983	2.075	1.713	2.089	2.136	2.036
29	2.363		2.492	2.375	2.067	1.240	2.062	2.106	1.612	2.081	1.687	2.121
30	2.438		2.619	2.585	2.022	1.583	2.049	2.022	1.729	2.013	2.265	2.062
31	2.565		2.474		2.079		2.024	2.125		2.037		2.086
Avg	2.420	2.440	2.406	2.457	2.174	2.085	1.948	1.838	1.936	2.088	2.096	2.066
Min	2.105	1.508	1.965	1.730	1.951	1.240	1.230	1.087	0.805	1.517	1.687	1.369
Max	2.662	2.866	2.671	2.781	2.601	2.554	2.409	2.255	2.394	2.405	2.336	2.384

POINT LOMA WASTEWATER TREATMENT PLANT  
METRO BIOSOLIDS CENTER  
ANNUAL SLUDGE CENTRATE COMPOSITES  
Trace Metals

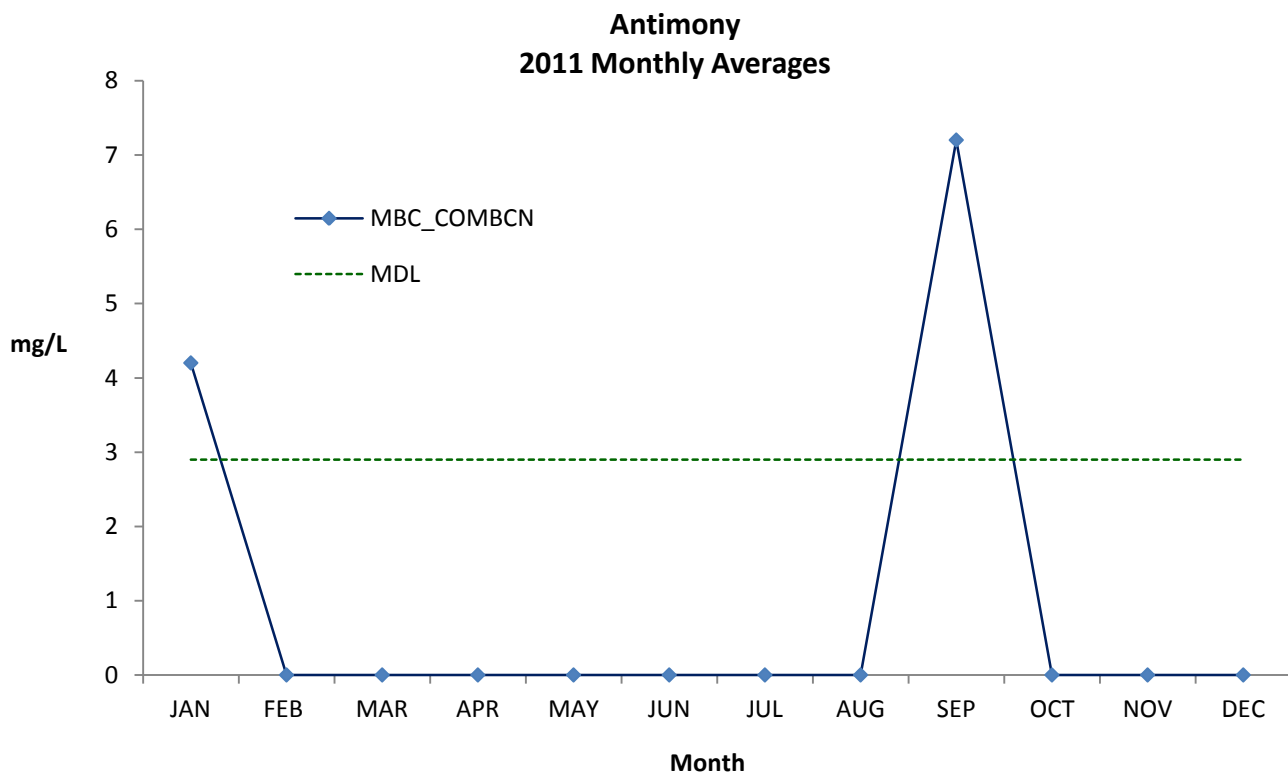
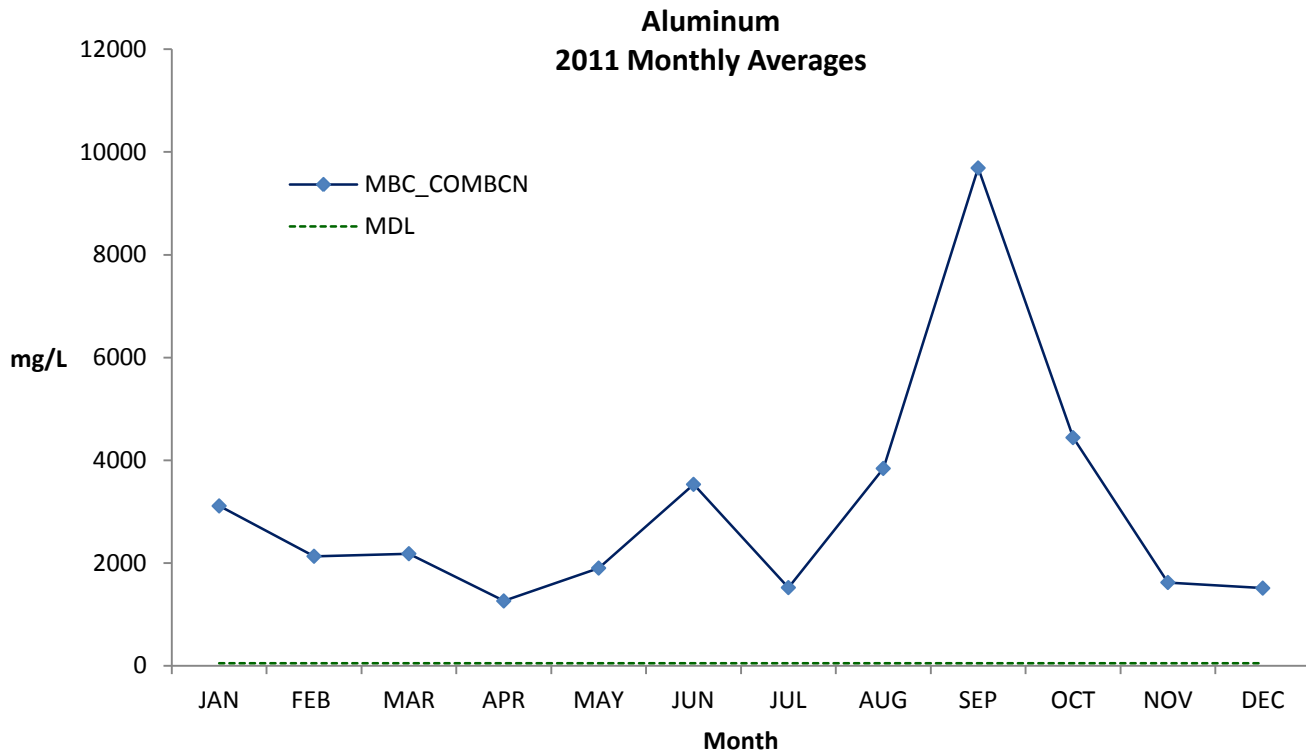
2011 Annual

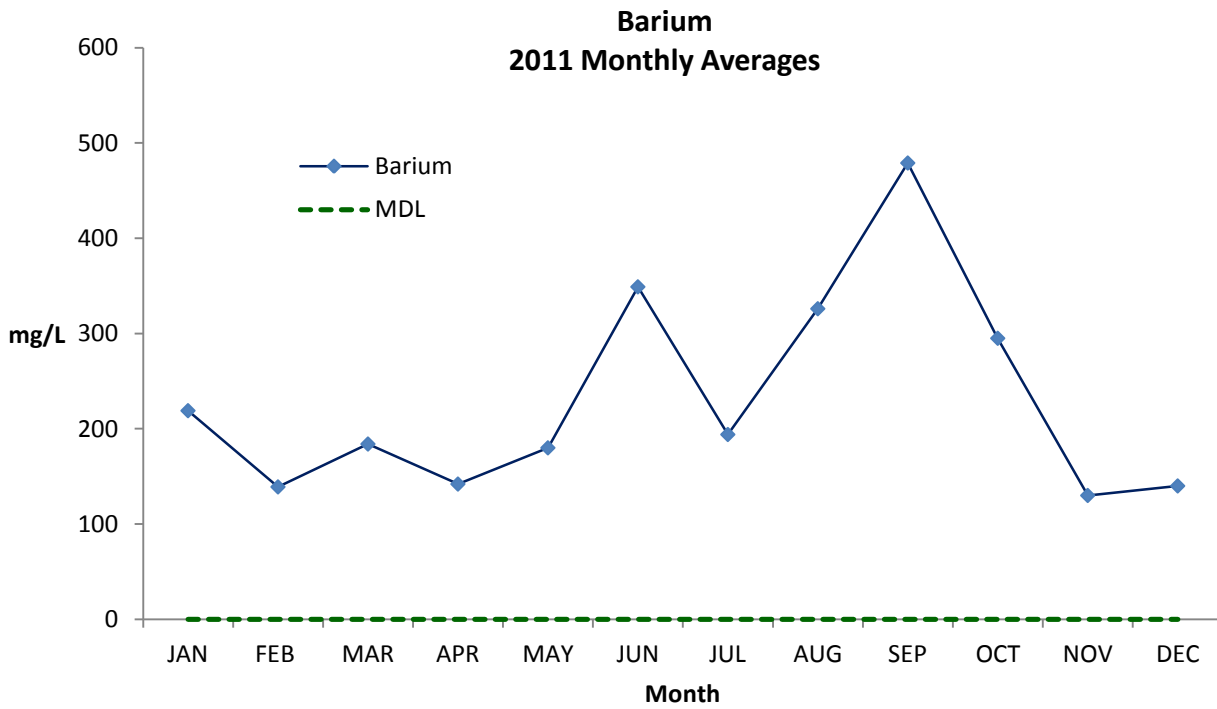
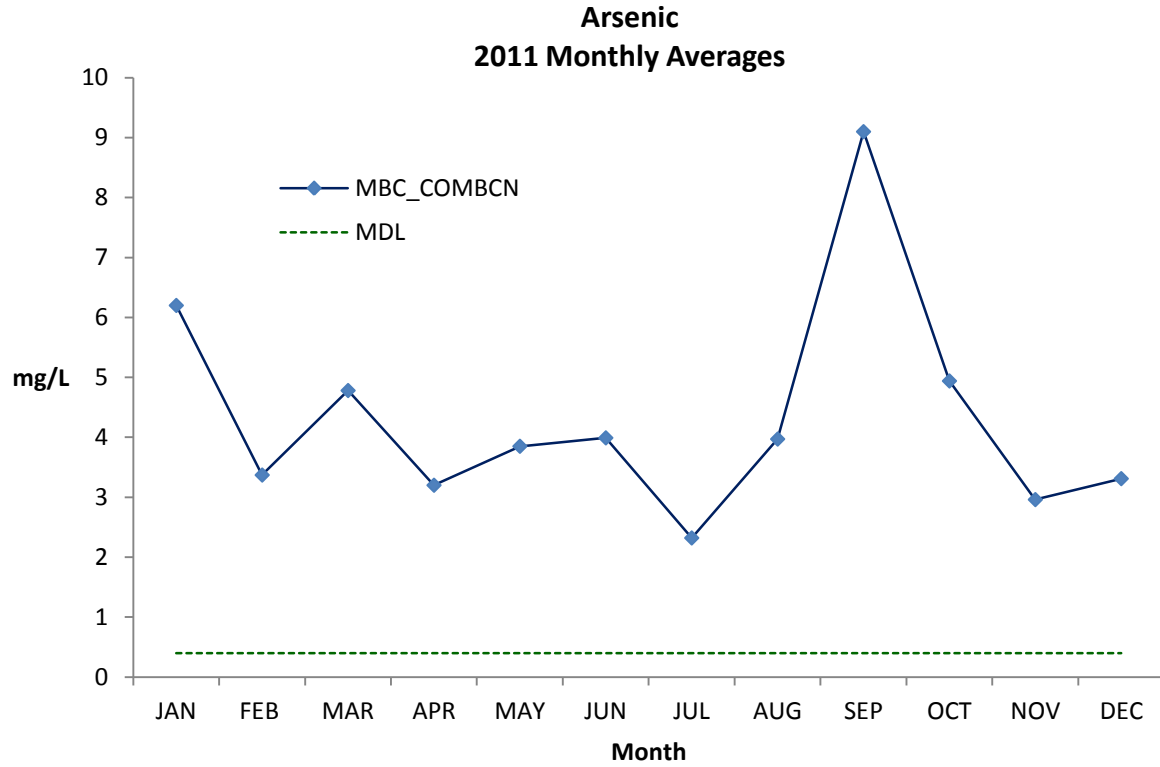
Source:	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	
Date:	31-JAN-2011	28-FEB-2011	31-MAR-2011	30-APR-2011	31-MAY-2011	30-JUN-2011	
Sample ID:	P551610	P554879	P559211	P563097	P566777	P570761	
===== =====	===== =====	===== =====	===== =====	===== =====	===== =====	===== =====	
Aluminum	47 UG/L	3110	2130	2180	1260	1900	3530
Antimony	2.9 UG/L	4.2	ND	ND	ND	ND	ND
Arsenic	.4 UG/L	6.2	3.4	4.8	3.2	3.9	4.0
Barium	.039 UG/L	219	139	184	142	180	349
Beryllium	.022 UG/L	ND	0.03	0.07	0.07	ND	0.11
Cadmium	.53 UG/L	1.1	ND	ND	ND	ND	1.2
Chromium	1.2 UG/L	21	13	19	12	15	37
Cobalt	.85 UG/L	3.2	3.0	3.9	4.5	4.4	5.3
Copper	2 UG/L	259	171	247	165	226	540
Iron	37 UG/L	45300	44000	49500	33200	40100	73600
Lead	2 UG/L	6	ND	7	5	6	11
Manganese	.24 UG/L	371	456	353	301	355	513
Mercury	.005 UG/L	0.17	0.25	0.35	0.28	0.28	0.48
Molybdenum	.89 UG/L	9.8	7.4	9.5	6.2	10.1	16.1
Nickel	.53 UG/L	33	32	34	31	34	45
Selenium	.28 UG/L	1.98	1.70	3.10	2.20	2.96	5.63
Silver	.4 UG/L	2	ND	2	ND	1	4
Thallium	3.9 UG/L	ND	ND	ND	ND	ND	ND
Vanadium	.64 UG/L	6.9	5.6	7.8	6.0	6.8	17.3
Zinc	2.5 UG/L	314	206	335	229	279	682

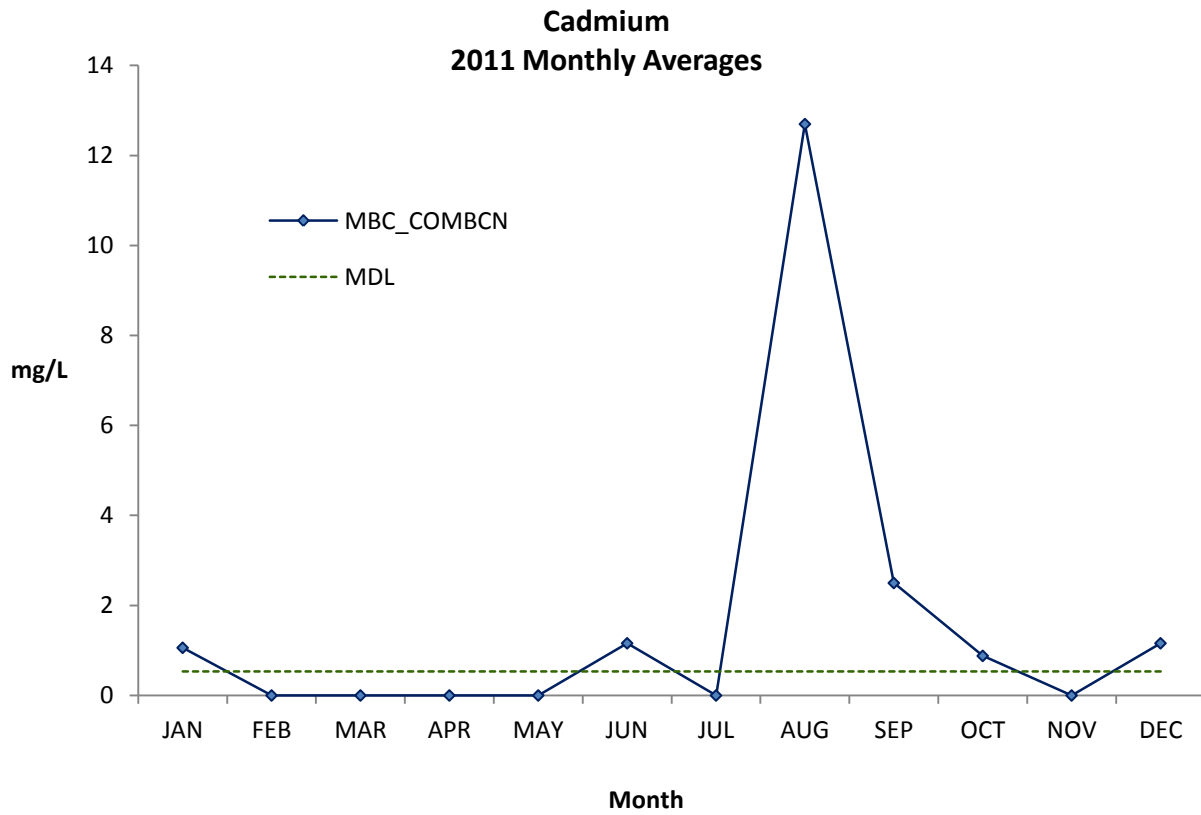
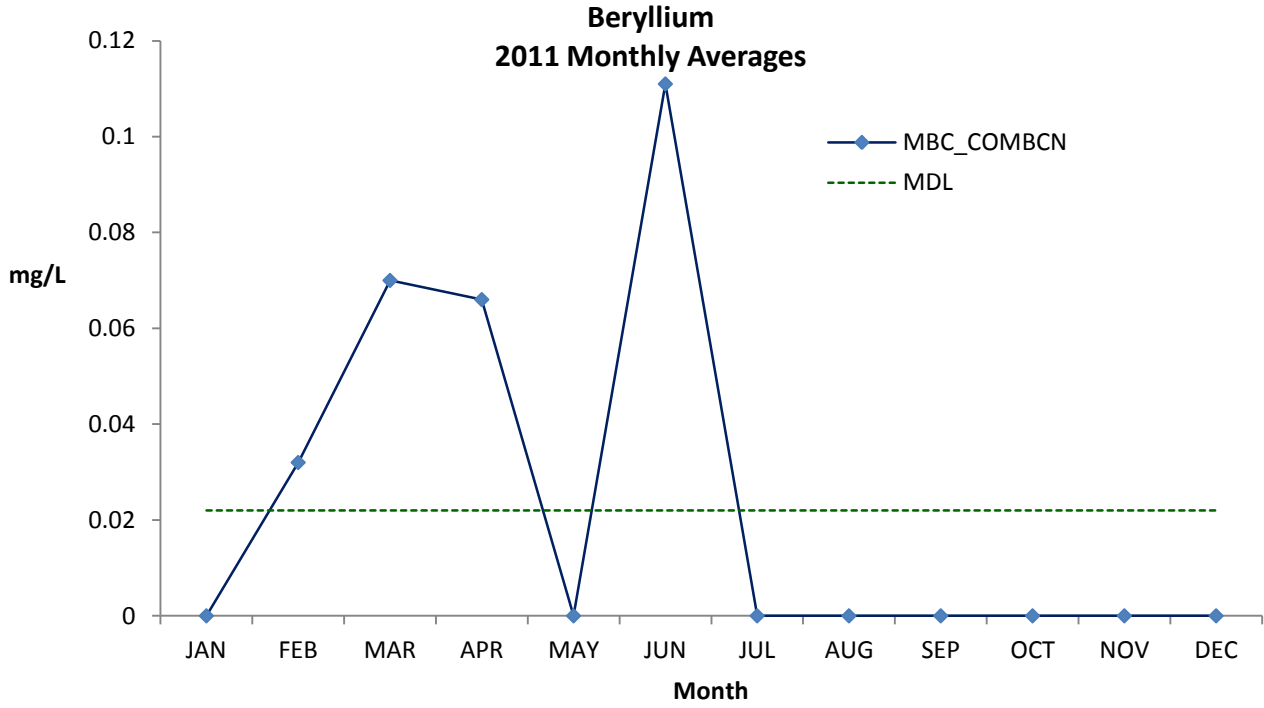
Source:	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	
Date:	31-JUL-2011	31-AUG-2011	30-SEP-2011	31-OCT-2011	30-NOV-2011	31-DEC-2011	
Sample ID:	P575134	P579596	P586865	P590289	P597128	P601034	
===== =====	===== =====	===== =====	===== =====	===== =====	===== =====	===== =====	
Aluminum	47 UG/L	1520	3840	9690	4440	1620	1510
Antimony	2.9 UG/L	ND	ND	7.2	ND	ND	ND
Arsenic	.4 UG/L	2.3	4.0	9.1	4.9	3.0	3.3
Barium	.039 UG/L	194	326	479	295	130	140
Beryllium	.022 UG/L	ND	ND	ND	ND	ND	ND
Cadmium	.53 UG/L	ND	12.7	2.5	0.9	ND	1.2
Chromium	1.2 UG/L	14	33	57	37	17	15
Cobalt	.85 UG/L	4.1	6.4	8.2	6.2	5.0	4.1
Copper	2 UG/L	223	515	931	494	188	174
Iron	37 UG/L	41400	72700	123000	64200	30600	32300
Lead	2 UG/L	7	11	24	11	2	ND
Manganese	.24 UG/L	359	363	594	430	249	254
Mercury	.005 UG/L	0.28	0.36	0.96	0.29	0.27	0.04
Molybdenum	.89 UG/L	7.6	19.6	34.0	18.0	8.8	6.6
Nickel	.53 UG/L	ND	43	67	45	26	28
Selenium	.28 UG/L	1.96	2.16	9.50	3.23	3.86	3.77
Silver	.4 UG/L	ND	4	10	4	1	1
Thallium	3.9 UG/L	ND	ND	ND	ND	ND	ND
Vanadium	.64 UG/L	9.5	22.4	31.7	20.4	5.2	8.3
Zinc	2.5 UG/L	304	703	1110	724	233	245

ND= Not Detected  
NA= Not Analyzed  
NS= Not Sampled  
NR= Not Required

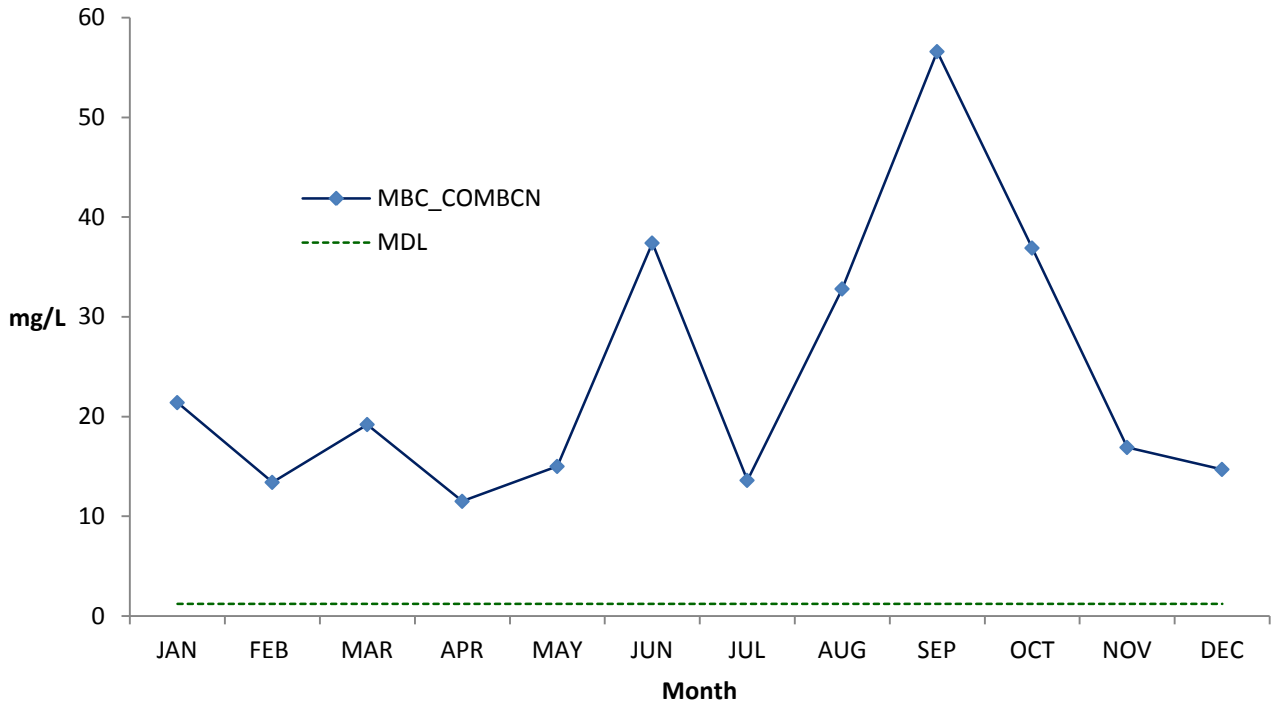
MBC\_COMBCN = Metro Biosolids Center Combined Sludge Centrate.



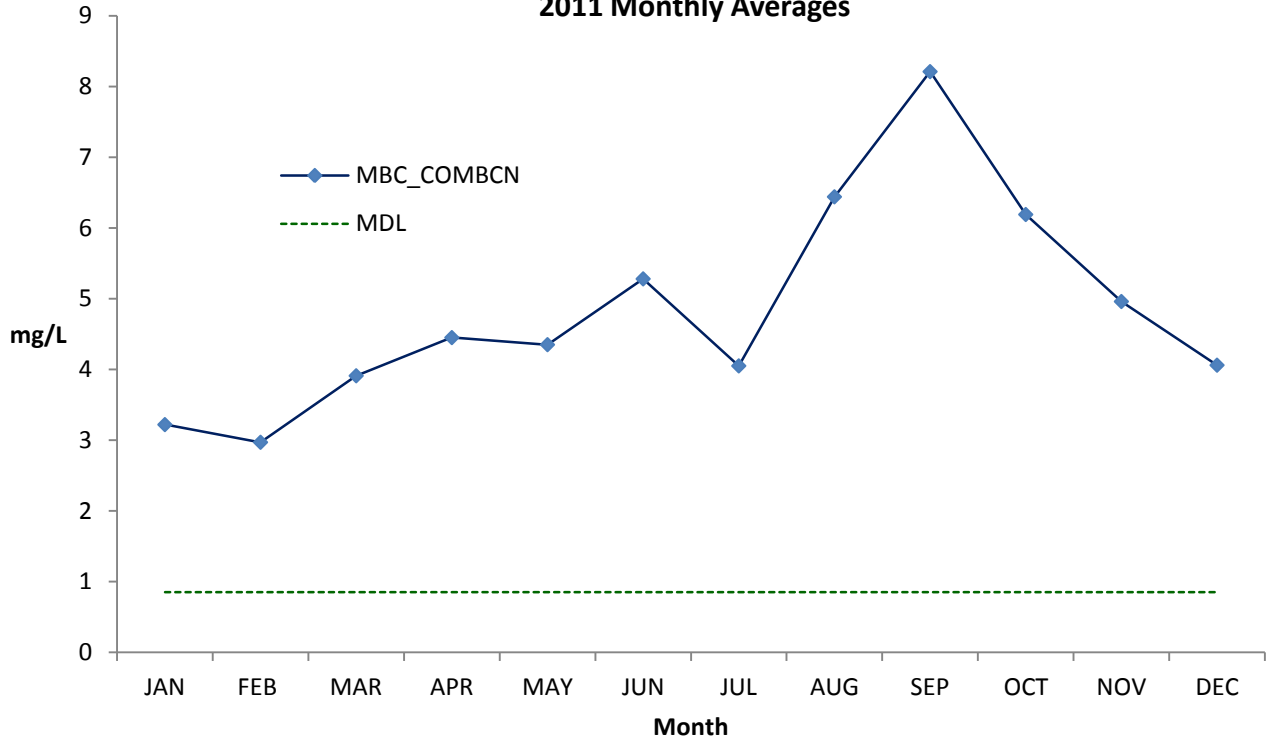




### Chromium 2011 Monthly Averages

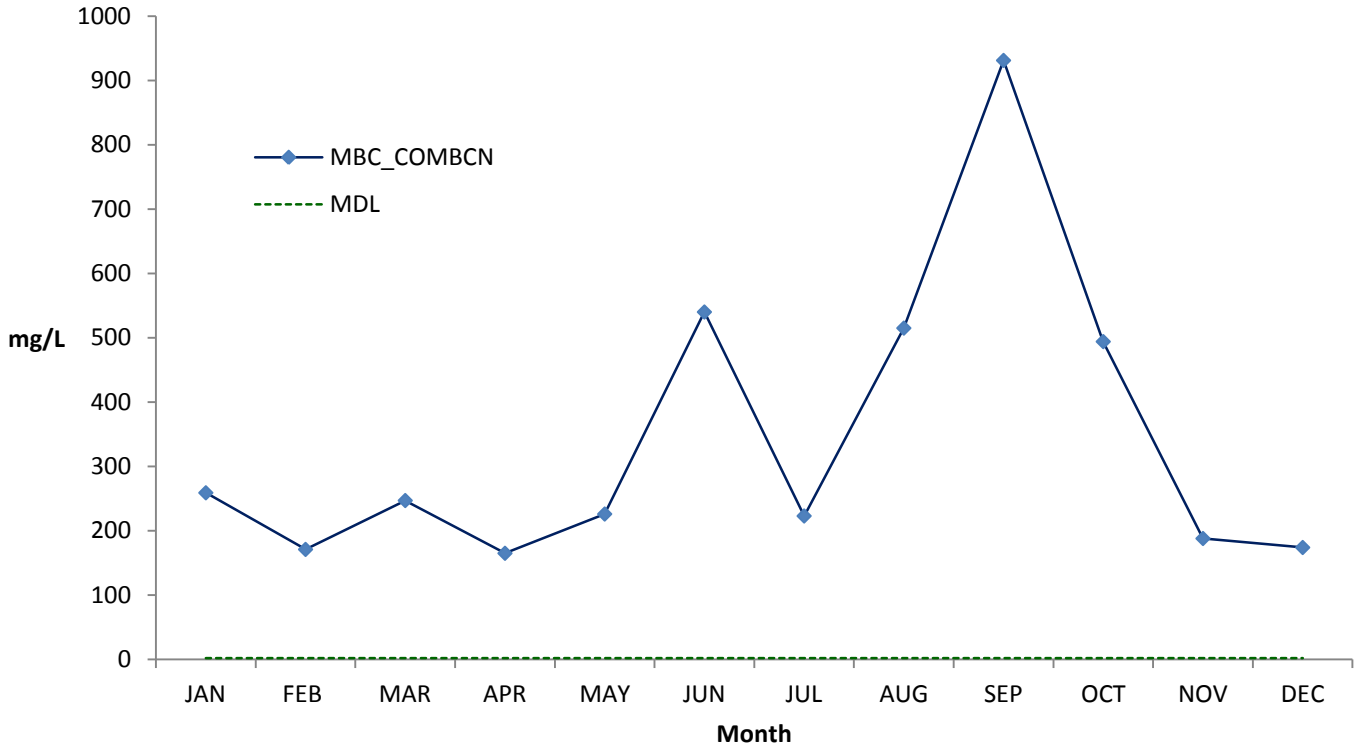


### Cobalt 2011 Monthly Averages

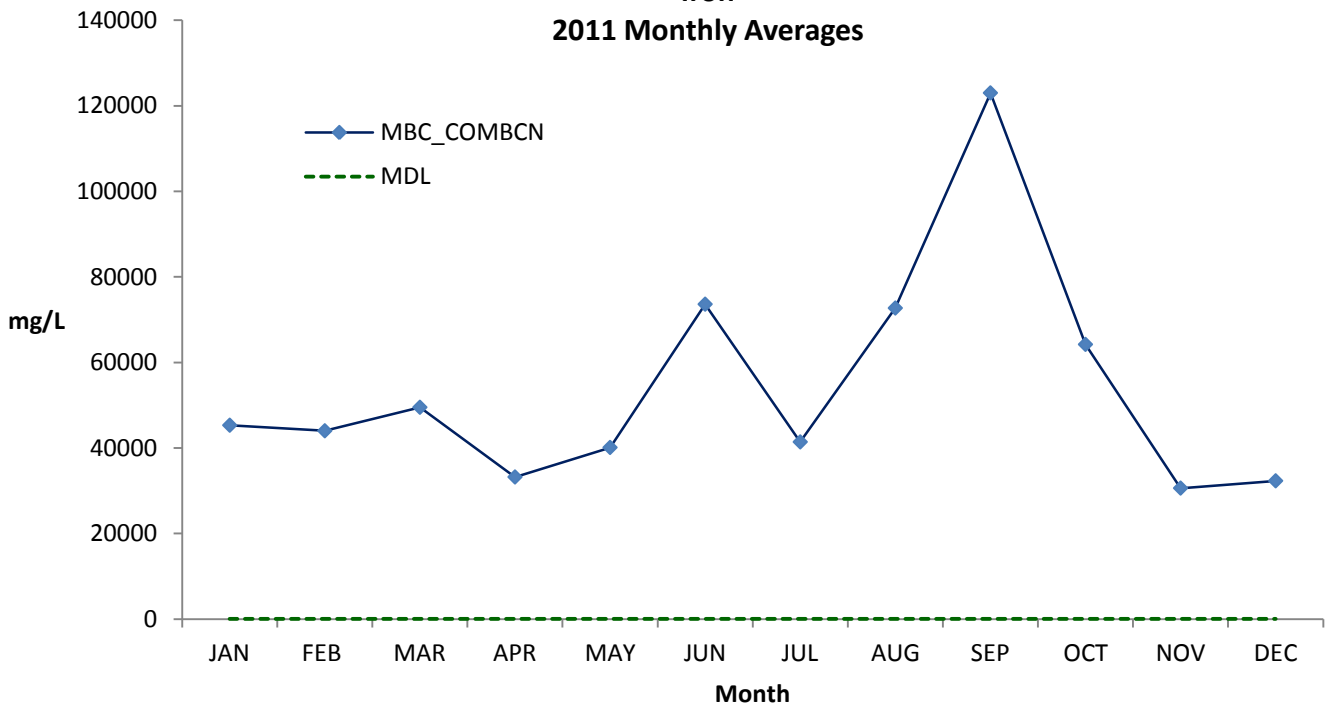


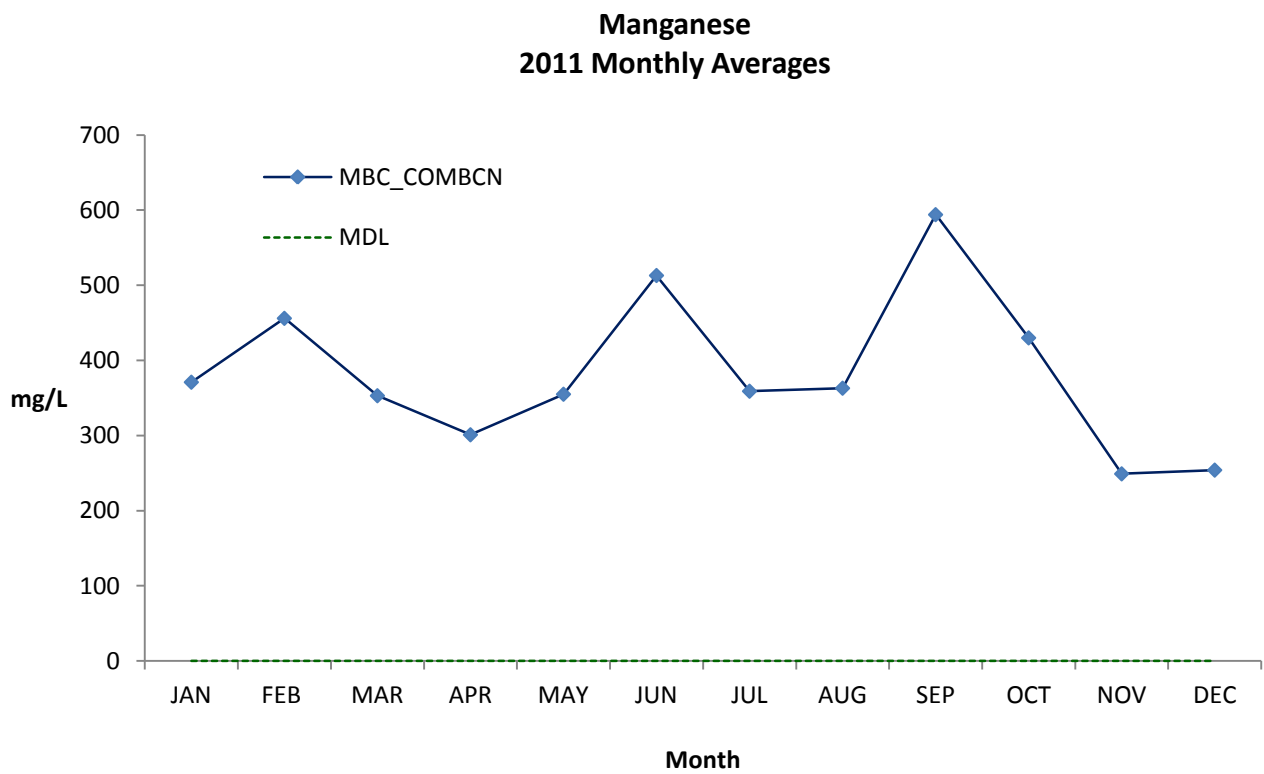
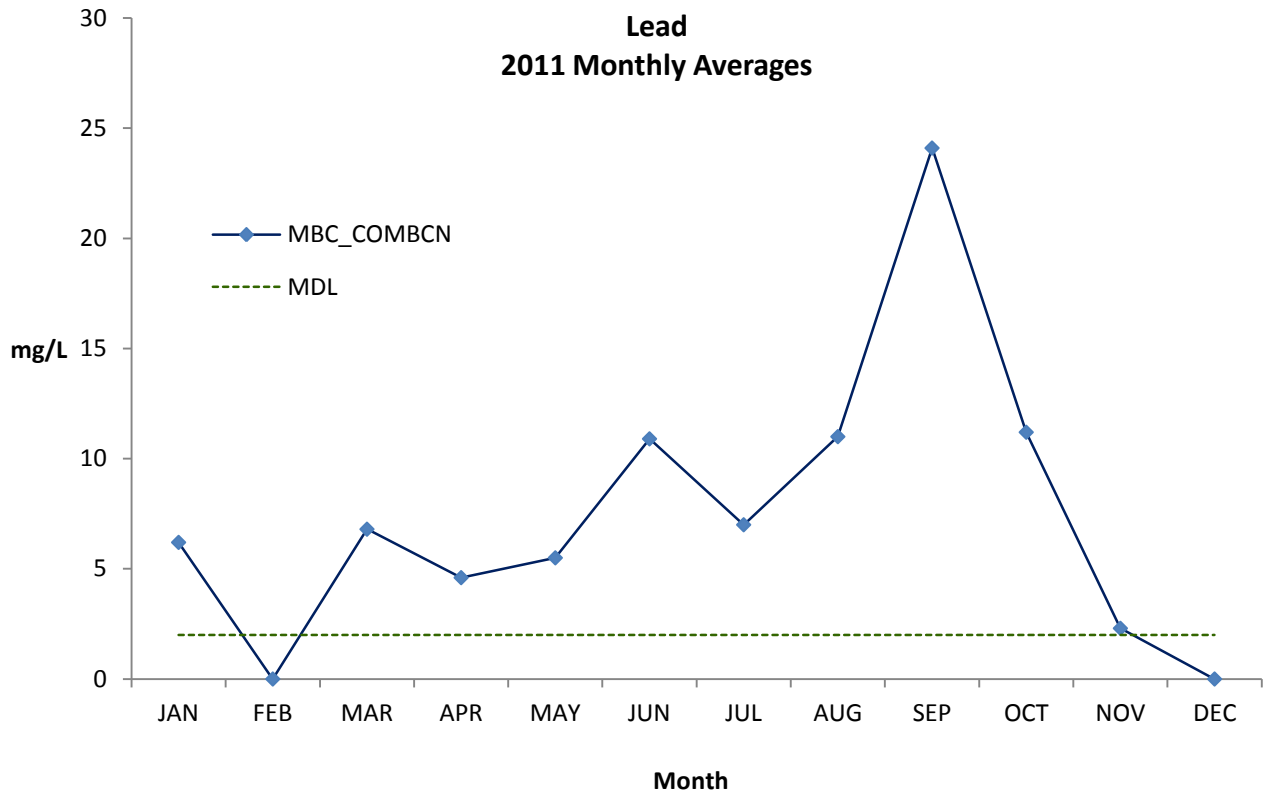


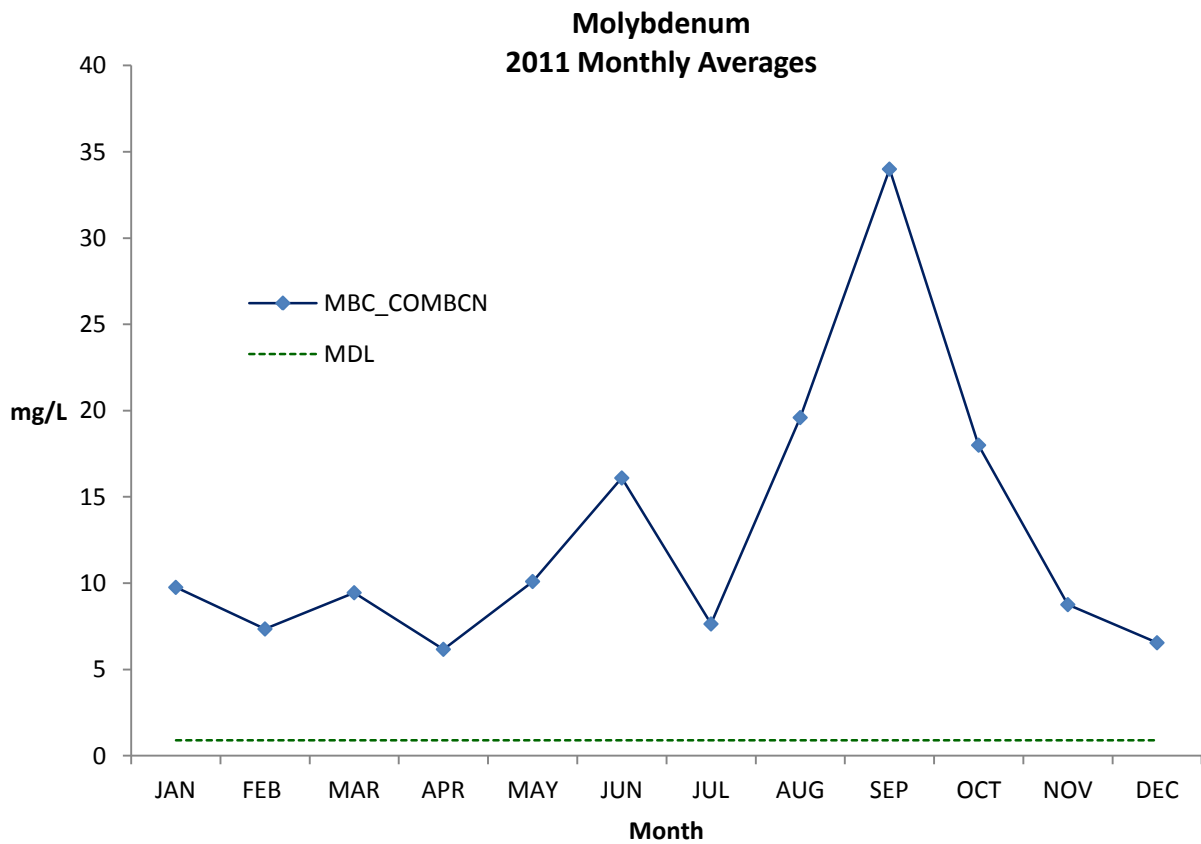
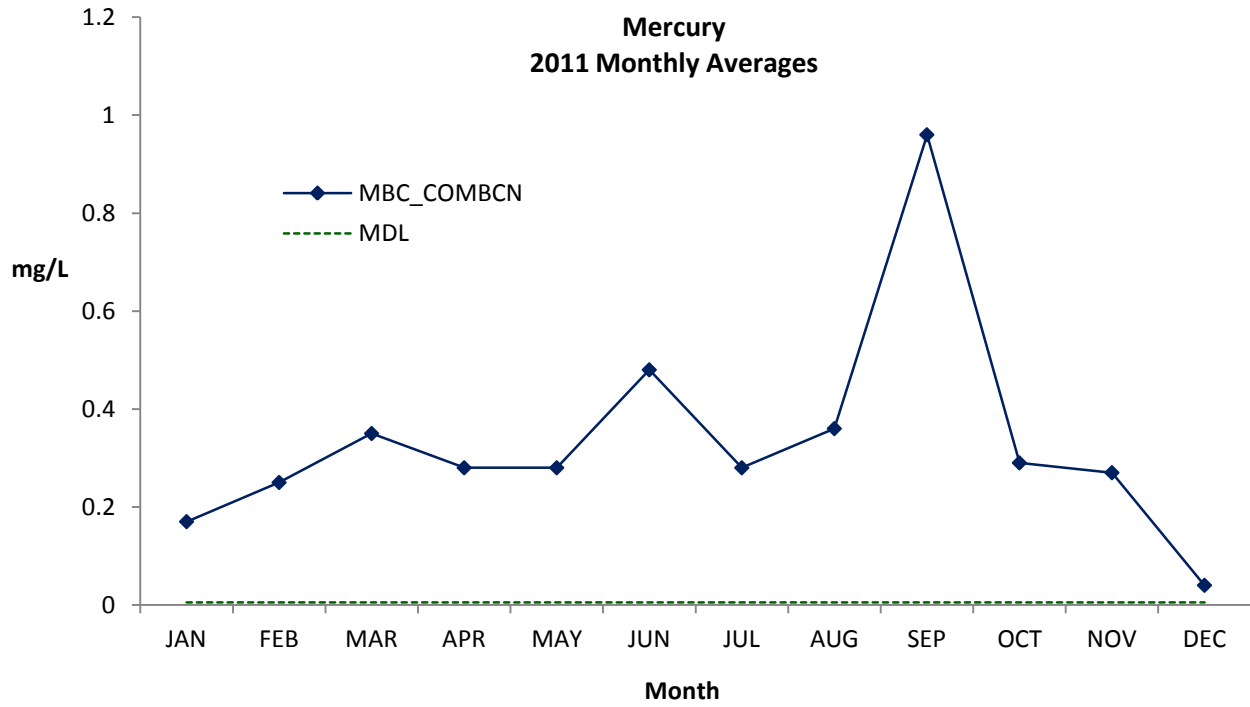
**Copper**  
**2011 Monthly Averages**

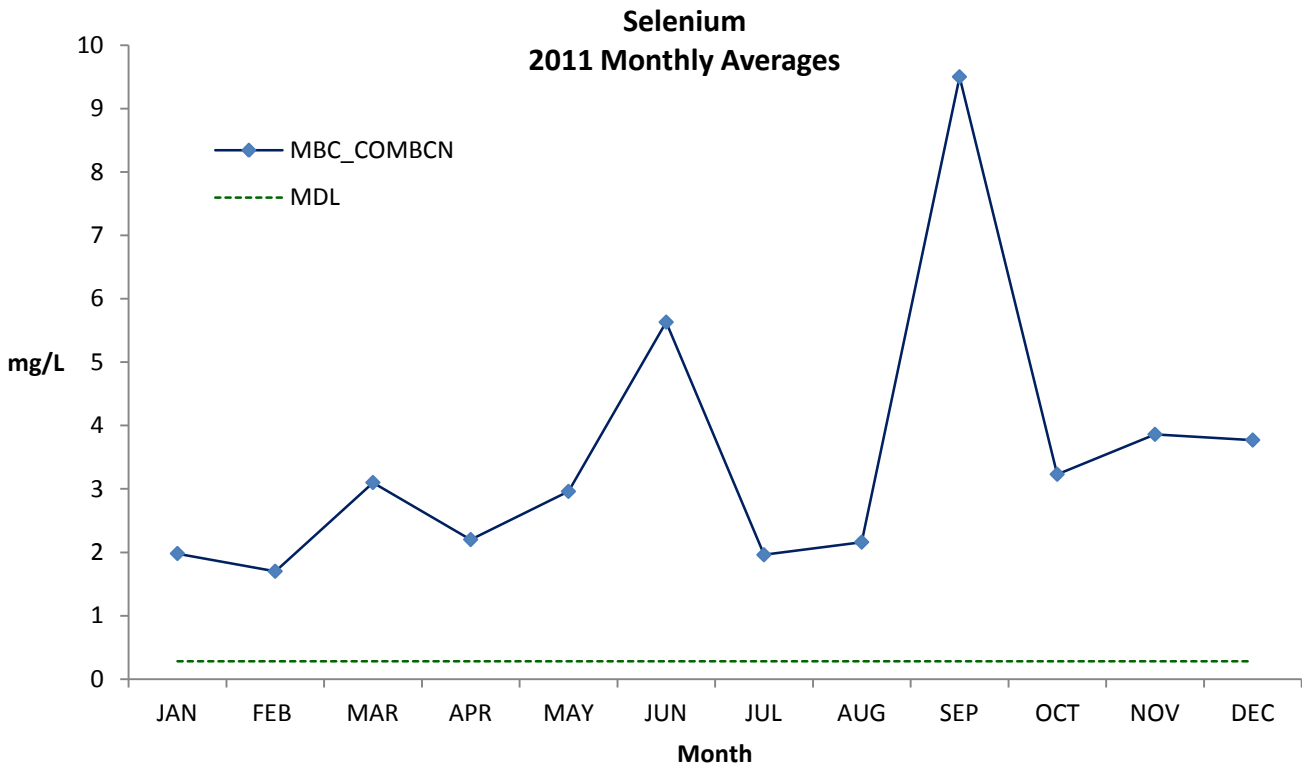
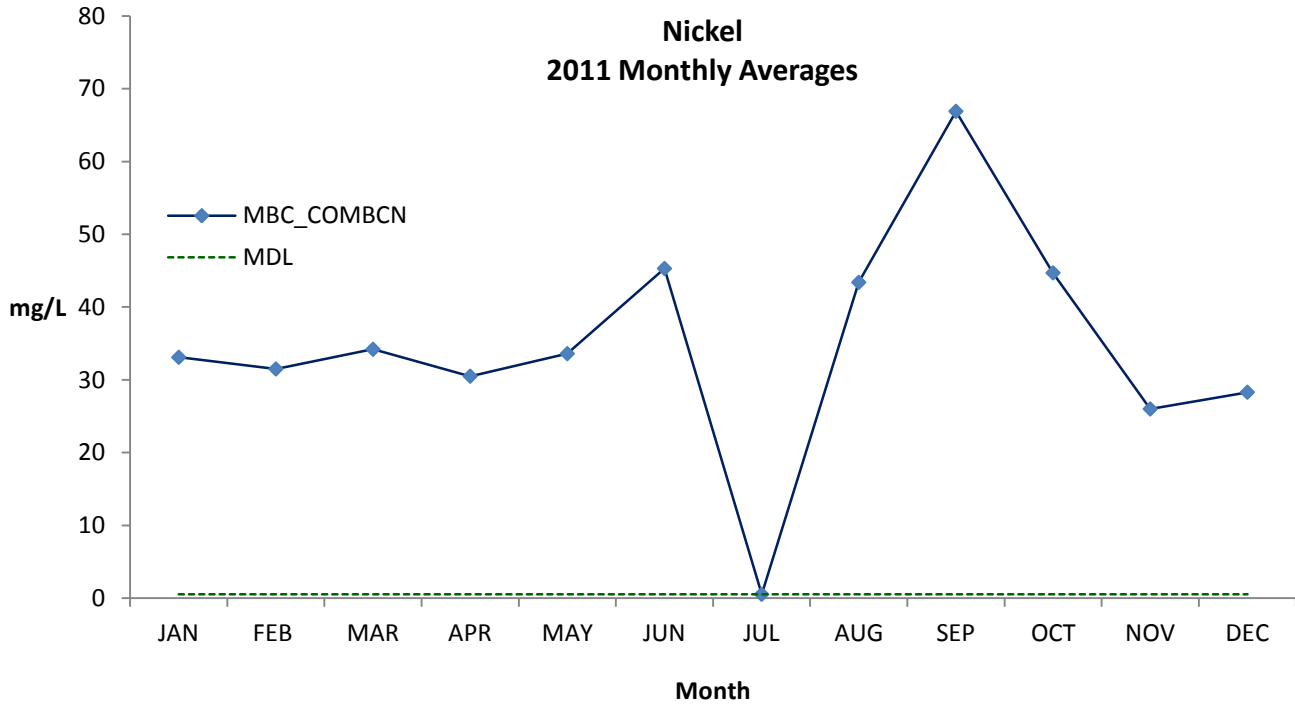


**Iron**  
**2011 Monthly Averages**

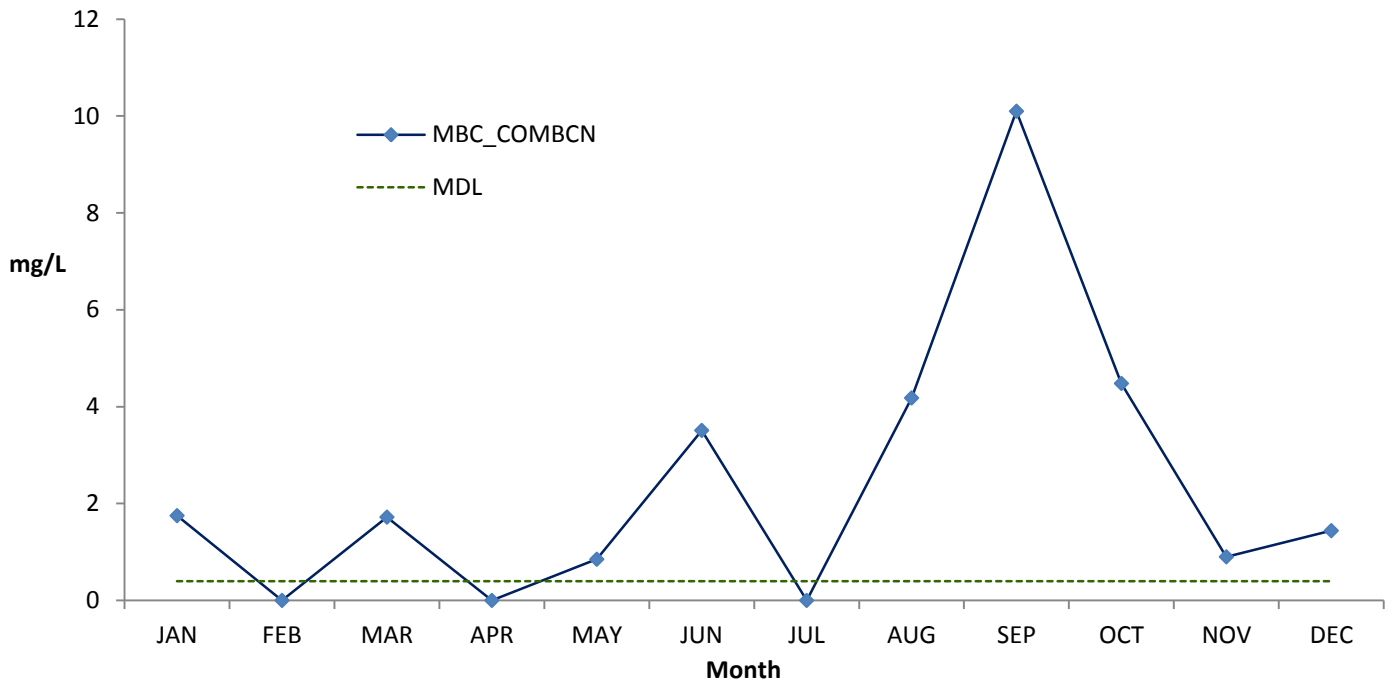




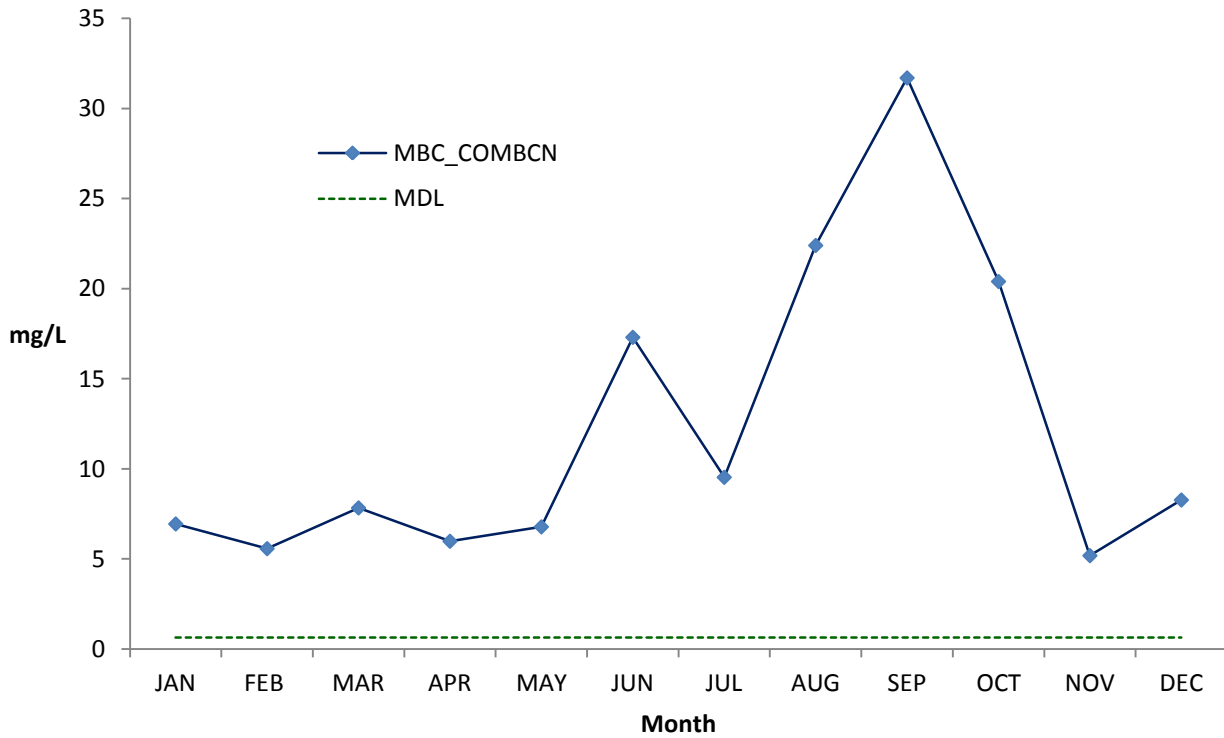




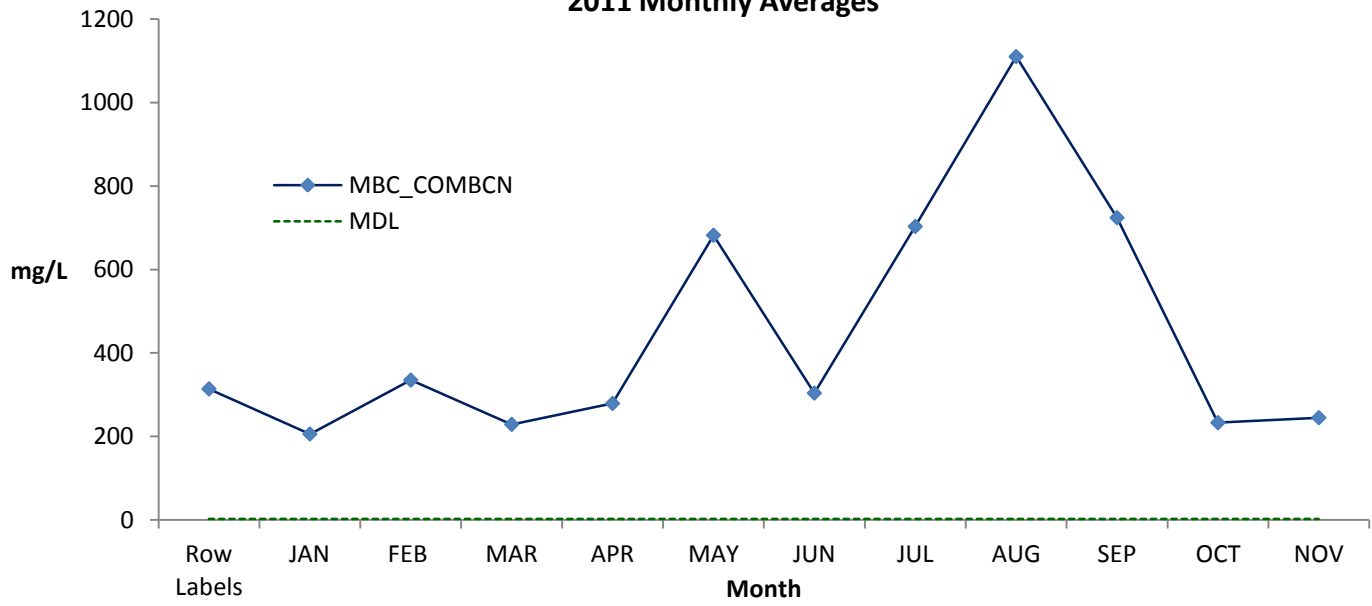
### Silver 2011 Monthly Averages



### Vanadium 2011 Monthly Averages



### Zinc 2011 Monthly Averages



## C. Digester and Digested Sludge Data Summary

### MBC Digester and Digested Sludge Data Summary

Metro Biosolids Center Annual Report  
 Digesters  
 Year: 2011

#### Digester 1

	pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2011	NOT IN SERVICE							
FEBRUARY -2011	NOT IN SERVICE							
MARCH -2011	NOT IN SERVICE							
APRIL -2011	NOT IN SERVICE							
MAY -2011	NOT IN SERVICE							
JUNE -2011	NOT IN SERVICE							
JULY -2011	NOT IN SERVICE							
AUGUST -2011	NOT IN SERVICE							
SEPTEMBER-2011	NOT IN SERVICE							
OCTOBER -2011	NOT IN SERVICE							
NOVEMBER -2011	NOT IN SERVICE							
DECEMBER -2011	NOT IN SERVICE							

Average:

#### Digester 2

	pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2011	NOT IN SERVICE							
FEBRUARY -2011	NOT IN SERVICE							
MARCH -2011	NOT IN SERVICE							
APRIL -2011	NOT IN SERVICE							
MAY -2011	NOT IN SERVICE							
JUNE -2011	NOT IN SERVICE							
JULY -2011	NOT IN SERVICE							
AUGUST -2011	NOT IN SERVICE							
SEPTEMBER-2011	NOT IN SERVICE							
OCTOBER -2011	NOT IN SERVICE							
NOVEMBER -2011	NOT IN SERVICE							
DECEMBER -2011	NOT IN SERVICE							

Average:

#### Digester 3

	pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2011	7.12	2.2	68.1	2530	73	60.5	39.5	19
FEBRUARY -2011	7.12	2.0	71.2	2450	72	59.4	39.6	24
MARCH -2011	7.12	2.1	70.7	2500	74	59.9	40.1	23
APRIL -2011	7.11	2.3	70.7	2630	75	60.2	39.8	22
MAY -2011	7.11	2.4	70.0	2630	71	60.4	39.6	22
JUNE -2011	7.11	2.3	68.7	2350	66	60.1	39.9	22
JULY -2011	7.01	2.2	66.8	1860	59	59.2	40.8	23
AUGUST -2011	7.00	2.3	64.8	1590	58	60.2	39.8	20
SEPTEMBER-2011	6.94	2.4	66.7	1540	59	58.9	41.1	18
OCTOBER -2011	6.88	2.4	68.2	1530	60	59.6	40.4	19
NOVEMBER -2011	6.98	2.3	68.0	1760	59	60.2	39.9	18
DECEMBER -2011	7.05	2.2	67.0	2110	65	60.9	39.1	18
	7.05	2.3	68.4	2123	66	60.0	40.0	21

## D. Gas Production

### Metro Biosolids Center Annual Summary

Gas Report - 2011

Daily Monthly Averages

Month	GAS PRODUCTION (x1000 Cu. Ft.)			GAS CONSUMPTION (x1000 Cu. Ft.)		
	DIG 1	DIG 2	Total Gas Production	GAS FLARES	GAS COGENERATION	Total Gas Consumption
01			351,236.9	1,259	346,087	347,346
02			343,984.5	31,359	300,359	331,718
03			370,118.5	1,929	350,624	352,553
04			397,437.4	1,999	373,520	375,519
05			275,612.1	949	275,387	276,336
06			235,618.4	1,547	225,289	226,837
07			191,460.6	323	183,419	183,742
08			166,360.7	698	156,748	157,447
09			208,876.9	4,005	195,372	199,377
10			245,713.4	2,001	244,233	246,234
11			235,923.7	985	238,898	239,883
12			252,468.0	1,195	250,618	251,812
avg			272,900.9	4,021	261,713	265,734

### Monthly Totals

Month	GAS PRODUCTION (x1000 Cu. Ft.)			GAS CONSUMPTION (x1000 Cu. Ft.)			
	DIG 1	DIG 2	Total Gas Production	Gas Flares	Gas Cogeneration	Total Gas Consumption	
01			10,888,345.0	10,888,345.0	39,029	10,728,694	10,767,723
02			9,631,567.0	9,631,567.0	878,044	8,410,061	9,288,105
03			11,473,673.0	11,473,673.0	59,814	10,869,333	10,929,147
04			11,923,123.0	11,923,123.0	59,968	11,205,590	11,265,558
05			8,543,974.0	8,543,974.0	29,407	8,537,010	8,566,417
06			7,068,551.0	7,068,551.0	46,420	6,758,683	6,805,103
07			5,935,279.0	5,935,279.0	10,019	5,685,984	5,696,003
08			5,157,183.0	5,157,183.0	21,650	4,859,198	4,880,848
09			6,266,307.0	6,266,307.0	120,135	5,861,174	5,981,309
10			7,617,116.0	7,617,116.0	62,026	7,571,236	7,633,262
11			7,077,711.0	7,077,711.0	29,541	7,166,946	7,196,487
12			7,826,509.0	7,826,509.0	37,032	7,769,148	7,806,180
avg			8,284,111.5	8,284,111.5	116,090	7,951,921	8,068,012
sum			99,409,338.0	99,409,338.0	1,393,085	95,423,057	96,816,142



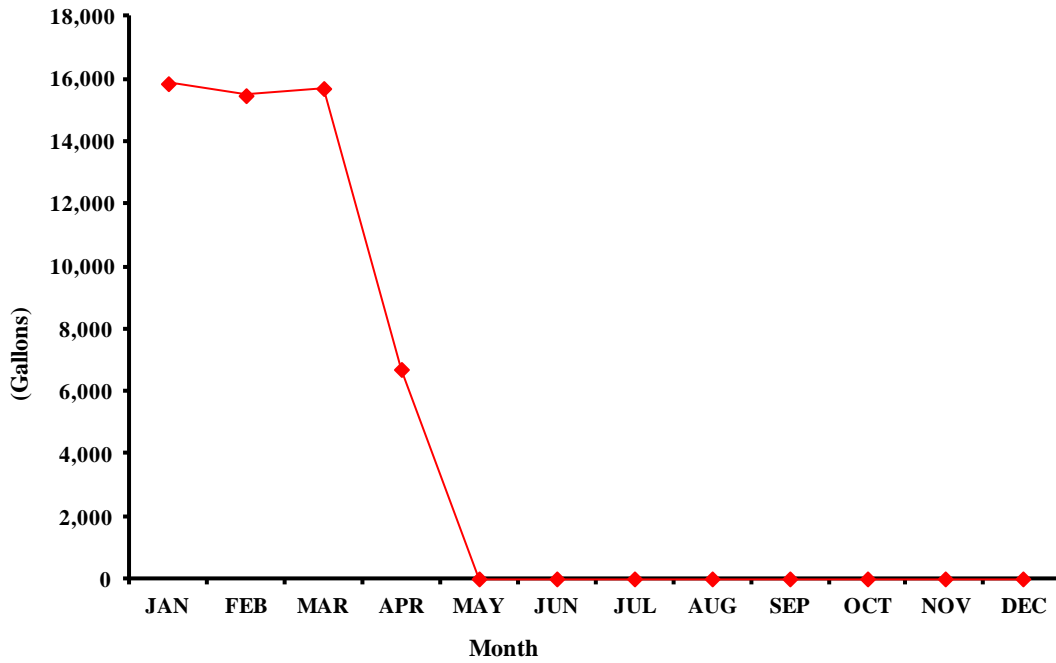
E. Chemical Usage

Metro Biosolids Center - Monthly Chemical Usage Report  
From 01-JAN-2011 TO 31-DEC-2011

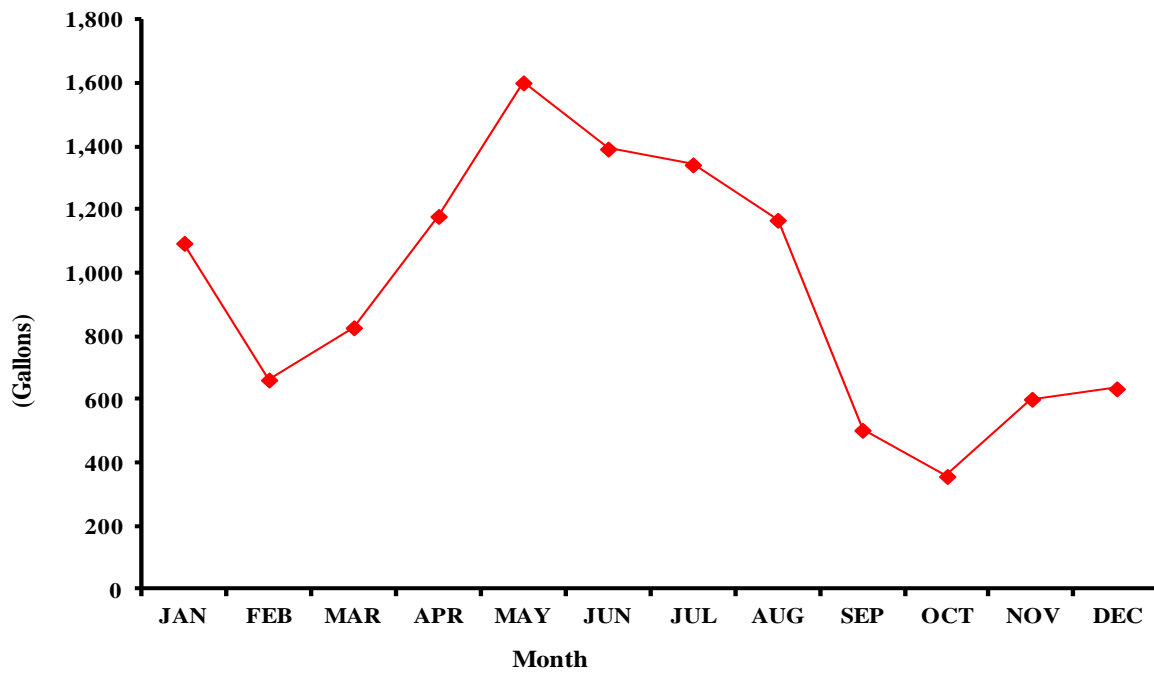
MON	Polymer Gallons	Ferric Chloride Gallons	Ferrous Chloride Gallons	Sodium Hydroxide Gallons	Hypochlorite Gallons	Sulfuric Acid Gallons
01	146,474	15,850	10,539	1,094	5,338	0
02	124,478	15,467	11,063	662	2,770	0
03	125,948	15,695	9,965	827	3,776	0
04	131,479	6,703	12,323	1,179	5,537	0
05	125,001	0	11,972	1,601	5,487	0
06	123,797	0	11,193	1,392	6,064	0
07	125,412	0	12,224	1,342	4,524	0
08	128,325	0	11,025	1,167	9,067	0
09	118,381	0	10,361	503	6,780	0
10	128,605	0	10,681	357	3,784	0
11	145,956	0	9,812	601	3,260	0
12	142,284	0	10,035	634	3,072	0
avg	130,512	4,476	10,933	947	4,955	0
sum	1,566,140	53,715	131,193	11,359	59,458	0

F. Graphs of Monthly Chemical Usage

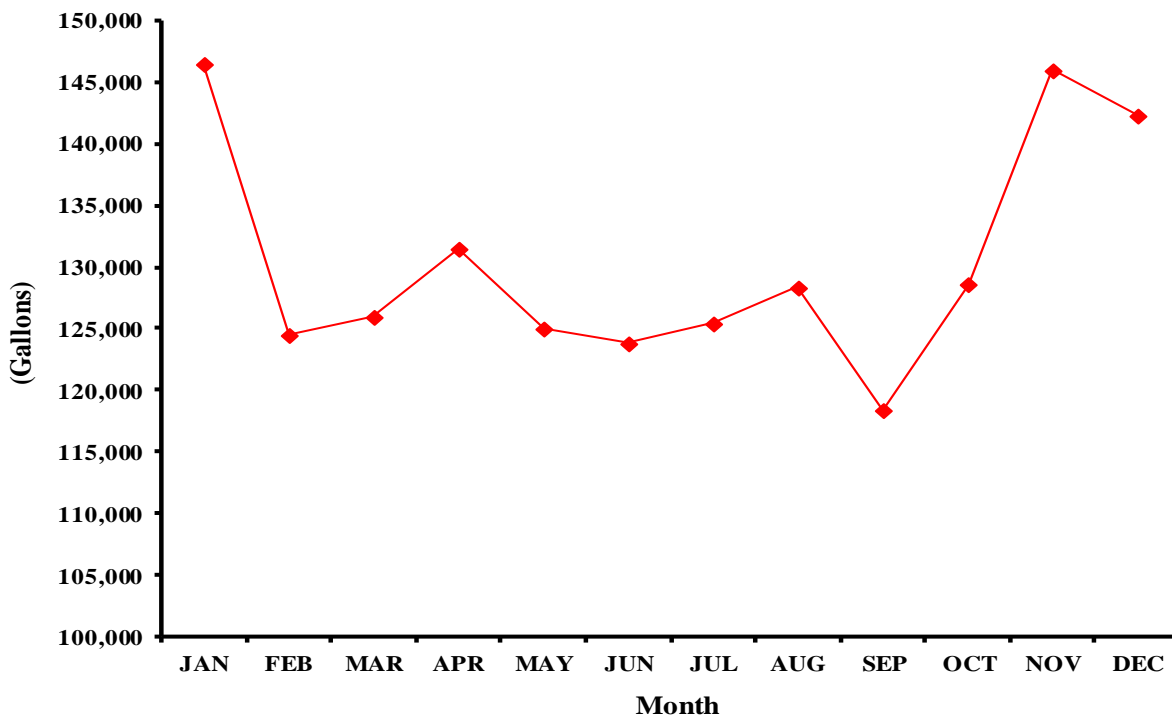
2011 Ferric Chloride Usage at MBC



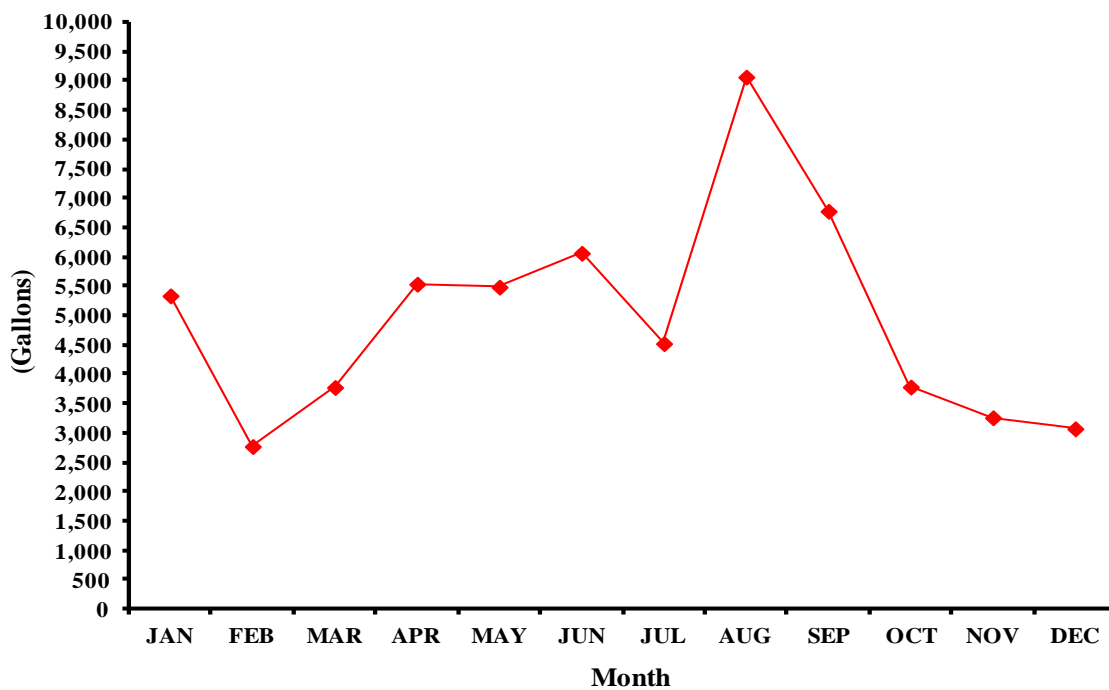
2011 Caustic Usage at MBC



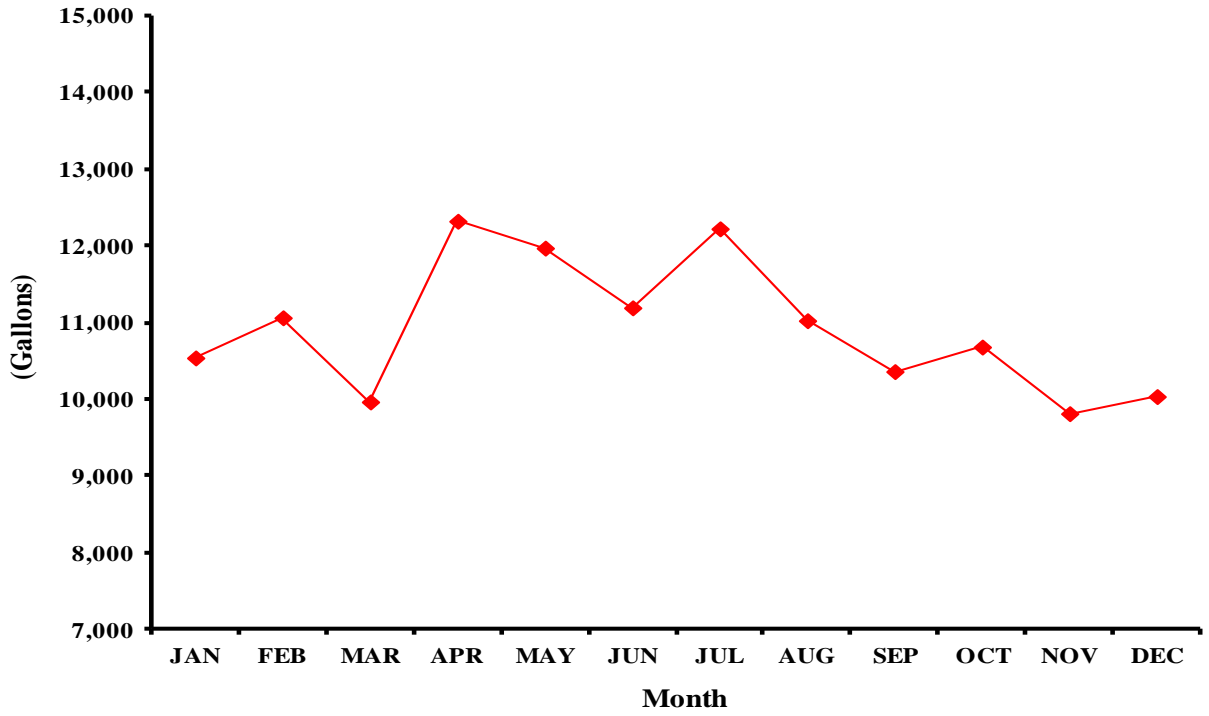
### 2011 Polymer Usage at MBC



### 2011 Sodium Hypochlorite Usage at MBC



### 2011 Ferrous Chloride Usage at MBC



G. Solids Handling Annual Report

**2011 Annual Biosolids Beneficial Use & Disposal Report**

Facilities:

Sources of biosolids:	Biosolids treatment and processing:
Point Loma Wastewater Treatment Plant (PLWWTP) 1902 Gatchell Rd., San Diego, CA	Metro Biosolids Center (MBC) 5240 Convoy Street, San Diego, CA 92111
North City Water Reclamation Plant (NCWRP) 4949 Eastgate Mall, San Diego, CA 92121	Point Loma Wastewater Treatment Plant (PLWWTP) 1902 Gatchell Rd., San Diego, CA

The Point Loma Wastewater Treatment Plant (PLWWTP) and the North City Water Reclamation Plant produced and disposed of 111,508 wet tons or 32,124 dry tons (29,143 dry metric tons) of digested sludge (biosolids) in 2011.

All digested sludge produced at the Pt. Loma WWTP was pumped to the Metro Biosolids Center (MBC) for dewatering by centrifuges. All biosolids were then hauled to a disposal site (Local Landfill) or beneficial use site. During this reporting period all of the raw sludge produced at the North City Water Reclamation Plant (NCWRP) was diverted to the Metro Biosolids Center for thickening, dewatering, digestion, and blended with the digested solids from the PLWWTP prior to dewatering. The MBC Monthly Biosolids Processing Reports include the biosolids processed from the PLWWTP and the NCWRP. Copies of the MBC Monthly Biosolids Processing Reports and the MBC Biosolids Beneficial Use and Disposal Monthly Summary Reports detailing daily biosolids processing and beneficial use/disposal are included as Enclosures 1 and 5, respectively.

All of the sludge/biosolids produced by the City of San Diego, Pt. Loma Wastewater Treatment Plant and North City Water Reclamation Plant were dewatered at the Metro Biosolids Center(MBC) and disposition is summarized in the following table.

Disposition	Wet tons (short)	Dry tons <sup>14</sup>	Dry metric tons
<b>Disposal in sanitary landfill</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Beneficial reuse as Alternative Daily Cover (ADC) at landfill</b>	<b>92,644</b>	<b>26,634</b>	<b>24,162</b>
<b>Land application in Arizona</b>	<b>18,864</b>	<b>5,489</b>	<b>4,980</b>

All Biosolids produced by the City of San Diego were treated to Class B standards through Anaerobic Digestion for a minimum of 15 days at a temperature of 35 to 55 degrees Centigrade (Alternative 3, Process 3). Vector Attraction requirements were achieved by reducing the volatile solids content a minimum of 38 percent (Option 1).

<sup>14</sup> (based on sum of monthly total tons)

**Land Applier:** Solid Solutions, LLC  
**Address:** 12812 Valley View St, #9, Garden Grove, CA 92845  
**Period:** January 1, 2011 - December 31, 2011  
**Reuse method:** Direct land application. Digested dewatered sludge from the MBC centrifuges were land applied directly to fields in Yuma County, AZ. The sludge was certified by the City of San Diego as meeting Class B pathogen and vector attraction reduction requirements of 40 CFR 503. Copies of the City of San Diego's certifications (which also serve as notification of nitrogen content) are included as Enclosure 2. Copies of Solid Solutions' certification statements are included as Enclosures 11 & 12.

The MBC provides two essential treatment processes, thickening and digestion of the raw solids from the NCWRP and dewatering of biosolids generated at the NCWRP and the PLWWTP. The digested biosolids from the PLWWTP are pumped to MBC in a 17 mile pipeline into one of the two storage tanks on site where it is blended with the digested biosolids from the NCWRP. Before these biosolids are sent to the dewatering process polymer and ferric chloride are added to condition the biosolids, which enhances the dewaterability of the biosolids and minimizes the potential of scale formation.

Eight dewatering centrifuges are used to separate the liquid and solids fractions of the conditioned biosolids. The liquid fraction, (centrate) is returned to the PLWWTP via the Rose Canyon Interceptor and the solids recovered, (cake), is pumped to one of the eight storage silos on site before it is loaded into trucks for disposal and beneficial use as Alternative Daily Cover at Otay Landfill or beneficially used for land application in Yuma County, Arizona, Tables 1B and Table 1C.

The digested biosolids, centrate and dewatered cake are sampled on a daily basis to ensure regulatory compliance and to track plant process performance. Grab samples are collected daily on the incoming biosolids from the PLWWTP and the blended biosolids, which includes the digested biosolids from the NCWRP. The operations staff also collect a twenty-four hour composite sample from the centrate return stream from the dewatering process and from the blended centrate return stream that includes the centrate flow from the thickening and dewatering processes.

Daily grab samples of dewatered cake are collected from each individual dewatering centrifuge that are in operation during the 24 hour period, and a portion of each of these grab samples are combined to provide a daily composite of dewatered cake produced. All sampling at MBC is performed by Wastewater Plant Operators who are certified by the State of California and in conformance with established sampling techniques listed in Standard Methods.

Because the dewatered cake samples are a daily composite and the Land Applier's (Solid Solutions) samples are a monthly grab sample, the dry ton calculations may differ slightly.

In addition to the monthly analyses of 503 and California Title 22 analyses by our California certified laboratory, and in accordance with the Arizona Department of Environmental Quality (ADEQ), grab samples were delivered to an Arizona certified laboratory. Legend Technical Services of Arizona, Inc, 17631 North 25<sup>th</sup> Avenue, Phoenix, AZ 85023, ADHS#AZ0004 provided EPA Part 503 Table 3 Metals and Nitrogen

analysis. See Enclosure 14.

Biosolids used for all uses in 2011 continued to meet all regulatory requirements. Concentration of pollutants were all well below the limits listed in California Title 22 Hazardous Waste thresholds including TTLC (Total Threshold Limit Concentration), STLC (Soluble Threshold Limit Concentration), and 40 CFR part 503.13 Table 3 "Limits for Land Application", the lower lead limit established by the California State Health and Safety Code 25157.8. It also met the A.C.C. (Arizona Administrative Code) R18-9-1005 Table 2. Monthly Average Pollutant Concentration limits.

Additional analyses, including the rest of the "priority pollutant list"<sup>15</sup>, were performed during 2011 and the reports of these analyses are included in Enclosure 7.

Table 1.A. Landfill location used during 2011 is as follows:

Otay Landfill 1700 Maxwell Road Chula Vista, San Diego County, CA 91911	92,644 wet tons (26,634 dry tons or 24,162 dry metric tons), based on sum of monthly totals disposed of from January to December 2011 at this landfill.
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No biosolids were shipped to or disposed of at a surface disposal site.

No biosolids were disposed of or reused by any other method than those listed above.

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<sup>15</sup> Includes volatile organic compounds, phenols, base/neutral organic compounds, organophosphorus pesticides, chlorinated pesticides and PCBs.

Table 1B. Biosolids Production for MBC

Table 1B. Annual Biosolids Beneficial Use & Landfill Disposal Summary

2011 Month:	Otay Landfill Biosolids (wet Tons)	Otay Landfill Beneficial Use <sup>1</sup> (wet Tons)	Otay Landfill Total (wet Tons)	Cullison Farms, Yuma, AZ Beneficial Use <sup>2</sup> (wet Tons)	Norris Farm Aztec, Yuma County, AZ Beneficial Use <sup>2</sup> (wet Tons)	Desert Ridge Farms Yuma, AZ Beneficial Use <sup>2</sup> (wet Tons)	Butler Diamond Farms Yuma, AZ Beneficial Use <sup>2</sup> (wet Tons)	Total (wet Tons)	%TS	Total Dry Tons	Total Biosolids (dry metric tons)
January		6,664.45	6,664.45	2,158.20		0.00		8,822.65	30.2	2,664.44	2,417.18
February		6,373.88	6,373.88	422.64	1,667.12			8,463.64	29.7	2,513.70	2,280.43
March		7,009.32	7,009.32	2,064.43	250.78			9,324.53	30.3	2,825.33	2,563.14
April		7,008.93	7,008.93	1,848.49	172.85			9,030.27	30.4	2,745.20	2,490.45
May		7,149.04	7,149.04		591.30		1,474.39	9,214.73	29.0	2,672.27	2,424.28
June		7,720.39	7,720.39	673.44			1,161.21	9,555.04	28.1	2,684.97	2,435.80
July		7,382.49	7,382.49	1,465.30			0.00	8,847.79	28.0	2,477.38	2,247.48
August		8,967.29	8,967.29	1,237.71			0.00	10,205.00	27.8	2,836.99	2,573.72
September		8,680.46	8,680.46	813.75			0.00	9,494.21	27.7	2,629.90	2,385.84
October		8,637.97	8,637.97	865.97		198.68		9,702.62	26.8	2,600.30	2,358.99
November		8,791.86	8,791.86	1,033.56		0.00		9,825.42	28.8	2,829.72	2,567.12
December		8,258.12	8,258.12	764.00		0.00		9,022.12	29.3	2,643.48	2,398.17
<b>Total:</b>		92,644.20	92,644.20	13,347.49	2,682.05	198.68	2,635.60	111,508.02		32,123.69	29,142.61
<b>Monthly Average:</b>		7,720.35	7,720.35	1,213.41	670.51	49.67	527.12	9,292.34	28.8	3,068.50	2,428.55

<sup>1</sup> beneficial use as Alternative Daily Cover.

<sup>2</sup> beneficial use in Land Application.



**Table 1C. 2011 Biosolids Land Application**

2011 Month	%TS	Desert Ridge , Yuma City, AZ		Norris, Yuma City, AZ		Cullison, Yuma County, AZ		Butler Diamond, Yuma County, AZ		Total Monthly	Total Monthly	Total Metric
		wet tons	dry tons	wet tons	dry tons	wet tons	dry tons	wet tons	dry tons	wet tons	dry tons	dry tons
January	30.2	0.00	0.00		0.00	2,158.20	651.78		0.00	2,158.20	651.78	591.29
February	29.7		0.00	1,667.12	495.13	422.64	125.52		0.00	2,089.76	620.66	563.06
March	30.3		0.00	250.78	75.99	2,064.43	625.52		0.00	2,315.21	701.51	636.41
April	30.4		0.00	172.85	52.55	1,848.49	561.94		0.00	2,021.34	614.49	557.46
May	29.0		0.00	591.30	171.48		0.00	1,474.39	427.57	2,065.69	599.05	543.46
June	28.1		0.00		0.00	673.44	189.24	1,161.21	326.30	1,834.65	515.54	467.69
July	28.0		0.00		0.00	1,465.30	410.28	0.00	0.00	1,465.30	410.28	372.21
August	27.8		0.00		0.00	1,237.71	344.08	0.00	0.00	1,237.71	344.08	312.15
September	27.7		0.00		0.00	813.75	225.41	0.00	0.00	813.75	225.41	204.49
October	26.8	198.68	53.25		0.00	865.97	232.08		0.00	1,064.65	285.33	258.85
November	28.8	0.00	0.00		0.00	1,033.56	297.67		0.00	1,033.56	297.67	270.04
December	29.3	0.00	0.00		0.00	764.00	223.85		0.00	764.00	223.85	203.08
2011 Totals	Avg =28.8	198.68	53.25	2,682.05	795.14	13,347.49	3,887.37	2,635.60	753.87	18,863.82	5,489.64	4,980.20

**Table 1D. Other Solids disposal (weights are gross wet weight)**

<b>2011 Month:</b>	<b>Copper Mountain Landfill Scum (Tons)</b>	<b>Otay Landfill Scum (Tons)</b>	<b>South Yuma Landfill Scum (Tons)</b>	<b>Otay Landfill Digester Cleanings (Tons)</b>	<b>Miramar Landfill Grit (Tons)</b>	<b>Miramar Landfill Rags &amp; Screenings (Tons)</b>
January	30.09				157.40	540.09
February	34.18				200.21	489.08
March	26.03	8.34			172.62	532.24
April	28.37				171.43	453.56
May	22.19				192.92	489.94
June	30.40				154.73	474.08
July	16.87				162.29	483.46
August	34.96				171.62	441.30
September	23.59	3.63			139.62	428.04
October	11.11				36.52	494.59
November	23.96				151.23	513.66
December	36.37				144.36	524.94
<b>Total:</b>	<b>318.12</b>	<b>11.97</b>			<b>1,854.95</b>	<b>5,864.98</b>
<b>Average:</b>	<b>26.51</b>	<b>5.99</b>			<b>154.58</b>	<b>488.75</b>

Point Loma Annual Monitoring Report  
 Solids Report - TOTALS  
 From 01-JAN-2011 To 31-DEC-2011

Month	Pt. Loma	Dry Tons	Pt. Loma	Dry Tons	MBC	MBC		Dry Tons
	Raw sludge Gallons		Digested Sludge Gallons		Combined Centrate Gallons	Dewatered Sludge Wet Tons	Dry Tons	
01	35,491,038	5,636	35,491,038	3,219	75,020,797	875	8,823	2,663
02	32,397,871	5,134	32,397,871	2,759	68,306,394	794	8,464	2,514
03	35,467,907	5,821	35,467,907	3,043	74,599,231	951	9,325	2,825
04	35,553,681	5,671	35,553,681	3,085	73,711,486	892	9,030	2,744
05	36,847,985	6,016	36,847,985	3,250	67,380,063	984	9,216	2,671
06	35,168,262	6,024	34,068,262	3,280	62,542,728	1,184	9,555	2,684
07	35,129,412	6,092	35,129,412	3,472	60,385,843	1,024	8,848	2,476
08	35,463,019	5,984	35,399,792	3,491	56,976,529	985	10,205	2,837
09	33,612,326	5,607	32,777,190	3,105	58,074,557	1,020	9,494	2,629
10	35,850,409	5,796	29,074,835	2,737	64,721,077	1,021	9,703	2,600
11	36,565,819	6,087	36,565,819	3,416	62,891,565	891	9,825	2,831
12	37,820,097	6,387	37,819,683	3,394	64,057,682	889	9,022	2,648
avg	35,447,319	5,854	34,716,123	3,188	65,722,329	959	9,292	2,677
sum	425,367,826	70,253	416,593,475	38,251	788,667,952	11,509	111,509	32,122

Point Loma Annual Monitoring Report  
 Solids Report - Daily Averages by Month  
 From 01-JAN-2011 To 31-DEC-2011

Year Month	Pt. Loma	%TS	Dry Tons	Pt. Loma	%TS	Dry Tons	MBC	%TS	MBC		%TS	Dry Tons
	Raw sludge Gallons			Digested Sludge Gallons			Combined Centrate Gallons		Dry Tons	Dewatered Sludge Wet Tons		
11-01	1,144,872	3.8	178	1,144,872	2.2	104	2,420,026	0.28	28.3	285	30.2	85.9
11-02	1,157,067	3.8	183	1,157,067	2.0	99	2,439,514	0.28	28.2	302	29.7	89.8
11-03	1,144,126	3.9	188	1,144,126	2.1	98	2,406,427	0.31	30.8	301	30.3	91.1
11-04	1,185,123	3.8	191	1,185,123	2.1	103	2,457,050	0.29	29.7	301	30.4	91.5
11-05	1,188,645	3.9	195	1,188,645	2.1	105	2,173,550	0.35	31.5	297	29.0	86.2
11-06	1,172,275	4.1	203	1,135,609	2.3	109	2,084,758	0.45	38.4	318	28.1	89.5
11-07	1,133,207	4.2	196	1,133,207	2.4	112	1,947,930	0.41	32.8	285	28.0	79.9
11-08	1,143,968	4.0	194	1,141,929	2.4	112	1,837,953	0.41	31.7	329	27.8	91.5
11-09	1,120,411	4.0	185	1,092,573	2.3	103	1,935,819	0.42	33.9	316	27.7	87.6
11-10	1,156,465	3.9	190	937,898	2.3	83	2,087,777	0.38	32.9	313	26.8	83.9
11-11	1,218,861	4.0	203	1,218,861	2.2	114	2,096,386	0.34	29.6	328	28.8	94.4
11-12	1,220,003	4.1	206	1,219,990	2.2	109	2,066,377	0.33	28.6	301	29.3	88.3
avg	1,165,419	4.0	193	1,141,658	2.2	104	2,162,797	0.35	31.4	306	28.8	88.3

Note: A ton is a "short ton" or 2000 lbs of dry solids.

Values for Wet Tons of dewatered sludge are based on calculated volumes from eight positive displacement cake pumps and are subject to inaccuracies. The mechanical condition of the cake pumps and the variability of sludge concentrations can effect the overall accuracies of these reported values.

Enclosure 7      Results of other analyses of dewatered biosolids for 2011

Tables showing the analyses for metals (including priority pollutants), pH, total and volatile solids, pesticides & PCBs, and organic priority pollutant compounds of sewage biosolids samples taken in 2011.

POINT LOMA WASTEWATER TREATMENT PLANT  
METRO BIOSOLIDS CENTER  
2011 ANNUAL DEWATERED SLUDGE COMPOSITES  
Trace Metals

Source:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:		31-JAN-2011	28-FEB-2011	31-MAR-2011	30-APR-2011	31-MAY-2011	30-JUN-2011
Sample ID:	MDL Units	P551608	P554957	P559212	P563098	P566778	P570762
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	4 MG/KG	9490	7550	8020	7130	5750	5480
Antimony	.5 MG/KG	3.2	2.1	2.6	2.2	2.0	2.6
Arsenic	.68 MG/KG	7.27	5.04	5.04	5.46	5.50	3.58
Barium	.05 MG/KG	77	52	343	327	364	358
Beryllium	.02 MG/KG	0.21	0.19	0.30	0.20	0.11	0.13
Cadmium	.1 MG/KG	1.4	1.4	1.6	1.7	1.6	1.5
Chromium	.3 MG/KG	56	55	68	61	58	61
Cobalt	.2 MG/KG	3.6	2.1	3.7	3.4	2.0	2.4
Cyanides, Total	.1 MG/KG	NR	2.59	NR	NR	4.24	NR
Copper	.4 MG/KG	561	598	691	714	757	741
Iron	20 MG/KG	77700	73200	84500	82500	90100	85600
Lead	2 MG/KG	19	15	18	20	14	16
Manganese	.2 MG/KG	284	269	301	298	316	336
Mercury	.4 MG/KG	1.27	0.68	1.46	1.49	0.88	0.99
Molybdenum	.1 MG/KG	16	13	18	16	18	21
Nickel	.3 MG/KG	54	48	63	61	46	42
Selenium	.47 MG/KG	5.46	5.55	5.46	6.19	6.43	6.25
Silver	.07 MG/KG	6	5	6	7	6	6
Thallium	1 MG/KG	ND	ND	ND	ND	ND	ND
Vanadium	.2 MG/KG	32	25	30	29	28	28
Zinc	.5 MG/KG	821	779	908	894	736	942
Sulfides-Reactive	11 MG/KG	ND	ND	ND	ND	ND	<11
Sulfides-Total	2170 MG/KG	6150	7210	6340	6570	12400	11700
Total Nitrogen	1.1 WT%	4.87	4.92	4.80	4.88	5.16	5.35
Total Kjeldahl Nitrogen	.04 WT%	NR	4.26	NR	NR	4.55	NR
Total Volatile Solids	WT%	56.2	59.4	57.8	57.5	59.0	58.9
Total Solids	WT%	30.3	29.9	30.1	30.1	28.9	27.7
pH	PH	7.57	7.68	7.72	7.73	7.67	7.69

ND= Not Detected  
NA= Not Analyzed  
NS= Not Sampled  
NR= Not Required

MBCDEWCN= Metro Biosolids Center Dewatered Centrifuged Sludge.

POINT LOMA WASTEWATER TREATMENT PLANT  
METRO BIOSOLIDS CENTER  
2011 ANNUAL DEWATERED SLUDGE COMPOSITES  
Trace Metals

Source:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:		31-JUL-2011	31-AUG-2011	30-SEP-2011	31-OCT-2011	30-NOV-2011	31-DEC-2011
Sample ID:	MDL Units	P575132	P579594	P586866	P591381	P597126	P601035
=====	=====	=====	=====	=====	=====	=====	=====
Aluminum	4 MG/KG	5350	5260	5930	5890	5400	5450
Antimony	.5 MG/KG	ND	2.7	2.8	2.6	2.6	1.5
Arsenic	.68 MG/KG	3.44	3.04	4.79	5.43	4.03	4.11
Barium	.05 MG/KG	319	95	116	116	262	171
Beryllium	.02 MG/KG	0.11	0.10	0.07	0.09	0.09	0.08
Cadmium	.1 MG/KG	ND	1.6	1.6	1.7	1.7	1.3
Chromium	.3 MG/KG	52	48	51	60	56	56
Cobalt	.2 MG/KG	3.9	2.9	3.1	3.3	3.2	3.0
Cyanides, Total	.1 MG/KG	NR	2.34	NR	2.10	NR	NR
Copper	.4 MG/KG	756	667	723	739	678	682
Iron	20 MG/KG	76900	91000	92000	85300	85000	86100
Lead	2 MG/KG	21	14	17	18	16	17
Manganese	.2 MG/KG	266	269	284	288	284	307
Mercury	.4 MG/KG	1.82	1.32	0.85	0.86	2.23	1.33
Molybdenum	.1 MG/KG	20	21	23	22	20	18
Nickel	.3 MG/KG	30	38	40	45	41	40
Selenium	.47 MG/KG	5.37	6.00	5.06	5.78	6.32	5.85
Silver	.07 MG/KG	7	7	8	8	6	7
Thallium	1 MG/KG	ND	ND	ND	ND	ND	ND
Vanadium	.2 MG/KG	34	36	37	36	35	41
Zinc	.5 MG/KG	1030	893	936	887	805	863
Sulfides-Reactive	11 MG/KG	19	<11	39	38	ND	<11
Sulfides-Total	2170 MG/KG	16200	14200	19600	21900	8730	8390
Total Nitrogen	1.1 WT%	5.18	5.01	4.94	5.04	5.10	4.97
Total Kjeldahl Nitrogen	.04 WT%	NR	4.58	NR	4.37	NR	NR
Total Volatile Solids	WT%	59.7	60.7	57.9	58.4	58.6	59.0
Total Solids	WT%	27.6	27.7	27.1	27.1	28.5	29.3
pH	.08 PH	7.76	7.73	7.73	7.73	7.74	7.62

ND= Not Detected  
NA= Not Analyzed  
NS= Not Sampled  
NR= Not Required

MBCDEWCN= Metro Biosolids Center Dewatered Centrifuged Sludge.

POINT LOMA WASTEWATER TREATMENT PLANT  
Total Nitrogen Analysis

Annual 2011

Date:	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
31-JAN-2011	28-FEB-2011	31-MAR-2011	30-APR-2011	31-MAY-2011	30-JUN-2011	31-JUL-2011	
Sample:	MDL Units	P551608	P554957	P559212	P563098	P566778	P570762
		P575132					
Total Nitrogen 1.1 WT%	4.9	4.9	4.8	4.9	5.2	5.4	5.2

Date:	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
31-AUG-2011	30-SEP-2011	31-OCT-2011	30-NOV-2011	31-DEC-2011	
Sample:	MDL Units	P579594	P586866	P591381	P597126
		P601035			
Total Nitrogen 1.1 WT%	5.0	4.9	5.0	5.1	5.0

nd=not detected; NS=not sampled; NA=not analyzed

POINT LOMA WASTEWATER TREATMENT PLANT  
 QUARTERLY SLUDGE PROJECT - ANNUAL SUMMARY

Radioactivity

Annual 2011

Analyzed by: Test America Laboratories

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
PLE	01-FEB-2011	P549217	0.3 ± 3.0	31.4 ± 8.1
PLE	03-MAY-2011	P557924	0.0 ± 3.6	33.9 ± 8.2
PLE	02-AUG-2011	P564859	2.4 ± 4.0	27.1 ± 7.6
PLE	04-OCT-2011	P584613	3.4 ± 5.1	28.7 ± 7.1
PLE	ANNUAL	AVERAGE	1.5 ± 3.9	30.3 ± 7.8

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
PLR	01-FEB-2011	P549223	5.6 ± 4.2	35.4 ± 8.4
PLR	03-MAY-2011	P557930	2.9 ± 2.8	30.0 ± 8.6
PLR	02-AUG-2011	P564865	3.8 ± 3.8	31.7 ± 7.5
PLR	04-OCT-2011	P584619	0.7 ± 5.4	28.6 ± 6.2
PLR	ANNUAL	AVERAGE	3.3 ± 4.0	31.4 ± 7.7

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
MBC_COMBCN	01-FEB-2011	P549234	4.9 ± 4.3	54.1 ± 9.7
MBC_COMBCN	03-MAY-2011	P557941	3.4 ± 2.3	49.8 ± 11.0
MBC_COMBCN	02-AUG-2011	P564876	13.1 ± 6.1	55.7 ± 11.0
MBC_COMBCN	04-OCT-2011	P584630	15.7 ± 11.0	57.9 ± 11.0
MBC_COMBCN	ANNUAL	AVERAGE	9.3 ± 5.9	54.4 ± 10.7

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
MBCDEWCN	28-FEB-2011	P554957	6540 ± 4200	10300 ± 18500
MBCDEWCN	31-MAY-2011	P566778	6630 ± 46000	9930 ± 3250
MBCDEWCN	31-AUG-2011	P579594	5030 ± 34500	9270 ± 3150
MBCDEWCN	31-OCT-2011	P591381	4970 ± 4200	8220 ± 3400
MBCDEWCN	ANNUAL	AVERAGE	5793 ± 22225	9430 ± 7075

Units in picocuries per Liter (pCi/L)

ND= Not Detected



METROBIOSOLIDS CENTER  
 SLUDGE PROJECT - ANNUAL SUMMARY  
 Chlorinated Pesticide Analysis

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			31-JAN-2011 P551608	28-FEB-2011 P554957	31-MAR-2011 P559212	30-APR-2011 P563098	31-MAY-2011 P566778
Aldrin	71000	NG/KG	ND	ND	ND	ND	ND
Dieldrin	35000	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	28000	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	32000	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	28000	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	18000	NG/KG	ND	ND	ND	ND	ND
p,p-DDE	28000	NG/KG	ND	ND	ND	ND	ND
p,p-DDT	35000	NG/KG	ND	ND	ND	ND	ND
o,p-DDD	28000	NG/KG	ND	ND	ND	ND	ND
o,p-DDE	52000	NG/KG	ND	ND	ND	ND	ND
o,p-DDT	71000	NG/KG	ND	ND	ND	ND	ND
Heptachlor	16000	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	13000	NG/KG	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	48000	NG/KG	52000	55500	ND	ND	66500
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA
Oxychlordane	28000	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	18000	NG/KG	41000	ND	ND	ND	ND
Cis Nonachlor	52000	NG/KG	ND	ND	ND	ND	ND
Alpha Endosulfan	18000	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	28000	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	45000	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	52000	NG/KG	ND	ND	ND	ND	ND
Toxaphene	130000	NG/KG	ND	ND	ND	ND	ND
Mirex	18000	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	71000	NG/KG	ND	ND	ND	ND	ND
PCB 1016	260000	NG/KG	ND	ND	ND	ND	ND
PCB 1221	580000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	220000	NG/KG	ND	ND	ND	ND	ND
PCB 1242		NG/KG	ND	ND	ND	ND	ND
PCB 1248	310000	NG/KG	ND	ND	ND	ND	ND
PCB 1254	130000	NG/KG	ND	ND	ND	ND	ND
PCB 1260	86000	NG/KG	ND	ND	ND	ND	ND
PCB 1262		NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	71000	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	32000	NG/KG	0	0	0	0	0
DDT and derivatives	71000	NG/KG	0	0	0	0	0
Chlordane + related cmpds.	48000	NG/KG	52000	55500	0	0	66500
Polychlorinated biphenyls	580000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	580000	NG/KG	93000	55500	0	0	66500

ND= not detected  
 NA= not analyzed

METROBIOSOLIDS CENTER  
 SLUDGE PROJECT - ANNUAL SUMMARY  
 Chlorinated Pesticide Analysis

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			30-JUN-2011 P570762	31-JUL-2011 P575132	31-AUG-2011 P579594	30-SEP-2011 P586866	31-OCT-2011 P591381
Aldrin	71000	NG/KG	ND	ND	ND	ND	ND
Dieldrin	35000	NG/KG	ND	ND	ND	ND	ND
BHC, Alpha isomer	28000	NG/KG	ND	ND	ND	ND	ND
BHC, Beta isomer	32000	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	ND	ND	ND	ND	ND
BHC, Delta isomer	28000	NG/KG	ND	ND	ND	ND	ND
p,p-DDD	18000	NG/KG	ND	ND	ND	ND	ND
p,p-DDE	28000	NG/KG	ND	ND	ND	ND	ND
p,p-DDT	35000	NG/KG	ND	ND	ND	ND	ND
o,p-DDD	28000	NG/KG	ND	ND	ND	ND	ND
o,p-DDE	52000	NG/KG	ND	ND	ND	ND	ND
o,p-DDT	71000	NG/KG	ND	ND	ND	ND	ND
Heptachlor	16000	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	13000	NG/KG	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	48000	NG/KG	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA
Oxychlordane	28000	NG/KG	ND	ND	ND	ND	ND
Trans Nonachlor	18000	NG/KG	ND	ND	ND	ND	ND
Cis Nonachlor	52000	NG/KG	ND	ND	ND	ND	ND
Alpha Endosulfan	18000	NG/KG	ND	ND	ND	ND	ND
Beta Endosulfan	28000	NG/KG	ND	ND	ND	ND	ND
Endosulfan Sulfate	45000	NG/KG	ND	ND	ND	ND	ND
Endrin aldehyde	52000	NG/KG	ND	ND	ND	ND	ND
Toxaphene	130000	NG/KG	ND	ND	ND	ND	ND
Mirex	18000	NG/KG	ND	ND	ND	ND	ND
Methoxychlor	71000	NG/KG	ND	ND	ND	ND	ND
PCB 1016	260000	NG/KG	ND	ND	ND	ND	ND
PCB 1221	580000	NG/KG	ND	ND	ND	ND	ND
PCB 1232	220000	NG/KG	ND	ND	ND	ND	ND
PCB 1242		NG/KG	ND	ND	ND	ND	ND
PCB 1248	310000	NG/KG	ND	ND	ND	ND	ND
PCB 1254	130000	NG/KG	ND	ND	ND	ND	ND
PCB 1260	86000	NG/KG	ND	ND	ND	ND	ND
PCB 1262		NG/KG	ND	ND	ND	ND	ND
Aldrin + Dieldrin	71000	NG/KG	0	0	0	0	0
Hexachlorocyclohexanes	32000	NG/KG	0	0	0	0	0
DDT and derivatives	71000	NG/KG	0	0	0	0	0
Chlordane + related cmpds.	48000	NG/KG	0	0	0	0	0
Polychlorinated biphenyls	580000	NG/KG	0	0	0	0	0
Chlorinated Hydrocarbons	580000	NG/KG	0	0	0	0	0

ND= not detected  
 NA= not analyzed

METROBIOSOLIDS CENTER  
 SLUDGE PROJECT - ANNUAL SUMMARY  
 Chlorinated Pesticide Analysis

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	Annual Average
			30-NOV-2011 P597126	31-DEC-2011 P601035	
Aldrin	71000	NG/KG	ND	ND	ND
Dieldrin	35000	NG/KG	ND	ND	ND
BHC, Alpha isomer	28000	NG/KG	ND	ND	ND
BHC, Beta isomer	32000	NG/KG	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	ND	ND	ND
BHC, Delta isomer	28000	NG/KG	ND	ND	ND
p,p-DDD	18000	NG/KG	ND	ND	ND
p,p-DDE	28000	NG/KG	ND	ND	ND
p,p-DDT	35000	NG/KG	ND	ND	ND
o,p-DDD	28000	NG/KG	ND	ND	ND
o,p-DDE	52000	NG/KG	ND	ND	ND
o,p-DDT	71000	NG/KG	ND	ND	ND
Heptachlor	16000	NG/KG	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND
Alpha (cis) Chlordane	13000	NG/KG	ND	ND	ND
Gamma (trans) Chlordane	48000	NG/KG	ND	ND	14500
Alpha Chlordene		NG/KG	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA
Oxychlordane	28000	NG/KG	ND	ND	ND
Trans Nonachlor	18000	NG/KG	ND	ND	3417
Cis Nonachlor	52000	NG/KG	ND	ND	ND
Alpha Endosulfan	18000	NG/KG	ND	ND	ND
Beta Endosulfan	28000	NG/KG	ND	ND	ND
Endosulfan Sulfate	45000	NG/KG	ND	ND	ND
Endrin aldehyde	52000	NG/KG	ND	ND	ND
Toxaphene	130000	NG/KG	ND	ND	ND
Mirex	18000	NG/KG	ND	ND	ND
Methoxychlor	71000	NG/KG	ND	ND	ND
PCB 1016	260000	NG/KG	ND	ND	ND
PCB 1221	580000	NG/KG	ND	ND	ND
PCB 1232	220000	NG/KG	ND	ND	ND
PCB 1242		NG/KG	ND	ND	ND
PCB 1248	310000	NG/KG	ND	ND	ND
PCB 1254	130000	NG/KG	ND	ND	ND
PCB 1260	86000	NG/KG	ND	ND	ND
PCB 1262		NG/KG	ND	ND	ND
=====					
Aldrin + Dieldrin	71000	NG/KG	0	0	0
Hexachlorocyclohexanes	32000	NG/KG	0	0	0
DDT and derivatives	71000	NG/KG	0	0	0
Chlordane + related cmpds.	48000	NG/KG	0	0	14500
Polychlorinated biphenyls	580000	NG/KG	0	0	0
=====					
Chlorinated Hydrocarbons	580000	NG/KG	0	0	17917

ND= not detected  
 NA= not analyzed

POINT LOMA WASTEWATER TREATMENT PLANT  
Tributyl Tin (Sludge)

Annual 2011

Analyte	MDL Units	MBCDEWCN	MBCDEWCN
		31-MAY-2011	31-OCT-2011
		P566778	P591381
===== Monobutyltin	4000 UG/KG	ND	ND
Tributyltin	2600 UG/KG	ND	ND

ND= not detected

POINT LOMA WASTEWATER TREATMENT PLANT  
Herbicide Analysis

Annual 2011

Date:			MBCDEWCN	MBCDEWCN	MBCDEWCN
Sample:	MDL	Units	28-FEB-2011	31-AUG-2011	31-OCT-2011
			P554957	P579594	P591381
			=====	=====	=====
2,4-Dichlorophenoxyacetic acid	.0667	MG/KG	ND	ND	ND
2,4,5-TP (Silvex)	.017	MG/KG	ND	ND	ND

Note: No data is reported for the first half of the year, sample was not reported due to the external laboratory analyzing the sample suspended operations.

ND=not detected

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER  
Organophosphorus Pesticides

Annual 2011

Analyte	MDL Units	PLE	PLE	PLE	PLE
		01-FEB-2011 P549217	03-MAY-2011 P557924	02-AUG-2011 P564859	04-OCT-2011 P584613
Demeton O	.15 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	0.1	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	0.04	0.08
Parathion	.03 UG/L	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND
Disulfoton	.02 UG/L	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.00	0.00	0.04	0.08
Demeton -O, -S	.15 UG/L	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.15 UG/L	0.00	0.10	0.04	0.08

Analyte	MDL Units	PLR	PLR	PLR	PLR
		01-FEB-2011 P549223	03-MAY-2011 P557930	02-AUG-2011 P564865	04-OCT-2011 P584619
Demeton O	.15 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	0.1	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	0.05	0.09
Parathion	.03 UG/L	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND
Disulfoton	.02 UG/L	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.00	0.00	0.05	0.09
Demeton -O, -S	.15 UG/L	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.15 UG/L	0.00	0.10	0.05	0.09

ND=not detected

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER  
Organophosphorus Pesticides

Annual 2011

Analyte	MDL Units	MBC_COMBCN	MBC_COMBCN	MBC_NC_DSL	MBC_NC_DSL
		03-MAY-2011 P557941	04-OCT-2011 P584630	03-MAY-2011 P557995	04-OCT-2011 P584684
Demeton O	.15 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	ND	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	ND	ND
Parathion	.03 UG/L	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND
Disulfoton	.02 UG/L	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.00	0.00	0.00	0.00
Demeton -O, -S	.15 UG/L	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.15 UG/L	0.00	0.00	0.00	0.00

Analyte	MDL Units	MBC_NC_RSL	MBC_NC_RSL	RAW COMP	RAW COMP
		03-MAY-2011 P557993	04-OCT-2011 P584682	03-MAY-2011 P557966	04-OCT-2011 P584655
Demeton O	.15 UG/L	ND	ND	ND	ND
Demeton S	.08 UG/L	ND	ND	ND	ND
Diazinon	.03 UG/L	ND	ND	ND	ND
Guthion	.15 UG/L	ND	ND	ND	ND
Malathion	.03 UG/L	ND	ND	ND	ND
Parathion	.03 UG/L	ND	ND	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND	ND	ND
Coumaphos	.15 UG/L	ND	ND	ND	ND
Dichlorvos	.05 UG/L	ND	ND	ND	ND
Dimethoate	.04 UG/L	ND	ND	ND	ND
Disulfoton	.02 UG/L	ND	ND	ND	ND
Stirophos	.03 UG/L	ND	ND	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.00	0.00	0.00	0.00
Demeton -O, -S	.15 UG/L	0.00	0.00	0.00	0.00
Total Organophosphorus Pesticides	.15 UG/L	0.00	0.00	0.00	0.00

ND=not detected

POINT LOMA WASTEWATER TREATMENT PLANT / METROBIOSOLIDS CENTER  
Organophosphorus Pesticides

Annual 2011

Analyte	MDL Units	DIG COMP	DIG COMP
		03-MAY-2011 P557980	04-OCT-2011 P584669
Demeton O	.15 UG/L	ND	ND
Demeton S	.08 UG/L	ND	ND
Diazinon	.03 UG/L	ND	ND
Guthion	.15 UG/L	ND	ND
Malathion	.03 UG/L	ND	ND
Parathion	.03 UG/L	ND	ND
Chlorpyrifos	.03 UG/L	ND	ND
Coumaphos	.15 UG/L	ND	ND
Dichlorvos	.05 UG/L	ND	ND
Dimethoate	.04 UG/L	ND	ND
Disulfoton	.02 UG/L	ND	ND
Stirophos	.03 UG/L	ND	ND
Thiophosphorus Pesticides	.15 UG/L	0.00	0.00
Demeton -O, -S	.15 UG/L	0.00	0.00
Total Organophosphorus Pesticides	.15 UG/L	0.00	0.00

Analyte	MDL Units	MBCDEWCN	MBCDEWCN
		31-MAY-2011 P566778	31-OCT-2011 P591381
Demeton O	67 UG/KG	ND	ND
Demeton S	27 UG/KG	ND	ND
Diazinon	UG/KG	ND	ND
Guthion	33 UG/KG	ND	ND
Malathion	20 UG/KG	ND	ND
Parathion	20 UG/KG	ND	ND
Chlorpyrifos	UG/KG	71.6	89.3
Coumaphos	33 UG/KG	ND	ND
Dichlorvos	17 UG/KG	ND	ND
Dimethoate	27 UG/KG	ND	ND
Disulfoton	20 UG/KG	ND	ND
Stirophos	20 UG/KG	ND	ND
Thiophosphorus Pesticides	33 UG/KG	0.0	0.0
Demeton -O, -S	67 UG/KG	0.0	0.0
Total Organophosphorus Pesticides	67 UG/KG	71.6	89.3

ND=not detected



POINT LOMA WASTEWATER TREATMENT PLANT  
Base/Neutrals

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			28-FEB-2011 P554957	31-MAY-2011 P566778	31-AUG-2011 P579594	31-OCT-2011 P591381
Acenaphthene	330	UG/KG	ND	ND	ND	ND
Acenaphthylene	330	UG/KG	ND	ND	ND	ND
Anthracene	330	UG/KG	ND	ND	ND	ND
Benzidine	330	UG/KG	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[k]fluoranthene	330	UG/KG	ND	ND	ND	ND
Benzo[a]anthracene	330	UG/KG	ND	ND	ND	ND
Benzo[a]pyrene	330	UG/KG	ND	ND	ND	ND
Benzo[g,h,i]perylene	330	UG/KG	ND	ND	ND	ND
4-Bromophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethoxy) methane	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroethyl) ether	330	UG/KG	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	330	UG/KG	ND	ND	ND	ND
4-Chlorophenyl phenyl ether	330	UG/KG	ND	ND	ND	ND
2-Chloronaphthalene		UG/KG	ND	ND	ND	ND
Chrysene	330	UG/KG	ND	ND	ND	ND
Dibenzo(a,h)anthracene	330	UG/KG	ND	ND	ND	ND
Butyl benzyl phthalate	330	UG/KG	ND	2940	3460	2750
Di-n-butyl phthalate	330	UG/KG	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	330	UG/KG	81500	83400	87800	81400
Diethyl phthalate	330	UG/KG	ND	ND	ND	ND
Dimethyl phthalate	330	UG/KG	ND	1110	415	ND
Di-n-octyl phthalate	330	UG/KG	ND	ND	ND	ND
3,3-Dichlorobenzidine	330	UG/KG	ND	ND	ND	ND
2,4-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
2,6-Dinitrotoluene	330	UG/KG	ND	ND	ND	ND
1,2-Diphenylhydrazine		UG/KG	ND	ND	ND	ND
Fluoranthene	330	UG/KG	ND	ND	ND	ND
Fluorene	330	UG/KG	<330	ND	ND	ND
Hexachlorobenzene	330	UG/KG	ND	ND	ND	ND
Hexachlorobutadiene	330	UG/KG	ND	ND	ND	ND
Hexachlorocyclopentadiene	330	UG/KG	ND	ND	ND	ND
Hexachloroethane	330	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	330	UG/KG	ND	ND	ND	ND
Isophorone	330	UG/KG	ND	ND	ND	ND
Naphthalene	330	UG/KG	430	390	ND	396
Nitrobenzene	330	UG/KG	ND	ND	ND	ND
N-nitrosodimethylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodi-n-propylamine	330	UG/KG	ND	ND	ND	ND
N-nitrosodiphenylamine	330	UG/KG	ND	ND	ND	ND
Phenanthrene	330	UG/KG	ND	639	ND	ND
Pyrene	330	UG/KG	ND	404	ND	ND
1,2,4-Trichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,3-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,2-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
1,4-Dichlorobenzene	330	UG/KG	ND	ND	ND	ND
=====						
PolyNuc. Aromatic Hydrocarbons	330	UG/KG	0	1043	0	0
=====						
Base/Neutral Compounds	330	UG/KG	81930	88883	91675	84546
Dichlorobenzenes	330	UG/KG	0	0	0	0
=====						
Benzo[e]pyrene		UG/KG	ND	ND	ND	ND
Biphenyl		UG/KG	194	412	ND	348
2,6-Dimethylnaphthalene		UG/KG	3120	2550	1460	1560
1-Methylnaphthalene		UG/KG	1000	726	ND	ND
1-Methylphenanthrene		UG/KG	ND	ND	ND	ND
2-Methylnaphthalene		UG/KG	1480	1080	434	439
2,3,5-Trimethylnaphthalene		UG/KG	739	ND	ND	ND
Perylene	330	UG/KG	ND	ND	ND	ND
Pyridine		UG/KG	ND	ND	ND	ND

nd= not detected, NA= not analyzed, NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT  
Phenolics

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	Average
			28-FEB-2011 P554957	31-MAY-2011 P566778	31-AUG-2011 P579594	31-OCT-2011 P591381	
2-Chlorophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dimethylphenol	330	UG/KG	ND	ND	ND	ND	ND
2,4-Dinitrophenol	330	UG/KG	ND	ND	ND	ND	ND
2-Methyl-4,6-dinitrophenol	800	UG/KG	ND	ND	ND	ND	ND
2-Nitrophenol	330	UG/KG	ND	ND	ND	ND	ND
4-Nitrophenol	800	UG/KG	ND	ND	ND	ND	ND
Pentachlorophenol	800	UG/KG	ND	ND	ND	ND	ND
Phenol	330	UG/KG	7980	5490	3350	2390	4803
2,4,6-Trichlorophenol	330	UG/KG	ND	ND	ND	ND	ND
Total Chlorinated Phenols	800	UG/KG	0	0	0	0	0
=====							
Total Non-Chlorinated Phenols	800	UG/KG	10410	8490	6432	3129	7115
=====							
Phenols	800	UG/KG	10410	8490	6432	3129	7115
=====							
2-Methylphenol	330	UG/KG	1170	1220	2150	ND	1135
4-Methylphenol(3-MP is unresolved)	330	UG/KG	1260	1780	932	739	1178
2,4,5-Trichlorophenol	800	UG/KG	ND	ND	ND	ND	ND
=====							
Phenols average	800	UG/KG	725	499	305	217	437

nd= not detected  
NA= not analyzed  
NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT  
Purgeables

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			31-JAN-2011 P551608	28-FEB-2011 P554957	31-MAR-2011 P559212	30-APR-2011 P563098	31-MAY-2011 P566778	30-JUN-2011 P570762
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	3.8	3.0	3.8	ND	ND	ND
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	ND	2.7	ND	ND	ND
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	17.5	22.1	20.1	17.6	14.1	15.0
1,3-Dichlorobenzene	1.8	UG/KG	ND	4.2	4.2	<1.8	ND	ND
1,4-Dichlorobenzene	1.5	UG/KG	202	210	218	239	179	186
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	140.0	231.0	171.0	180.0	138.0	229.0
Methylene chloride	3.5	UG/KG	142.0	12.2	12.1	ND	84.9	6.3
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	62.5	54.6	59.7	55.9	44.3	56.2
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	567.8	537.1	491.6	492.5	460.3	492.5
Acetone	31.4	UG/KG	28600	23100	23600	28000	22400	
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	6660	5160	3700	5520	5640	5090
Carbon disulfide	4.7	UG/KG	186.0	131.0	94.2	117.0	134.0	105.0
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	101.0	73.6	79.0	74.0	77.0	21.8
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	56.4	48.7	41.4	41.4	42.4	48.9
Styrene	1.7	UG/KG	82.4	46.6	63.0	43.6	29.8	46.9
1,2,4-Trichlorobenzene	2.5	UG/KG	ND	ND	ND	ND	ND	14.8
meta,para xylenes	4.2	UG/KG	117.0	97.3	76.6	80.1	78.1	86.3
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	28.7	23.3	31.5	18.6	14.4	30.4

ND= not detected, NA= not analyzed, NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT  
Purgeables

Annual 2011

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	Average
			31-JUL-2011 P575132	31-AUG-2011 P579594	30-SEP-2011 P586866	31-OCT-2011 P591381	30-NOV-2011 P597126	
Acrolein	6.4	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	3.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	2.1	UG/KG	ND	ND	ND	ND	9.9	1.9
Bromodichloromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromoform	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	6.9	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	3	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	1	UG/KG	ND	4.4	ND	ND	ND	0.6
Chloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Chloroform	2.3	UG/KG	ND	ND	ND	ND	ND	ND
Chloromethane	3.4	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	2.4	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	1.5	UG/KG	20.1	36.4	21.4	18.3	17.3	20.0
1,3-Dichlorobenzene	1.8	UG/KG	ND	4.3	ND	ND	ND	1.2
1,4-Dichlorobenzene	1.5	UG/KG	156.0	109.0	130.0	104.0	120.0	168.5
Dichlorodifluoromethane	5.56	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	1.9	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	3.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,2-dichloroethene	3.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	2.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	2.5	UG/KG	ND	ND	ND	ND	ND	ND
trans-1,3-dichloropropene	2.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	1.4	UG/KG	251.0	248.0	386.0	698.0	521.0	290.3
Methylene chloride	3.5	UG/KG	5.0	16.4	10.2*	<3.5	5.8	28.5
1,1,2,2-Tetrachloroethane	5.9	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	1.2	UG/KG	59.8	49.8	70.0	60.0	64.2	57.9
1,1,1-Trichloroethane	3.2	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	2.8	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	2.6	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	2.2	UG/KG	ND	ND	ND	ND	ND	ND
Vinyl chloride	4.8	UG/KG	ND	ND	ND	ND	ND	ND
Halomethane Purgeable Compounds	6.9	UG/KG	0.0	0.0	0.0	0.0	0.0	0.0
Purgeable Compounds	6.9	UG/KG	491.9	468.3	607.4	880.3	738.2	566.2
Acetone	31.4	UG/KG	16700.0	13800.0	19800.0	17700.0	19200.0	21409.1
Allyl chloride	3.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzyl chloride	4.3	UG/KG	ND	ND	ND	ND	ND	ND
2-Butanone	36.3	UG/KG	5600.0	2870.0	4320.0	4120.0	4240.0	4810.9
Carbon disulfide	4.7	UG/KG	170.0	105.0	78.4	101.0	105.0	120.6
Chloroprene	3.1	UG/KG	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	2.5	UG/KG	ND	ND	ND	ND	ND	ND
Isopropylbenzene	1.3	UG/KG	25.9	21.5	29.3	33.5	35.9	52.0
Methyl Iodide	3.8	UG/KG	ND	ND	ND	ND	ND	ND
Methyl methacrylate	2.4	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	3.4	UG/KG	ND	ND	ND	ND	ND	ND
2-Nitropropane	45.8	UG/KG	ND	ND	ND	ND	ND	ND
ortho-xylene	1.9	UG/KG	56.4	45.2	57.7	60.5	68.9	51.6
Styrene	1.7	UG/KG	48.1	48.1	57.6	126.0	66.2	59.8
1,2,4-Trichlorobenzene	2.5	UG/KG	15.3	21.0	9.0	7.0	ND	6.1
meta,para xylenes	4.2	UG/KG	98.6	73.7	102.0	102.0	126.0	94.3
2-Chloroethylvinyl ether	5.5	UG/KG	ND	ND	ND	ND	ND	ND
4-Methyl-2-pentanone	9.7	UG/KG	35.8	16.2	15.9	11.5	50.5	25.2

\*= The result value of the blank in this batch was 3.77 ug/L.

ND= not detected, NA= not analyzed, NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT  
 QUARTERLY SLUDGE PROJECT- Priority Pollutants Purgeable Compounds, SW 846 8260B

ANALYZED BY: TestAmerica Laboratories

From 01-DEC-2011 to 31-DEC-2011

Analyte	MDL	Units	MBCDEWCN
			31-DEC-2011 P601035
Acrolein	6.4	UG/KG	NR
Acrylonitrile	3.9	UG/KG	NR
Benzene	96.5	UG/KG	ND
Bromodichloromethane	96.5	UG/KG	ND
Bromoform	96.5	UG/KG	ND
Bromomethane	96.5	UG/KG	ND
Carbon tetrachloride	96.5	UG/KG	ND
Chlorobenzene	96.5	UG/KG	ND
Chloroethane	241	UG/KG	ND
Chloroform	96.5	UG/KG	ND
Chloromethane	96.5	UG/KG	ND
Dibromochloromethane	96.5	UG/KG	ND
1,2-Dichlorobenzene	96.5	UG/KG	ND
1,3-Dichlorobenzene	96.5	UG/KG	ND
1,4-Dichlorobenzene	96.5	UG/KG	ND
1,1-Dichloroethane	96.5	UG/KG	ND
1,2-Dichloroethane	96.5	UG/KG	ND
1,1-Dichloroethene	96.1	UG/KG	ND
trans-1,2-dichloroethene	96.5	UG/KG	ND
1,2-Dichloropropane	96.5	UG/KG	ND
cis-1,3-dichloropropene	96.5	UG/KG	ND
trans-1,3-dichloropropene	96.5	UG/KG	ND
Ethylbenzene	96.5	UG/KG	ND
Methylene chloride	483	UG/KG	ND
1,1,2,2-Tetrachloroethane	96.5	UG/KG	ND
Tetrachloroethene	96.5	UG/KG	ND
Toluene	96.5	UG/KG	ND
1,1,1-Trichloroethane	96.5	UG/KG	ND
Trichlorofluoromethane	96.1	UG/KG	ND
1,1,2-Trichloroethane	241	UG/KG	ND
Trichloroethene	96.5	UG/KG	ND
Vinyl chloride	96.5	UG/KG	ND
=====			=====
Halomethane Purgeable Cmpnds			0.0
=====			=====
Total Dichlorobenzenes			0.0
=====			=====
Purgeable Compounds			0.0

Additional volatile organic compounds determined;

Acetone	2410	UG/KG	19400
Allyl chloride	3.6	UG/KG	NR
Benzyl chloride	4.3	UG/KG	NR
2-Butanone	2410	UG/KG	ND
Carbon disulfide	241	UG/KG	ND
Chloroprene	3.1	UG/KG	NR
1,2-Dibromoethane	96.5	UG/KG	ND
Isopropylbenzene	96.5	UG/KG	ND
Methyl Iodide	3.8	UG/KG	NR
Methyl methacrylate	2.4	UG/KG	NR
Methyl tert-butyl ether	96.5	UG/KG	ND
2-Nitropropane	45.8	UG/KG	NR
ortho-xylene	241	UG/KG	ND
Styrene	96.5	UG/KG	ND
1,2,4-Trichlorobenzene	96.5	UG/KG	ND
meta,para xylenes	241	UG/KG	ND
2-Chloroethylvinyl ether	5.5	UG/KG	NR
4-Methyl-2-pentanone	2410	UG/KG	ND

nd= not detected, NA= not analyzed, NS= not sampled

METROBIOSOLIDS CENTER  
Dioxin and Furan Analysis, SW-846 Method 8290

Annual 2011

Analyzed by: Frontier Analytical Laboratories

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN
			31-MAY-2011 P566778	31-AUG-2011 P579594
2,3,7,8-tetra CDD	.0262	NG/KG	ND	ND
1,2,3,7,8-penta CDD	.0442	NG/KG	ND	DNQ3.54
1,2,3,4,7,8-hexa CDD	.0486	NG/KG	DNQ1.85	DNQ1.58
1,2,3,6,7,8-hexa CDD	.0587	NG/KG	22.5	DNQ8.01
1,2,3,7,8,9-hexa CDD	.0529	NG/KG	7.62	DNQ3.62
1,2,3,4,6,7,8-hepta CDD	.0954	NG/KG	295	158.0
octa CDD	.154	NG/KG	1760	1400
2,3,7,8-tetra CDF	.0205	NG/KG	3.28	3.79
1,2,3,7,8-penta CDF	.0304	NG/KG	DNQ1.51	ND
2,3,4,7,8-penta CDF	.0322	NG/KG	DNQ2.31	DNQ1.97
1,2,3,4,7,8-hexa CDF	.0365	NG/KG	DNQ2.43	DNQ2.23
1,2,3,6,7,8-hexa CDF	.0357	NG/KG	DNQ2.04	DNQ1.77
1,2,3,7,8,9-hexa CDF	.0387	NG/KG	DNQ1.11	ND
2,3,4,6,7,8-hexa CDF	.0399	NG/KG	DNQ2.83	DNQ2.79
1,2,3,4,6,7,8-hepta CDF	.0418	NG/KG	29.4	24.5
1,2,3,4,7,8,9-hepta CDF	.0429	NG/KG	DNQ2.58	DNQ2.05
octa CDF	.105	NG/KG	93.9	77.0

ND = not detected  
NA = not analyzed  
NS = not sampled  
DNQ= (Detected but not quantified). Estimated analyte concentration below calibration range.

## H. Results of "Title 22" Sludge Hazardous Waste Tests

### **Title 22 CCR Summary Tables**

Concentrations of Title 22 analytes (metals and organics) both on a wet weight and dry weight concentration basis for monthly composite of daily samples of sludge being hauled from the Metro Biosolids Center.

The tables list the TTLC (Total Threshold Limit Concentration) or STLC (Soluble Threshold Limit Concentration) limits in the left column for each analyte.

Definitions:

MBCDEWCN = Metro Biosolids Center dewatered sludge.

CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TEST (TITLE 22)

METRO BIOSOLIDS CENTER (MBC)

**METALS**

**WET WEIGHT Concentration (calculated)**

ANALYTE	TILC Wet wt mg/Kg	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
		Jan-11 P551608	Feb-11 P554957	Mar-11 P559212	Apr-11 P563098	May-11 P566778	Jun-11 P570762	Jul-11 P575132	Aug-11 P579594	Sep-11 P586866	Oct-11 P591381	Nov-11 P597126	Dec-11 P601035
ANTIMONY	500	0.98	0.63	0.77	0.66	0.59	0.71	< 0.14	0.73	0.77	0.70	0.73	0.45
ARSENIC	500	2.2	1.5	1.5	1.6	1.6	1.0	0.95	0.8	1.3	1.5	1.1	1.2
BARIUM	10000	23	16	103	98	105	99	88	26	31	31	75	50
BERYLLIUM	75	0.064	0.057	0.090	0.060	0.032	0.036	0.030	0.028	0.019	0.024	0.026	0.023
CADMIUM	100	0.4	0.4	0.5	0.5	0.5	0.4	< 0.0	0.4	0.4	0.5	0.5	0.4
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	17	16	20	18	17	17	14	13	14	16	16	16
COBALT	8000	1.1	0.6	1.1	1.0	0.6	0.7	1.1	0.8	0.8	0.9	0.9	0.9
COPPER	2500	170	179	208	215	219	205	209	185	196	200	193	200
LEAD	1000	6	4	5	6	4	4	6	4	5	5	5	5
MERCURY	20	0.38	0.20	0.44	0.45	0.25	0.27	0.50	0.37	0.23	0.23	0.64	0.39
MOLYBDENUM	3500	4.7	3.9	5.3	4.9	5.3	5.8	5.5	5.9	6.3	6.0	5.6	5.2
NICKEL	2000	162	14	19	18	13	12	8	11	11	12	12	12
SELENIUM	100	1.7	1.7	1.6	1.9	1.9	1.7	1.5	1.7	1.4	1.6	1.8	1.7
SILVER	500	2	2	2	2	2	2	2	2	2	2	2	2
THALLIUM	700	< 0.30	< 0.30	< 0.30	< 0.30	< 0.29	< 0.28	< 0.28	< 0.28	< 0.27	< 0.27	< 0.29	< 0.29
VANADIUM	2400	10	8	9	9	8	2	9	10	10	10	10	12
ZINC	5000	249	233	273	269	213	72	284	247	254	240	229	253
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	< 3	< 3	< 3	< 3	< 3	2	5	2	11	10	< 3	2
SULFIDES-TOTAL	NA	1863	2156	1907	595	3584	3241	4471	3920	5298	5921	2487	2457
TOTAL SOLIDS (%)		30.3	29.9	30.1	30.1	28.9	27.7	27.6	27.7	27.1	27.1	28.5	29.3

**DRY WEIGHT Concentration**

ANALYTE	TILC Wet wt mg/Kg	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
		Jan-11 P551608	Feb-11 P554957	Mar-11 P559212	Apr-11 P563098	May-11 P566778	Jun-11 P570762	Jul-11 P575132	Aug-11 P579594	Sep-11 P586866	Oct-11 P591381	Nov-10 P597126	Dec-11 P601035
ANTIMONY	500	3.2	2.1	2.6	2.2	2.0	2.6	< 0.5	2.7	2.8	2.6	2.6	1.5
ARSENIC	500	7.3	5.0	5.0	5.5	5.5	3.6	3.4	3.0	4.8	5.4	4.0	4.1
BARIUM	10000	77	52	343	327	364	358	319	95	116	116	262	171
BERYLLIUM	75	0.2	0.2	0.3	0.2	0.1	0.13	0.11	0.10	0.07	0.09	0.1	0.08
CADMIUM	100	1.4	1.4	1.6	1.7	1.6	1.5	< 0.1	1.6	1.6	1.7	1.7	1.3
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	56.3	55	68.1	61.3	58	61.1	51.9	47.6	50.9	59.7	55.9	56.2
COBALT	8000	3.6	2.1	3.7	3.4	2.0	2.4	3.9	2.9	3.1	3.3	3.2	3.0
COPPER	2500	561	597.5	691	713.5	756.5	741	756	667	723	739	678	682
LEAD	1000	19.4	14.7	17.9	19.9	13.8	15.9	20.7	14.4	16.7	17.8	16.2	16.7
MERCURY	20	1.3	0.7	1.5	1.5	0.9	1.0	1.8	1.3	0.9	0.9	2.2	1.3
MOLYBDENUM	3500	15.6	13.2	17.5	16.2	18.3	21.1	19.8	21.3	23.3	22.0	19.6	17.9
NICKEL	2000	535	48.1	63.4	60.9	46.2	41.6	29.6	38.2	39.8	45.3	40.8	39.9
SELENIUM	100	5.5	5.6	5.5	6.2	6.4	6.3	5.4	6.0	5.1	5.8	6.3	5.9
SILVER	500	5.74	5.49	6.42	6.6	5.93	5.93	6.68	7.39	7.88	8.21	6.45	6.59
THALLIUM	700	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
VANADIUM	2400	32.1	25.1	30.3	29.3	28	7.811	34	36	37.4	36.4	35.4	40.6
ZINC	5000	821	779	908	894	736	260	1028	893	936	887	805	863
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	< 11	< 11	< 11	< 11	< 11	6	18	9	39	38	< 11	7
SULFIDES-TOTAL	NA	6150	7210	6335	1978	12400	11700	16200	14150	19550	21850	8725	8385

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

NA = Not Analyzed, NS = Not Sampled

\* = The total concentration is less than 10 times the the STLC, therefore by definition this substance is below hazardous concentrations.



**ORGANICS**

**WET WEIGHT Concentration (calculated)**

ANALYTE	TTLc Wet wt mg/Kg	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
		Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-10
		P551608	P554957	P559212	P563098	P566778	P570762	P575132	P579594	P586866	P591381	P597126	P601035
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLORDANE	2.5	0.016	0.005	nd	nd	0.019	nd	nd	nd	nd	nd	nd	nd
DDT,DDE,DDD	1.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DCPAA	100	NA	NA	NA	NA	NA	NA	NA	nd	NA	nd	NA	NA
DIELDRIN	8.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDRIN	0.20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
KEPONE	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINDANE	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHOXYCHLOR	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MIREX	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PENTACHLOROPHENOL	17	NA	nd	NA	NA	nd	NA	NA	NA	NA	nd	NA	NA
PCBs (TOTAL)	50	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOXAPHENE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROETHENE	2040	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,5-TCPPA	10	NA	NA	NA	NA	NA	NA	NA	nd	NA	nd	NA	NA
TOTAL SOLIDS (%)		30.3	29.9	30.1	30.1	28.9	27.7	27.6	27.7	27.1	27.1	28.5	29.3
pH	>2-<12.5	7.57	7.68	7.72	7.73	7.67	7.69	7.76	7.73	7.73	7.73	7.74	7.62

**DRY WEIGHT Concentration**

ANALYTE	TTLc Wet wt mg/Kg	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
		Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11
		P551608	P554957	P559212	P563098	P566778	P570762	P575132	P579594	P586866	P591381	P597126	P601035
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLORDANE	2.5	0.052	0.017	nd	nd	0.067	nd	nd	nd	nd	nd	nd	nd
DDT,DDE,DDD	1.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4-DCPAA	100	NA	NA	NA	NA	NA	NA	NA	NA	nd	NA	nd	NA
DIELDRIN	8.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
ENDRIN	0.20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
HEPTACHLOR	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
KEPONE	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINDANE	4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
METHOXYCHLOR	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
MIREX	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
PENTACHLOROPHENOL	17	NA	nd	NA	NA	nd	NA	NA	NA	NA	nd	NA	NA
PCBs (TOTAL)	50	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOXAPHENE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TRICHLOROETHENE	2040	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
2,4,5-TCPPA	10	NA	NA	NA	NA	NA	NA	NA	NA	nd	NA	nd	NA

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

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