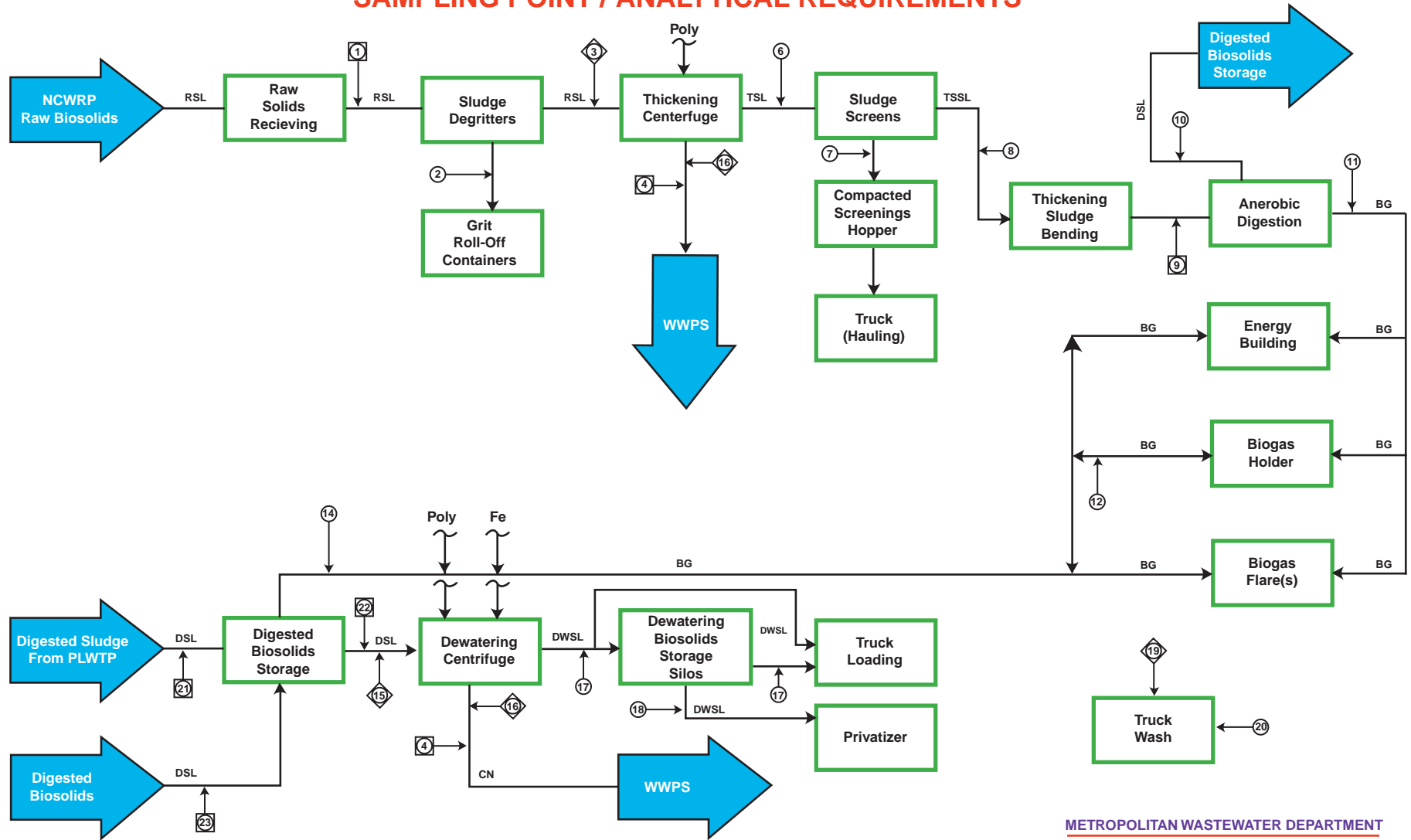


Metro Biosolids Center



METROPOLITAN BIOSOLIDS CENTER PROCESS FLOW DIAGRAM SAMPLING POINT / ANALYTICAL REQUIREMENTS



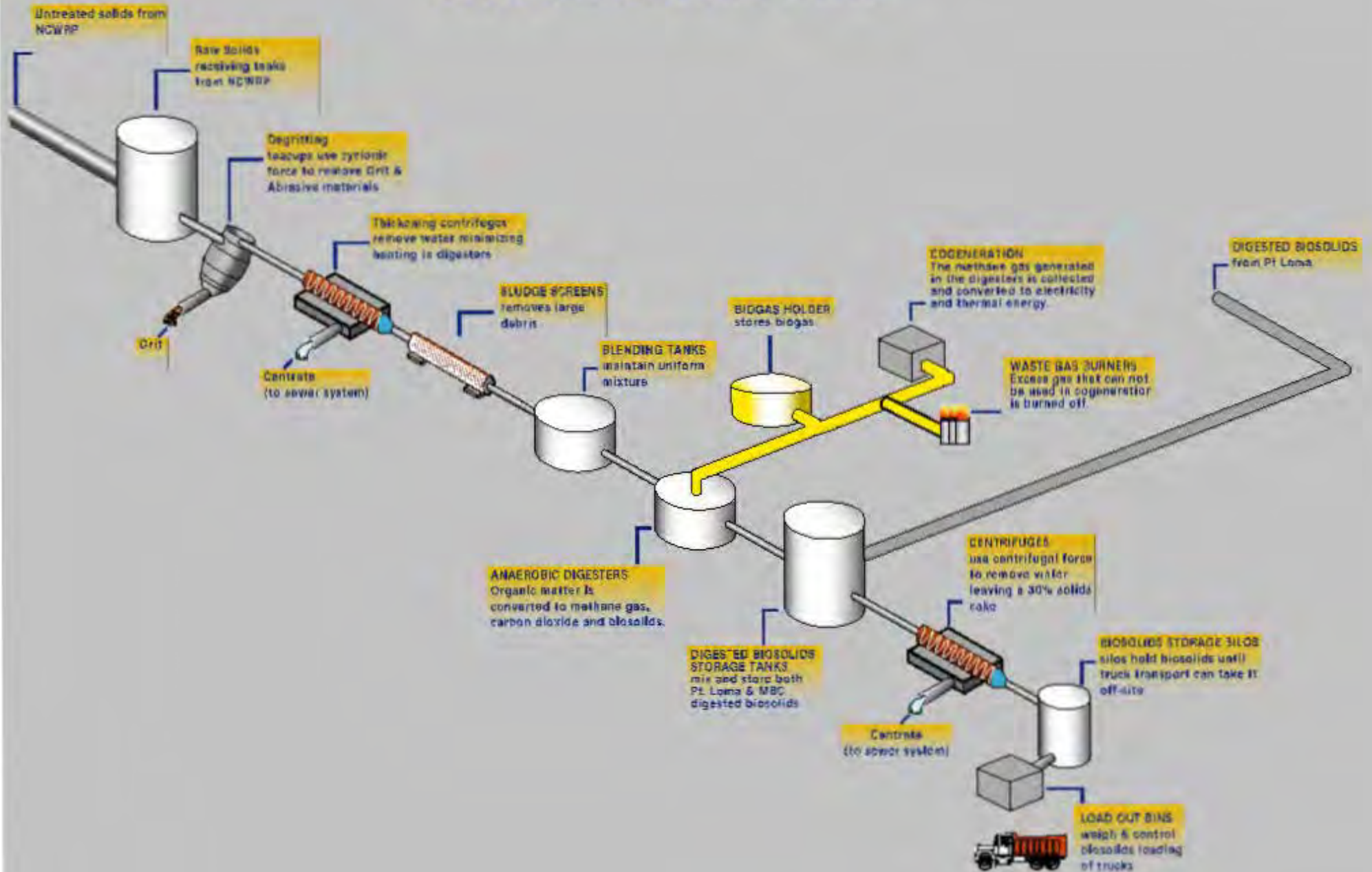
METROPOLITAN WASTEWATER DEPARTMENT
O & M SUPPORT SERVICES

- 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	Anaerobically 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 ₄), Carbon Dioxide (CO ₂), Hydrogen Sulfide (H ₂ S)	18	Dewatered Biosolids Cake: Total Solids, Volatile Solids, pH, TKN, PCB, Trace Metals
4	Centrate (Dewatering & Thickening) Sampler (76 AU 2635): Total Solids, Volatile Solids, % Moisture	12	Biogas to Biogas Holder: Methane (CH ₄), Carbon Dioxide (CO ₂), H ₂ S	19	Truck Wash: (87 AIT 9011): Cl ₂ Residue
5	Suspended Solids, pH, BOD ₅	13	Biogas from Digestion: Methane (CH ₄), Carbon Dioxide (CO ₂)	20	Truck Wash: BOD ₅ , Coliform
6	Thickened Biosolids: Total Solids, Volatile Solids, pH	14	Biogas to Biogas Holder: Methane (CH ₄), Carbon Dioxide (CO ₂), H ₂ S	21	Digested Sludge from PLWTP (80 AU 9009): Total Solids, Volatile Solids, pH, Iron
7	Sludge Screening: Volatile Solids, % Moisture	15	Dewatering Centrifuge Feed Loop (76 DE 2502): Total Solids	22	Digested Sludge from DBST (80 AU 2115): Total Solids, Volatile Solids, pH
8	Thickened Screen Sludge: Total Sludge, Volatile Solids			23	Digester Samplers: Digester#1 80 AU 9006, Digester#2 9007, Digester#3 9008
					Total Solids, Volatile Solids, pH, Alkalinity, Iron

Revision Date: 05/17/2000

Metro Biosolids Center Process



IV. Metro Biosolids Center (MBC) Data

- A. Return Stream Data Summary
- B. Digester and Digested Sludge Data Summary
- C. Gas Production
- D. Chemical usage
- E. Graphs of chemical usage
- F. Facilities Out-of-service Report (2002)
- G. Solids Handling Annual Report
- H. Results of "Title 22" Sludge Hazardous Waste Tests

A. Return Stream Data Summary

This section presents the results of analyses of the Metro Biosolids Center (MBC) return stream (MBC_COMBCN) for 2002. This return stream is continuously sampled by a flow proportioned, autosampler connected to the return stream lines at MBC. Each 24-hour¹ 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 select parameters' monthly averages are graphed. Tables of daily values for select parameters (such as TSS, Flow, etc.) along with graphs are also provided.

¹ approximately midnight to midnight each day.

City of San Diego
Metropolitan Wastewater Department

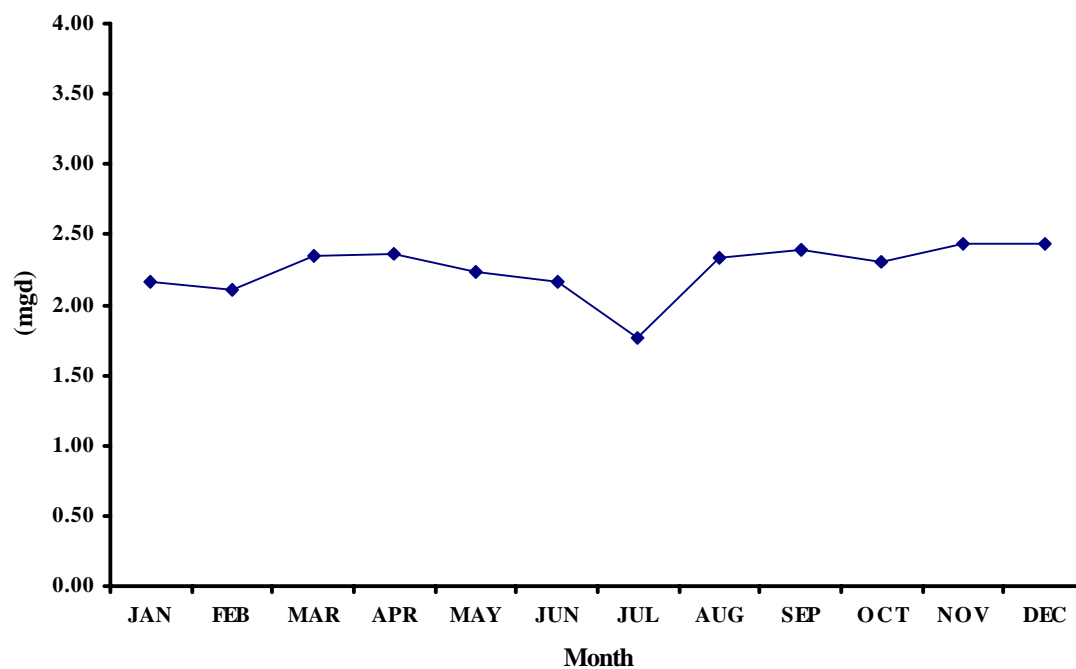
Metro Biosolids Center

Monthly Averages of Daily Analyses
From 01-JAN-2002 To 31-DEC-2002

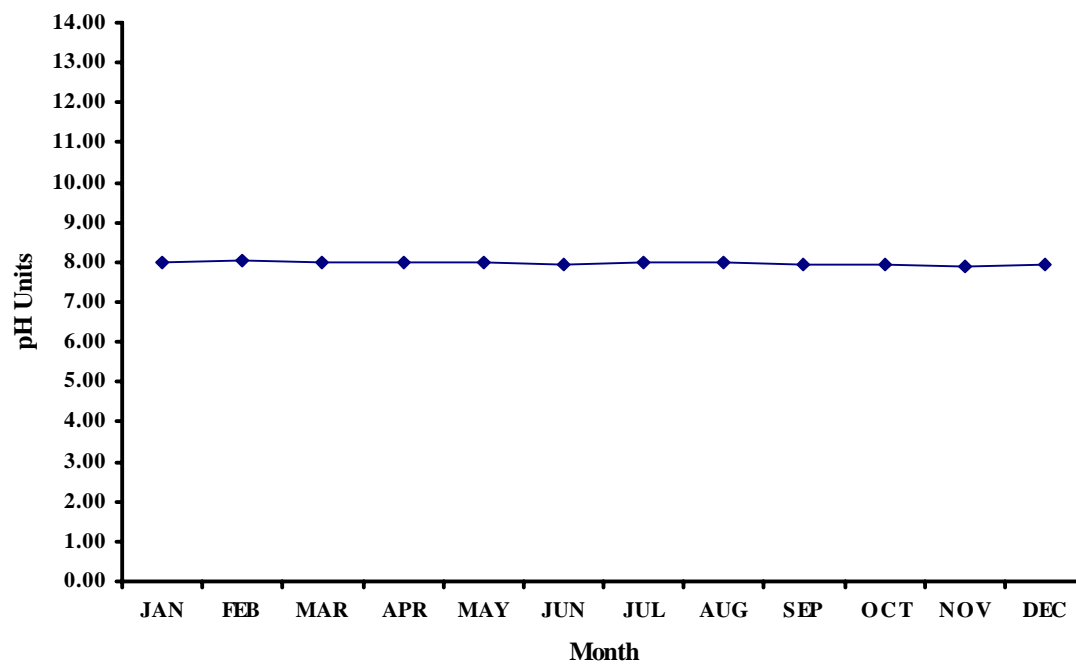
									TSS
		FLOW	PH	BOD	TSS	VSS	TS	TVS	Mass
		MGD	pH Units	mg/L	mg/L	mg/L	Wt%	Wt%	Emissions
									(lbs/Day)
=====		=====	=====	=====	=====	=====	=====	=====	=====
JANUARY	-2002	2.16	8.00	322	883	659	0.27	43	15907
FEBRUARY	-2002	2.11	8.04	249	446	374	0.21	37	7848
MARCH	-2002	2.35	7.99	245	443	345	0.24	38	8682
APRIL	-2002	2.37	8.00	310	477	387	0.26	40	9428
MAY	-2002	2.24	8.01	<314	633	494	0.27	42	11825
JUNE	-2002	2.16	7.92	<259	569	450	0.28	40	10250
JULY	-2002	1.77	7.98	360	1040	730	0.37	46	15352
AUGUST	-2002	2.33	7.99	254	661	509	0.29	44	12845
SEPTEMBER	-2002	2.39	7.96	257	612	468	0.28	42	12199
OCTOBER	-2002	2.30	7.94	279	518	393	0.27	39	9936
NOVEMBER	-2002	2.44	7.90	<342	942	677	0.27	37	19169
DECEMBER	-2002	2.43	7.93	435	860	637	0.29	37	17429
=====		=====	=====	=====	=====	=====	=====	=====	=====
Average		2.25	7.97	302	674	510	0.28	40	12573

'Average' = Annual average of Monthly Averages.

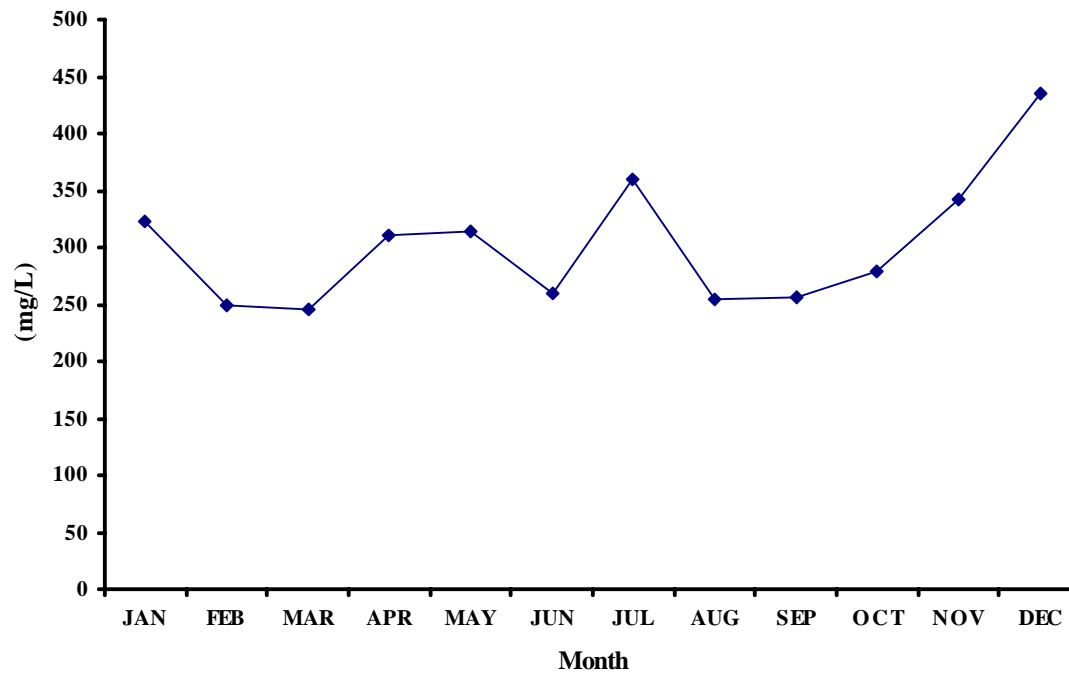
**MBC Combined Centrate 2002
Monthly Averages - Flow (mgd)**



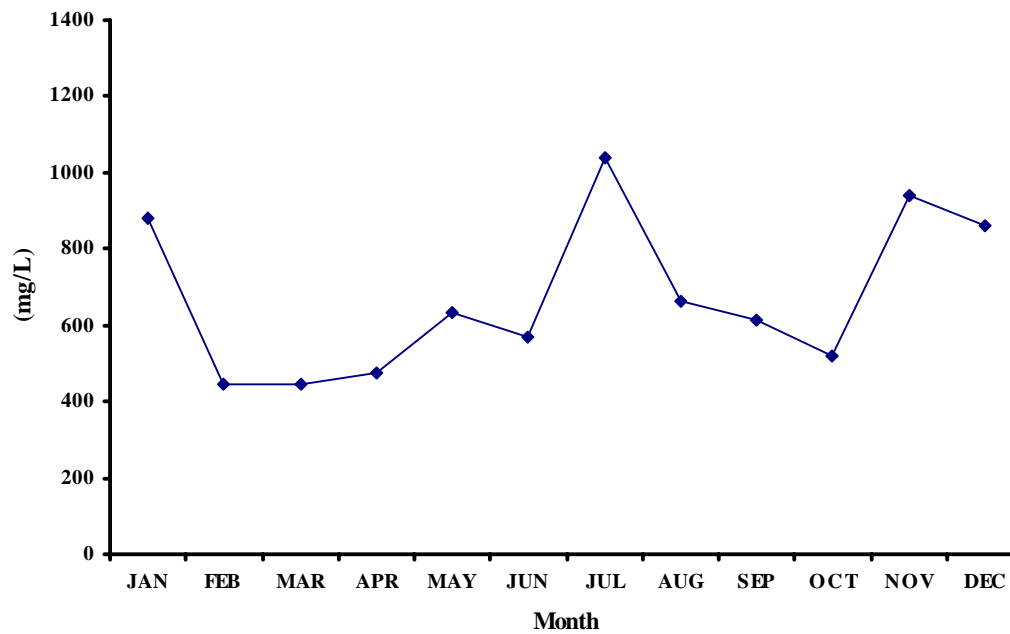
**MBC Combined Centrate
2002 Monthly Averages - pH**



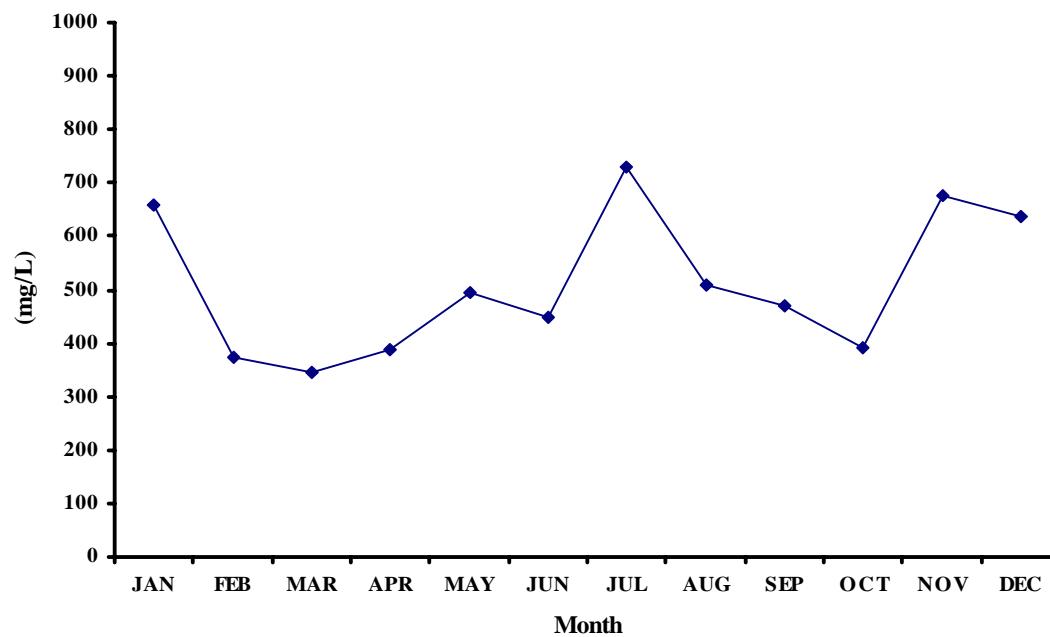
**MBC Combined Centrate
2002 Monthly Averages - BOD (mg/L)**



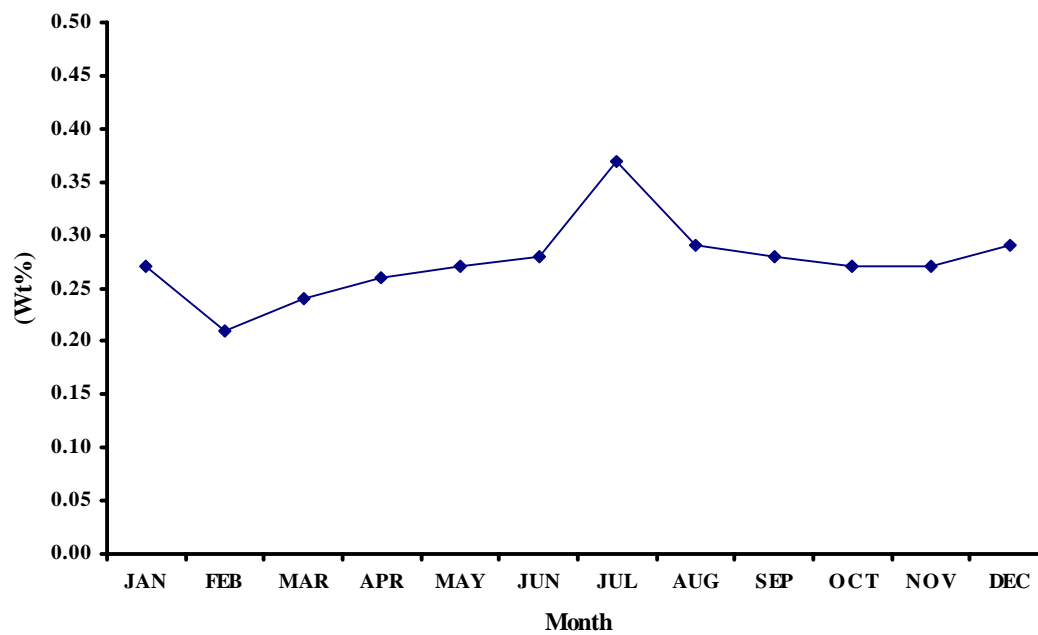
**MBC Combined Centrate
2002 Monthly Averages - TSS (mg/L)**



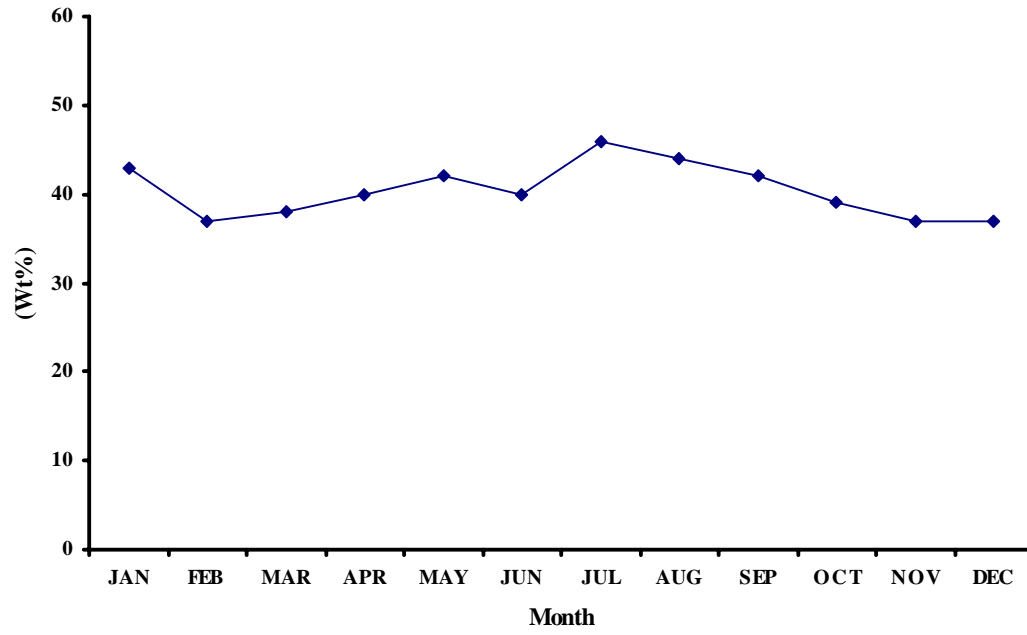
**MBC Combined Centrate
2002 Monthly Averages - VSS (mg/L)**



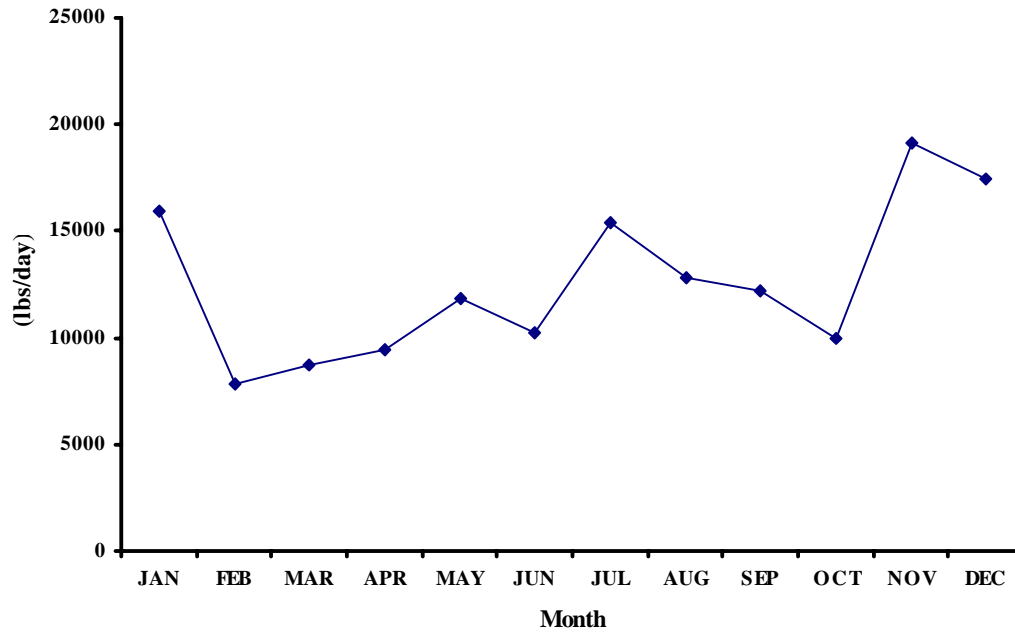
**MBC Combined Centrate
2002 Monthly Averages - Percent TS**



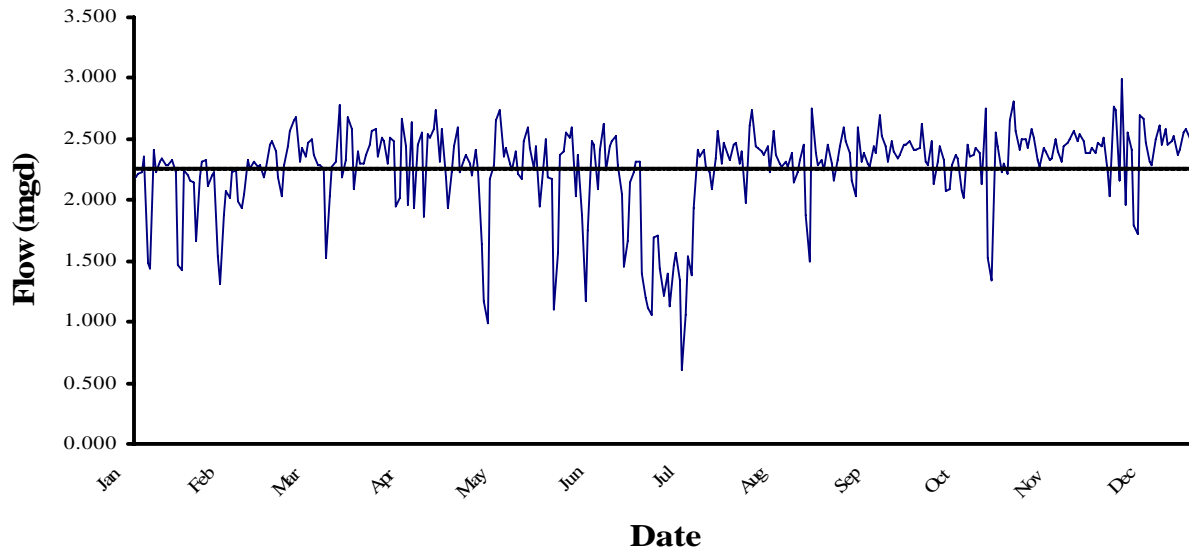
**MBC Combined Centrate
2002 Monthly Averages - Percent TVS**



**MBC Combined Centrate
2002 Monthly Averages - TSS Mass Emission (lbs/day)**



2002 MBC Return Stream Flow (mgd)



Metro Biosolids Center 2001 MBC Return Stream Daily Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2.250	2.196	2.478	2.374	2.590	2.171	1.400	2.465	2.304	2.623	2.562	2.225
2	2.213	2.157	2.406	2.456	2.224	1.100	1.199	2.303	2.155	2.322	2.415	2.033
3	2.436	2.150	2.194	2.565	2.323	1.573	1.116	2.404	2.334	2.293	2.494	2.773
4	2.252	1.670	2.029	2.583	2.378	2.366	1.064	1.972	2.444	2.490	2.505	2.736
5	2.265	2.189	2.280	2.359	2.296	2.394	1.698	2.616	2.596	2.135	2.433	2.166
6	2.293	2.309	2.448	2.516	2.200	2.555	1.705	2.740	2.488	2.314	2.576	2.988
7	2.200	2.326	2.570	2.483	2.412	2.508	1.439	2.447	2.391	2.443	2.505	1.962
8	2.274	2.110	2.660	2.307	2.242	2.603	1.218	2.433	2.153	2.334	2.325	2.549
9	2.193	2.197	2.677	2.506	1.632	2.038	1.399	2.403	2.031	2.082	2.270	2.408
10	2.209	2.223	2.311	2.480	1.170	2.374	1.129	2.364	2.599	2.083	2.433	1.788
11	2.183	1.538	2.427	1.951	0.983	1.876	1.464	2.445	2.317	2.286	2.401	1.722
12	2.214	1.317	2.355	2.014	2.175	1.169	1.560	2.229	2.379	2.376	2.324	2.702
13	2.181	1.874	2.470	2.662	2.290	1.746	1.341	2.571	2.297	2.342	2.340	2.671
14	2.286	2.081	2.500	2.440	2.652	2.480	0.602	2.376	2.269	2.076	2.500	2.470
15	2.192	2.025	2.370	1.955	2.734	2.461	1.064	2.302	2.444	2.022	2.395	2.320
16	2.209	2.225	2.290	2.645	2.355	2.090	1.536	2.276	2.391	2.461	2.311	2.285
17	2.227	2.245	2.292	1.934	2.434	2.413	1.379	2.317	2.694	2.361	2.439	2.495
18	2.353	1.992	2.257	2.457	2.307	2.632	1.935	2.267	2.526	2.374	2.466	2.611
19	1.476	1.934	1.525	2.557	2.246	2.245	2.411	2.380	2.439	2.431	2.504	2.458
20	1.434	2.045	2.027	1.859	2.406	2.436	2.358	2.152	2.310	2.390	2.569	2.579
21	2.417	2.332	2.271	2.547	2.212	2.478	2.420	2.224	2.482	2.136	2.486	2.452
22	2.236	2.255	2.321	2.514	2.180	2.529	2.278	2.335	2.404	2.755	2.541	2.483
23	2.308	2.309	2.777	2.577	2.488	2.290	2.233	2.457	2.339	1.526	2.488	2.521
24	2.344	2.274	2.185	2.738	2.600	2.043	2.093	1.883	2.373	1.341	2.385	2.373
25	2.292	2.286	2.330	2.313	2.425	1.448	2.340	1.493	2.459	2.548	2.390	2.417
26	2.285	2.188	2.677	2.579	2.264	1.660	2.565	2.755	2.455	2.445	2.429	2.561
27	2.329	2.255	2.587	2.193	2.446	2.146	2.297	2.389	2.482	2.229	2.387	2.587
28	2.229	2.450	2.086	1.932	1.952	2.236	2.472	2.281	2.418	2.304	2.476	2.513
29	1.471		2.394	2.223	2.144	2.313	2.373	2.333	2.416	2.211	2.445	2.474
30	1.419		2.307	2.444	2.503	2.311	2.322	2.250	2.426	2.654	2.510	2.435
31	2.239		2.297		2.181		2.460	2.460		2.808		2.425
Avg	2.158	2.113	2.348	2.372	2.240	2.156	1.770	2.333	2.394	2.297	2.443	2.425
Min	1.419	1.317	1.525	1.859	0.983	1.100	0.602	1.493	2.031	1.341	2.270	1.722
Max	2.436	2.450	2.777	2.738	2.734	2.632	2.565	2.755	2.694	2.808	2.576	2.988

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

From: 01-JAN-2002 to: 31-DEC-2002

SAMPLED BY: MBC Personnel
SAMPLED BY: BOA,G8C.JRF,IEN,LXP,DXS,JRV,SCV,JZI

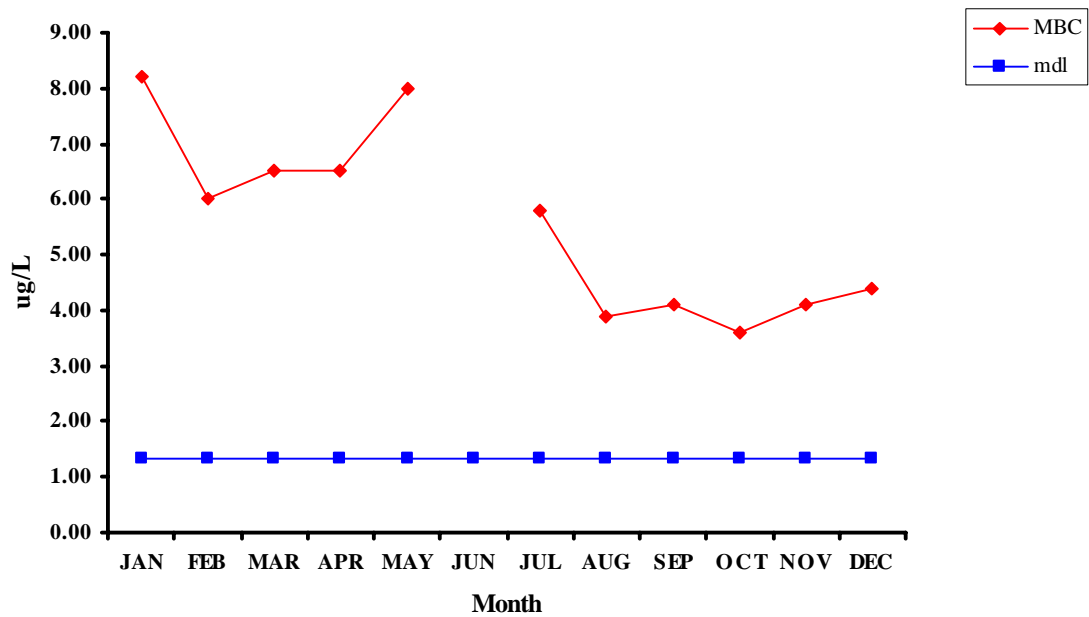
Source:		MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date:		31-JAN-2002	28-FEB-2002	31-MAR-2002	30-APR-2002	31-MAY-2002	30-JUN-2002
Sample ID:		P130537ts	P132667	P134916	P138468	P172121	P175399
		=====	=====	=====	=====	=====	=====
Aluminum	50 UG/L	6330	1950	1770	2100	3610	3070
Antimony	23 UG/L	36.0	39.5	36.4	ND	45.0	ND
Arsenic	1.33 UG/L	8.2	6.0	6.5	6.5	8.0	NA
Barium	10 UG/L	343	136	126	125	192	141
Beryllium	.39 UG/L	ND	ND	ND	ND	ND	ND
Cadmium	1 UG/L	ND	ND	1.0	2.1	2.4	ND
Chromium	5 UG/L	18	<5	9	ND	46	ND
Cobalt	4 UG/L	ND	<4.0	6.7	ND	<4.0	ND
Copper	4 UG/L	441	174	208	142	306	258
Iron	30 UG/L	41600	19000	28500	24300	32700	27100
Lead	18 UG/L	ND	ND	ND	ND	ND	ND
Manganese	4 UG/L	1070	971	910	739	779	680
Mercury	.5 UG/L	0.49	ND	ND	ND	0.45	ND
Molybdenum	3 UG/L	12.9	8.8	ND	ND	8.7	6.6
Nickel	14 UG/L	17	ND	29	ND	34	31
Selenium	2 UG/L	5.09	3.53	3.25	3.96	4.13	NA
Silver	6.6 UG/L	30	ND	ND	ND	ND	ND
Thallium	40 UG/L	ND	ND	ND	ND	ND	ND
Vanadium	7 UG/L	11.9	ND	ND	ND	ND	ND
Zinc	4 UG/L	423	157	146	161	247	176

Source:		MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN	MBC_COMBCN
Date:		31-JUL-2002	31-AUG-2002	30-SEP-2002	31-OCT-2002	30-NOV-2002	31-DEC-2002
Sample ID:		P182166ts	P185888	P189534	P193226	P196904	P200015
		=====	=====	=====	=====	=====	=====
Aluminum	50 UG/L	7000	4530	3560	2180	4470	5350
Antimony	23 UG/L	35.5	84.5	55.9	72.5	41.5	74.5
Arsenic	1.33 UG/L	5.8	3.9	4.1	3.6	4.1	4.4
Barium	10 UG/L	337	218	185	131	243	260
Beryllium	.39 UG/L	ND	ND	ND	1.33	ND	ND
Cadmium	1 UG/L	ND	<1.0	ND	4.1	2.1	3.9
Chromium	5 UG/L	25	8	19	8	15	15
Cobalt	4 UG/L	ND	ND	<4.0	4.1	<4.0	ND
Copper	4 UG/L	443	339	331	361	345	356
Iron	30 UG/L	62200	38300	37900	33500	57400	53500
Lead	18 UG/L	27	ND	ND	23	<18	24
Manganese	4 UG/L	650	781	733	998	1200	1200
Mercury	.5 UG/L	0.60	ND	ND	ND	0.29	0.80
Molybdenum	3 UG/L	20.7	<3.0	16.3	3.9	10.2	8.1
Nickel	14 UG/L	38	28	26	21	19	<14
Selenium	2 UG/L	4.87	3.05	2.94	2.63	3.69	4.10
Silver	6.6 UG/L	16	ND	ND	ND	8	9
Thallium	40 UG/L	ND	ND	ND	ND	ND	ND
Vanadium	7 UG/L	13.5	ND	ND	ND	ND	ND
Zinc	4 UG/L	479	281	287	173	313	338

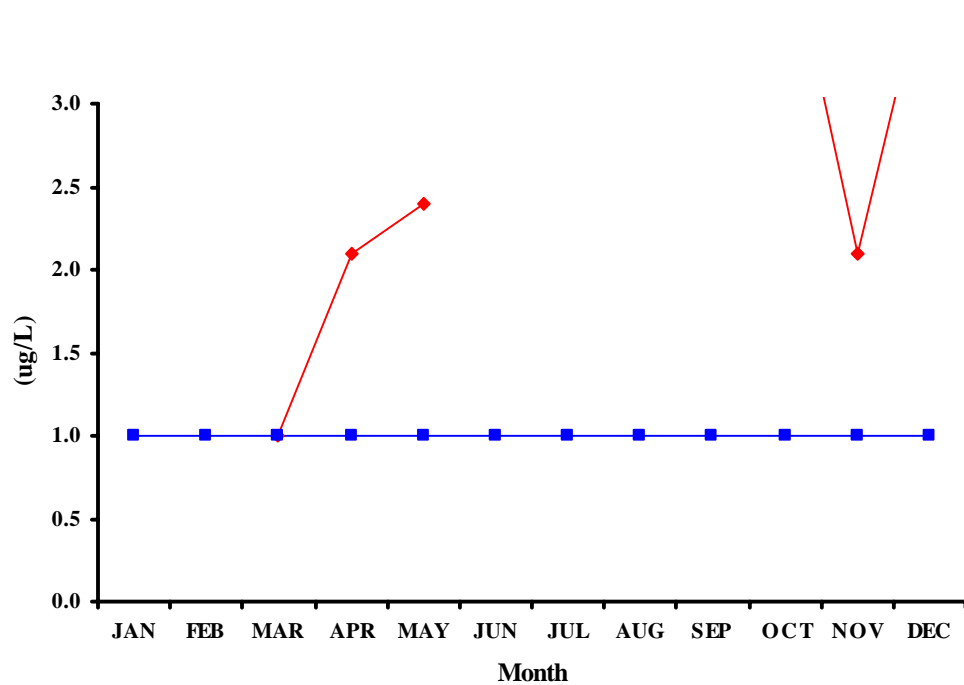
ND= Not Detected
NA= Not Analyzed
NS= Not Sampled
NR= Not Required

MBC_COMBCN= Metro Biosolids Center Combined Sludge Centrate.

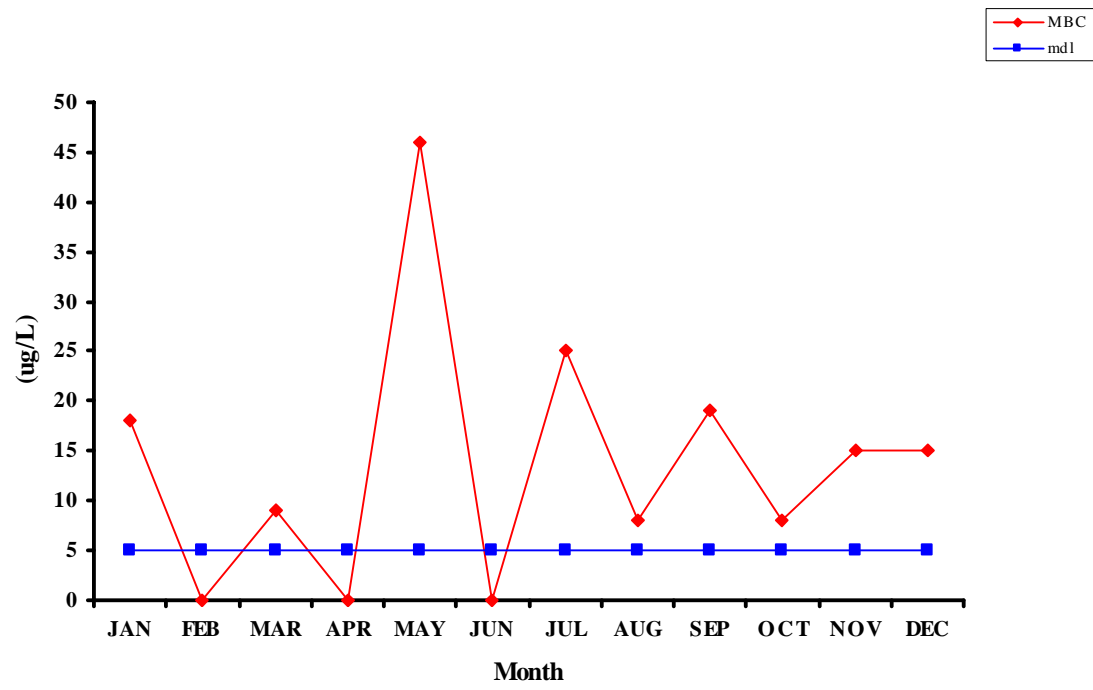
Arsenic 2002 Monthly Averages



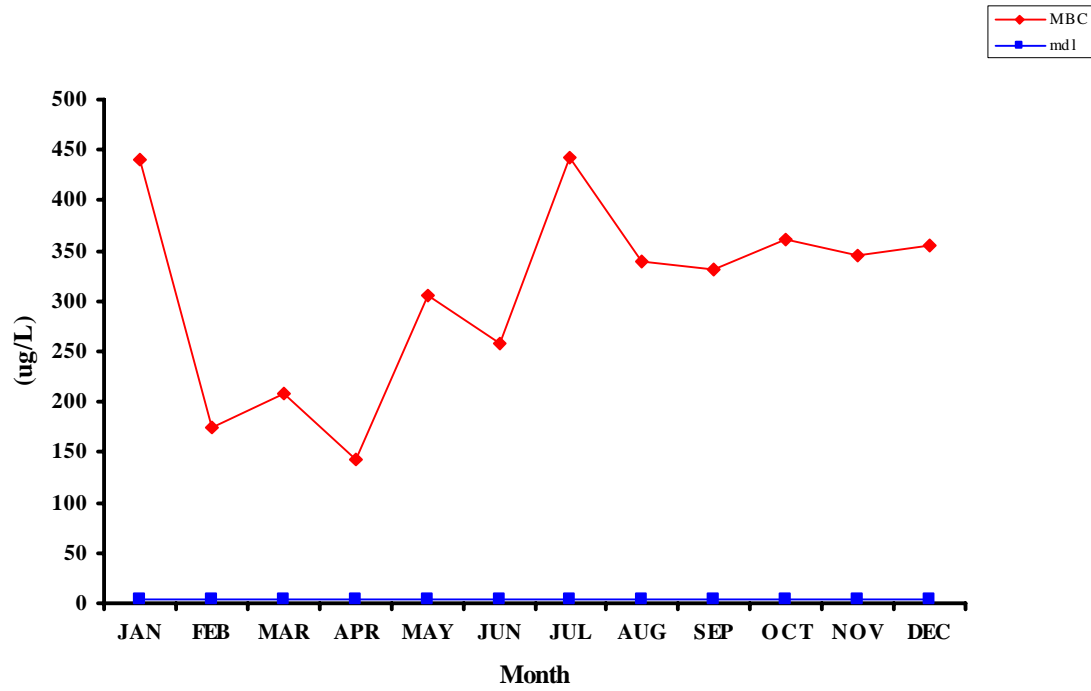
Cadmium 2002 Monthly Averages



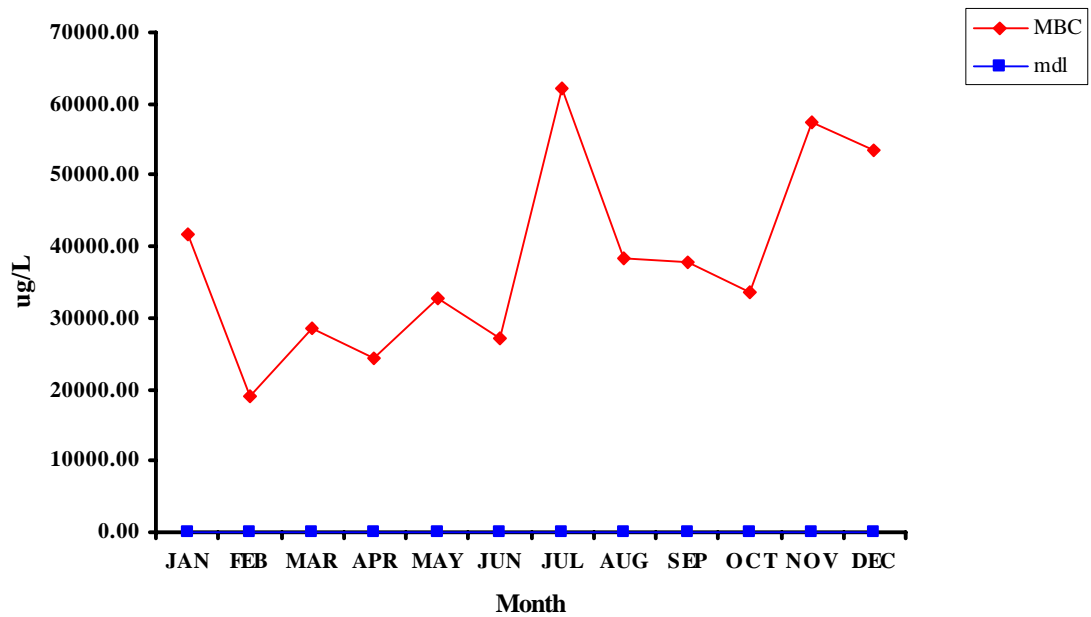
Chromium 2002 Monthly Averages



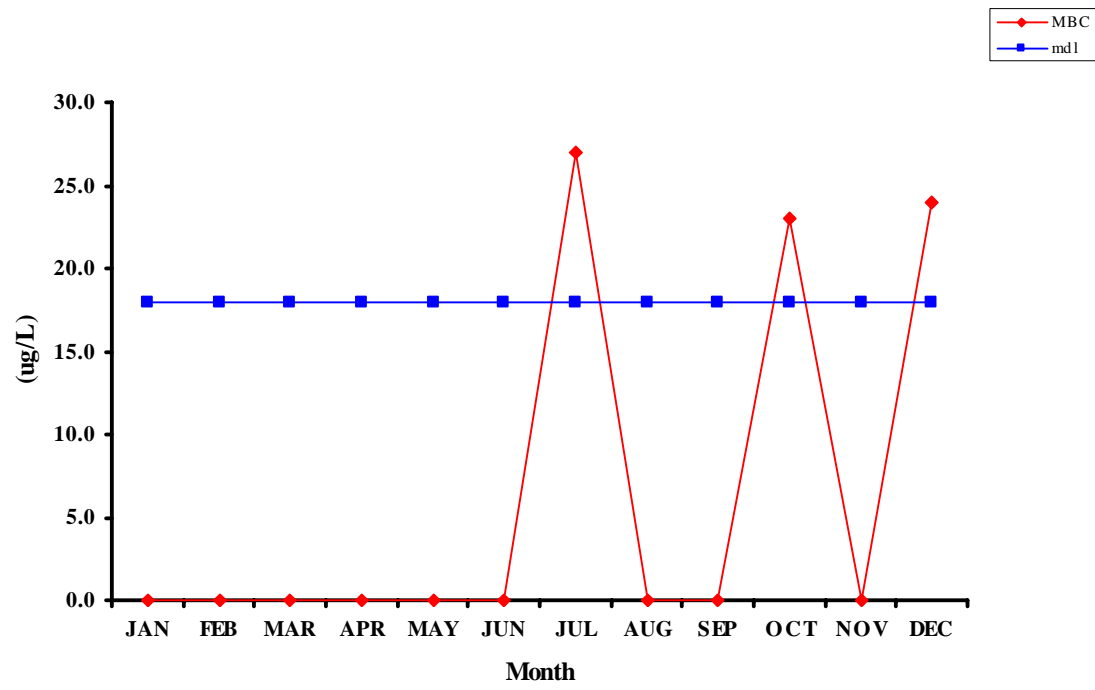
Copper 2002 Monthly Averages



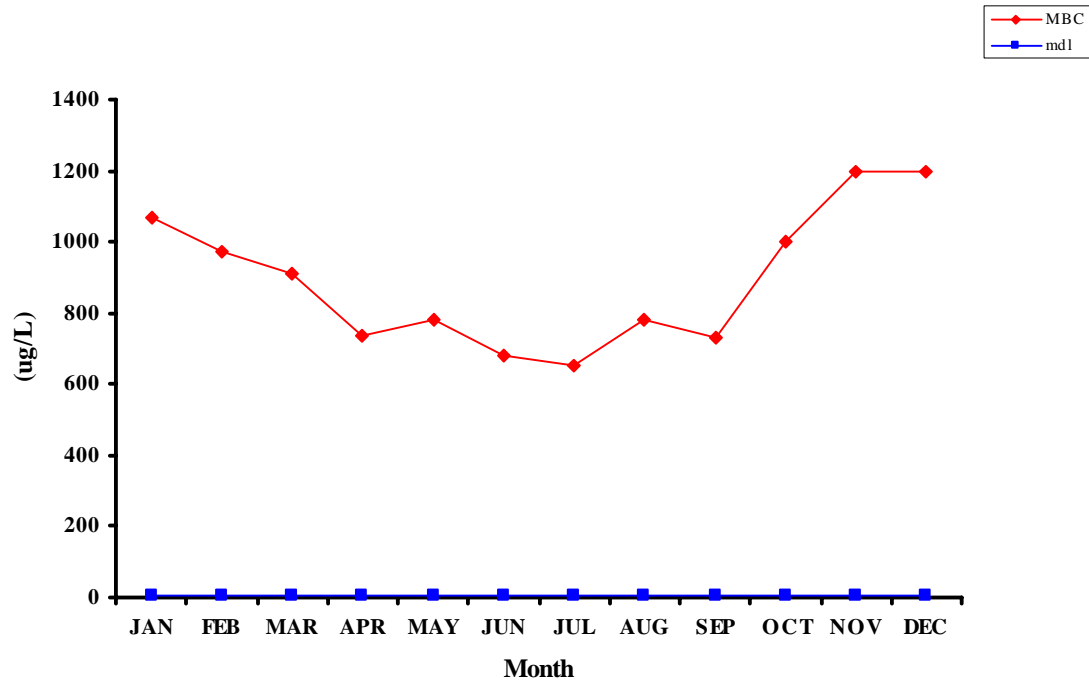
Iron 2002 Monthly Averages



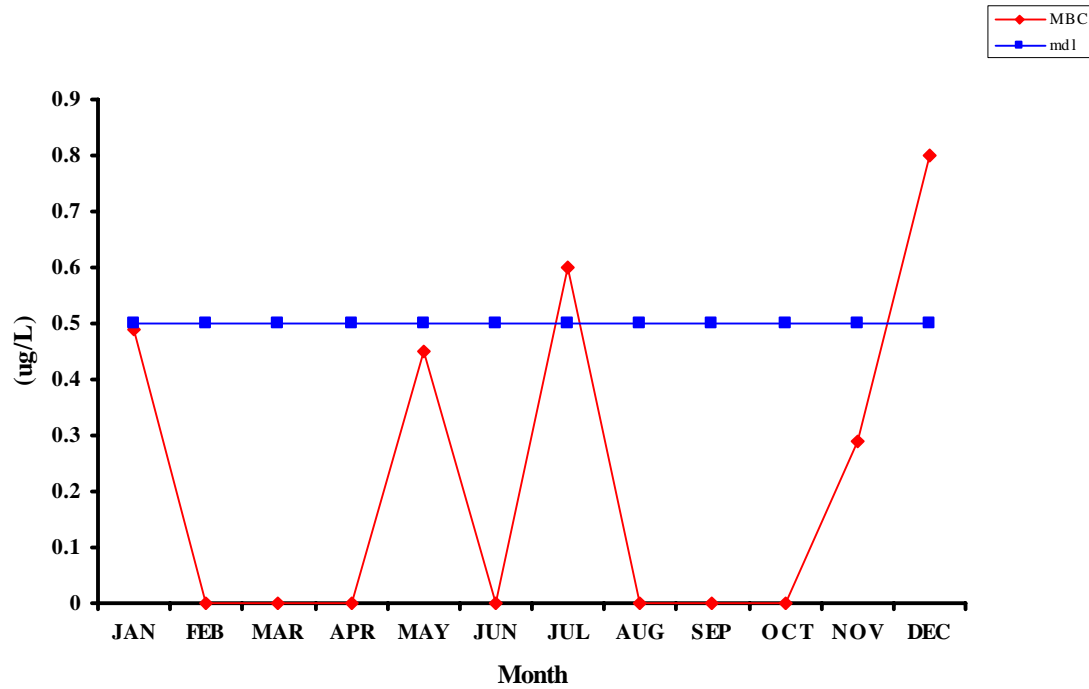
Lead 2002 Monthly Averages



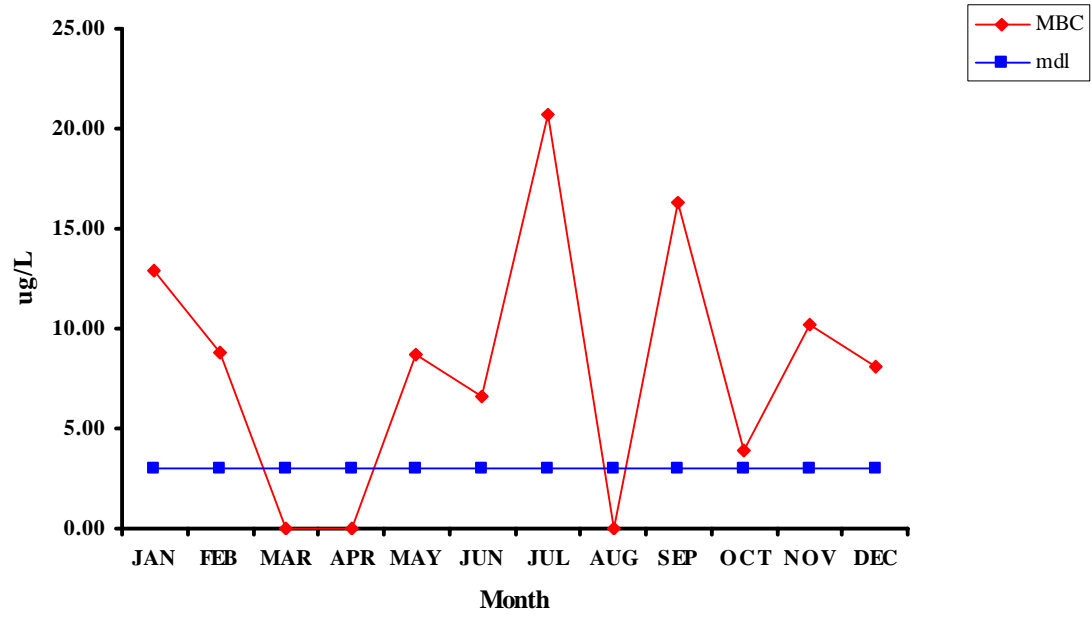
Manganese 2002 Monthly Averages



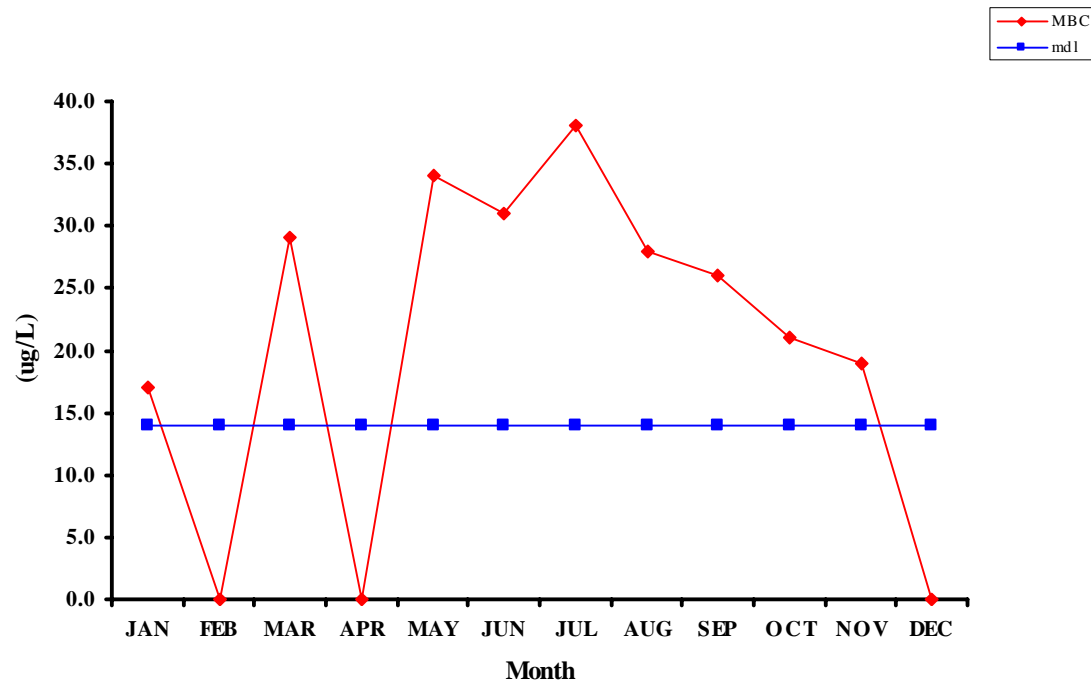
Mercury 2002 Monthly Averages



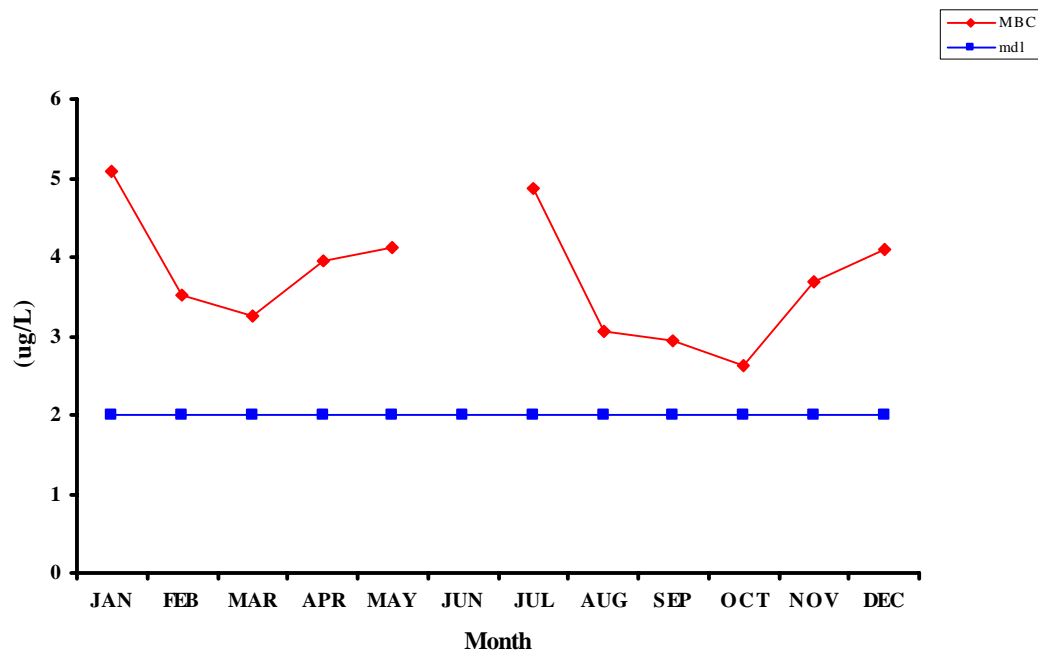
Molybdeum 2002 Monthly Averages



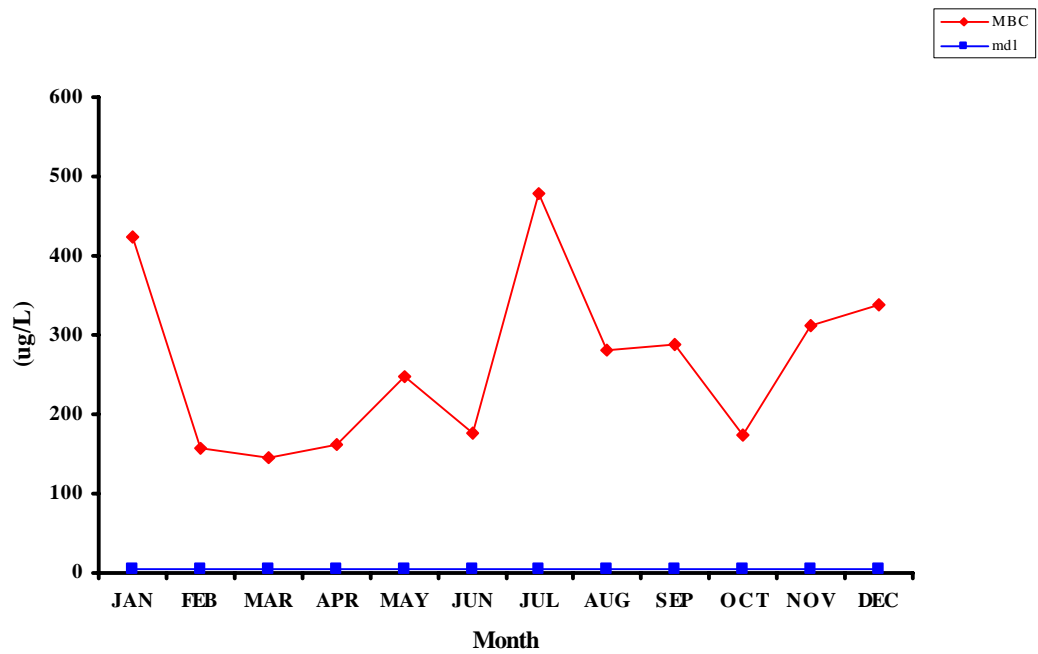
Nickel 2002 Monthly Averages



Selenium 2002 Monthly Averages



Zinc 2002 Monthly Averages



B. MBC Digester and Digested Sludge Data Summary

Metro Biosolids Center Annual Report 2002 Digesters

Digester 1

		pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2002		7.30	2.4	68.1	2720	109	60.6	39.1	20
FEBRUARY -2002		7.38	2.4	67.3	2850	118	60.1	39.9	21
MARCH -2002		7.27	2.3	68.6	2810	105	59.3	40.7	17
APRIL -2002		7.22	2.2	67.5	2600	109	59.6	40.4	16
MAY -2002		7.18	2.1	67.4	2410	102	59.7	40.4	18
JUNE -2002		7.19	4.1	62.2	2310	101	59.9	40.1	14
JULY -2002		7.21	2.5	60.6	2100	106	61.2	38.8	14
AUGUST -2002		7.13	2.2	61.7	1980	91	60.1	39.9	15
SEPTEMBER-2002		7.12	3.8	60.6	2190	100	59.9	40.1	19
OCTOBER -2002		7.14	2.4	67.3	2220	104	59.6	40.4	22
NOVEMBER -2002		7.15	2.3	68.0	2320	121	59.4	40.6	18
DECEMBER -2002		7.15	2.4	68.2	2420	139	59.8	40.2	20
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
Average:		7.20	2.6	65.6	2411	109	59.9	40.1	18

Digester 2

		pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2002									
FEBRUARY -2002									
MARCH -2002									
APRIL -2002									
MAY -2002									
JUNE -2002									
JULY -2002									
AUGUST -2002									
SEPTEMBER-2002									
OCTOBER -2002									
NOVEMBER -2002									
DECEMBER -2002									
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
		*	*	*	*	*	*	*	*

Digester 3

		pH	Total Solids (%)	Volatile Solids (%)	Alkalinity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
JANUARY -2002									
FEBRUARY -2002									
MARCH -2002									
APRIL -2002									
MAY -2002									
JUNE -2002									
JULY -2002									
AUGUST -2002									
SEPTEMBER-2002									
OCTOBER -2002									
NOVEMBER -2002									
DECEMBER -2002									
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
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C. Gas Production

Metro Biosolids Center Gas Report - 2002

Daily Monthly Averages

GAS PRODUCTION (x1000 Cu. Ft.)				GAS CONSUMPTION (x1000 Cu. Ft.)			
Month	DIG 1	DIG 2	DIG 3	Total Gas Production	GAS FLARES	GAS COGENERATION	Total Gas Consumption
01	142,151.3			142,151.3	6,284	350,556	356,840
02	146,262.2			146,262.2	1,596	387,417	389,013
03	138,112.0			138,112.0	1,063	367,508	368,571
04	130,214.3			130,214.3	1,261	341,244	342,505
05	259,391.6			259,391.6	1,135	335,723	336,859
06	223,338.7			223,338.7	10,692	294,738	305,430
07	112,197.5			112,197.5	7,948	182,261	190,209
08	241,220.0			241,220.0	1,691	315,809	317,501
09	293,480.7			293,480.7	3,797	386,373	390,170
10	310,212.1			310,212.1	922	403,021	403,943
11	289,349.6			289,349.6	2,488	382,278	384,765
12	298,819.0			298,819.0	941	381,053	381,994
avg	215,395.8			215,395.8	3,318	343,998	347,317

Monthly Totals

GAS PRODUCTION (x1000 Cu. Ft.)				GAS CONSUMPTION (x1000 Cu. Ft.)			
Month	DIG 1	DIG 2	DIG 3	Total Gas Production	Gas Flares	Gas Cogeneration	Total Gas Consumption
01	4,122,388.0			4,122,388.0	194,800	10,867,242	11,062,042
02	4,095,342.0			4,095,342.0	44,692	10,847,674	10,892,366
03	4,281,473.0			4,281,473.0	32,961	11,392,744	11,425,705
04	3,776,215.0			3,776,215.0	37,818	10,237,320	10,275,138
05	7,781,749.0			7,781,749.0	34,061	10,071,698	10,105,759
06	6,476,821.0			6,476,821.0	310,062	8,547,404	8,857,466
07	3,478,123.0			3,478,123.0	246,381	5,650,101	5,896,482
08	7,477,821.0			7,477,821.0	52,432	9,790,085	9,842,517
09	8,804,421.0			8,804,421.0	60,748	6,181,975	6,242,723
10	9,616,576.0			9,616,576.0	28,595	12,493,639	12,522,234
11	8,680,487.0			8,680,487.0	74,625	11,468,331	11,542,956
12	9,263,390.0			9,263,390.0	29,160	11,812,648	11,841,808
avg	6,487,900.5			6,487,900.5	95,528	9,946,738	10,042,266
sum	77,854,806.0			77,854,806.0	1,146,335	119,360,861	120,507,196

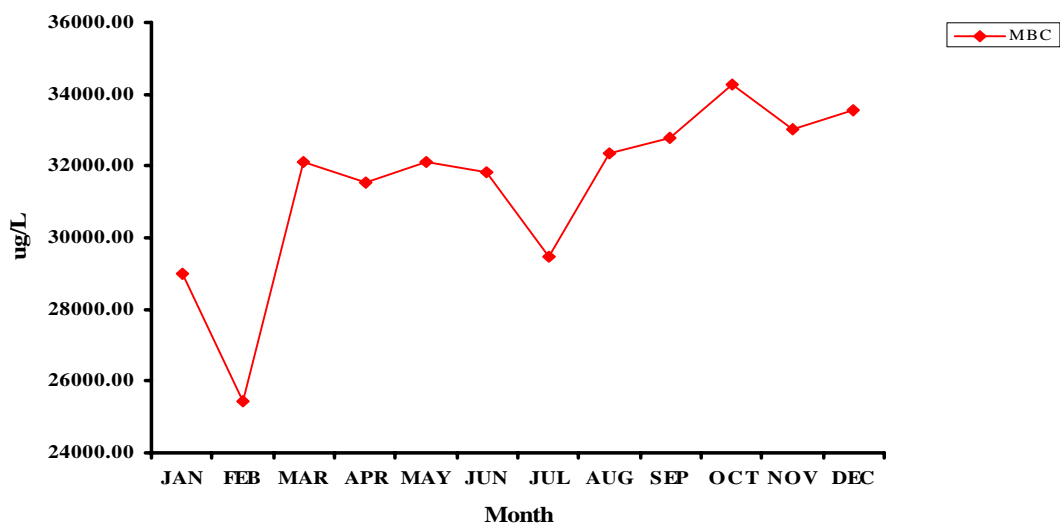
D. Chemical Usage

Metro Biosolids Center - Monthly Chemical Usage Report - 2002

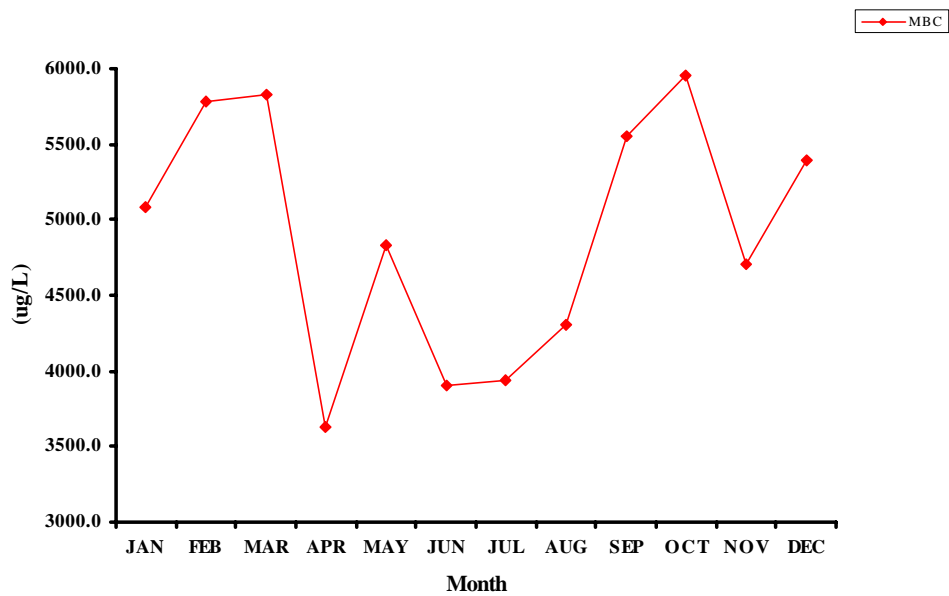
MON	Polymer Gallons	Ferric Chloride Gallons	Ferrous Chloride Gallons	Sodium Hydroxide Gallons	Hypochlorite Gallons	Sulfuric Acid Gallons
01	151,923	28,971		5,087	5,771	343
02	136,866	25,424		5,782	5,961	360
03	170,921	32,095		5,830	2,429	318
04	157,068	31,530		3,627	4,571	279
05	159,594	32,128		4,828	11,764	617
06	147,763	31,821		3,900	3,630	521
07	155,231	29,462		3,936	6,071	283
08	178,764	32,363		4,308	5,867	1,123
09	171,682	32,782		5,549	6,702	1,557
10	173,617	34,262		5,954	7,325	585
11	168,906	33,033		4,705	5,895	0
12	151,477	33,556		5,393	4,930	0
avg	160,318	31,452		4,908	5,910	499
sum	1,923,812	377,427		58,899	70,916	5,986

E. Graphs of Monthly Chemical Usage

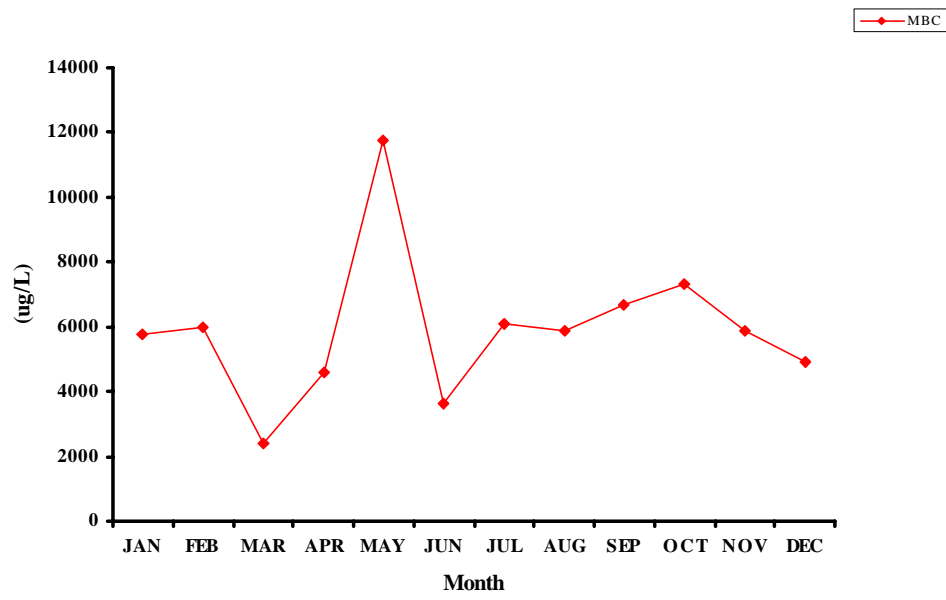
Ferric Chloride 2002 Monthly Chemical Usage



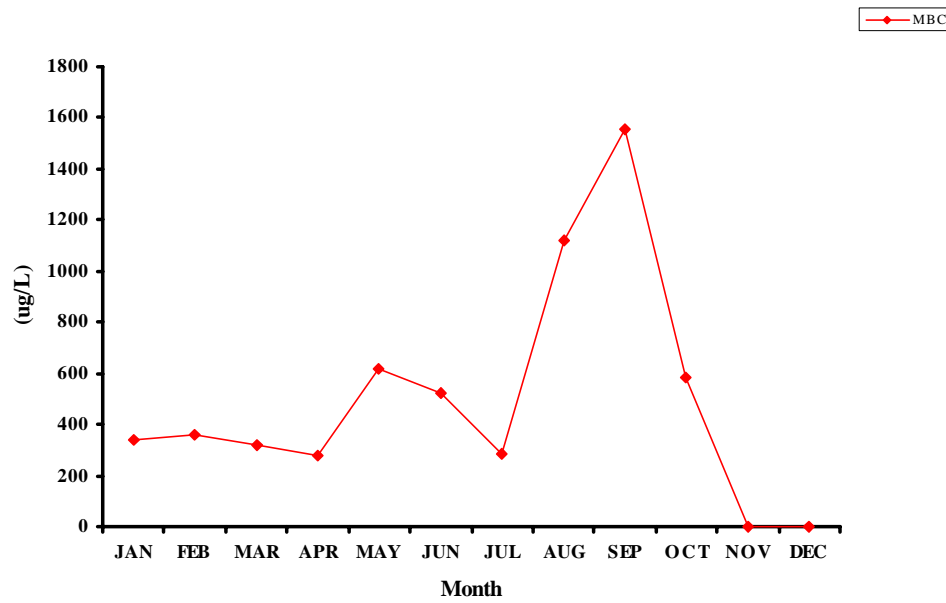
Caustic 2002 Monthly Chemical Usage



Sodium Hypochlorite 2002 Monthly Chemical Usage



Sulfuric Acid 2002 Monthly Chemical Usage



F. Facilities Out-of-service Report (2002)

FACILITY: DATES OUT OF SERVICE

DEWATERING CENTRIFUGES

DEWATERING CENTRIFUGE 1	01/18/02-01/30/02, 03/06/02-03/18/02, 03/12/02-03/18/02, 03/25/02-04/03/02, 04/03/02-04/17/02, 05/06/02-08/06/02, 07/10/02-07/15/02, 07/11/02-07/19/02, 08/07/02-08/27/02, 10/07/02-10/09/02, 10/07/02-10/21/02, 11/18/02-12/02/02, 11/27/02-12/02/02, 12/16/02-12/17/02, 12/18/02-12/18/02
DEWATERING CENTRIFUGE 2	01/25/02-02/05/02, 01/31/02-03/18/02, 02/20/02-02/26/02, 03/06/02-03/18/02, 03/11/02-05/02/02, 03/21/02-04/03/02, 03/29/02-04/17/02, 03/29/02-08/06/02, 04/03/02-09/13/02, 04/22/02-04/26/02, 08/27/02-09/12/02, 08/27/02-08/29/02, 08/29/02-09/09/02, 08/29/02-09/12/02, 08/29/02-09/09/02, 09/16/02-09/25/02, 09/18/02-09/19/02, 09/19/02-09/27/02, 10/07/02-10/21/02, 10/08/02-10/21/02, 10/30/02-12/02/02, 11/05/02-12/02/02, 11/12/02-12/02/02, 11/19/02-11/26/02, 11/26/02-12/02/02, 12/03/02-12/03/02, 12/16/02-12/16/02, 12/16/02-12/18/02,
DEWATERING CENTRIFUGE 3	01/23/02-01/28/02, 01/28/02-03/18/02, 04/24/02-05/01/02, 04/30/02-08/27/02, 05/22/02-08/06/02, 07/05/02-07/05/02, 07/05/02-07/23/02, 07/25/02-07/05/02, 07/25/02-08/06/02, 07/29/02-08/27/02, 08/19/02-10/21/02, 08/22/02-09/12/02, 09/27/02-10/09/02, 11/05/02-12/02/02, 11/12/02-11/26/02, 11/18/02-11/26/02, 11/19/02-11/26/02, 11/20/02-11/26/02, 11/26/02-12/02/02, 12/02-/02-12/10/02, 12/09/02-12/10/02,
DEWATERING CENTRIFUGE 4	01/04/02-02/19/02, 01/09/02-02/13/02, 01/09/02-01/14/02, 01/28/02-02/26/02, 01/29/02-02/05/02, 01/29/02-02/05/02, 02/19/02-02/25/02, 05/21/02-06/17/02, 07/11/02-07/11/02, 07/11/02-07/17/02, 09/16/02-10/09/02, 09/16/02-10/09/02, 09/16/02-10/28/02, 11/06/02-12/02/02
DEWATERING CENTRIFUGE 5	01/14/02-01/30/02, 01/14/02-01/22/02, 01/20/02-01/30/02, 01/20/02-01/30/02, 02/05/02-05/15/02, 02/05/02-03/05/02, 03/28/02-05/01/02, 04/11/02-06/17/02, 04/12/02-05/01/02, 05/08/02-06/17/02, 05/08/02-05/13/02, 07/05/02-10/22/02, 07/05/02-07/29/02, 07/11/02-07/11/02, 07/22/02-08/27/02, 09/12/02-10/09/02, 10/29/02-12/02/02, 11/18/02-12/16/02, 12/17/02-12/17/02, 12/20/02-12/20/02
DEWATERING CENTRIFUGE 6	04/22/02-04/26/02, 05/06/02-05/13/02, 08/13/02-08/27/02, 10/16/02-10/28/02, 10/18/02-10/29/02, 10/21/02-10/28/02
DEWATERING CENTRIFUGE 7	01/29/02-02/05/02, 04/17/02-04/22/02, 05/08/02-06/17/02, 05/08/02-06/17/02, 07/15/02-10/11/02, 10/03/02-10/24/02
DEWATERING CENTRIFUGE 8	01/23/02-01/30/02, 01/29/02-02/05/02, 03/07/02-03/18/02, 04/10/02-04/11/02, 06/20/02-06/20/02, 06/25/02-06/25/02, 06/25/02-06/26/02, 07/11/02-07/17/02, 08/22/02-08/27/02, 11/08/02-01/06/0311/26/02-12/10/02

THICKENING CENTRIFUGES

THICKENING CENTRIFUGE 1	01/24/02-01/30/02, 04/02-/02-05/01/02, 04/16/02-04/22/02, 07/22/02-08/27/02, 09/09/02-09/18/02, 09/12/02-10/09/02
THICKENING CENTRIFUGE 2	02/14/02-02/26/02, 04/09/02-05/01/02, 07/22/02-07/22/02
THICKENING CENTRIFUGE 3	01/29/02-02/05/02, 02/07/02-02/15/02, 02/13/02-02/26/02, 03/01/02-03/06/02, 04/18/02-05/01/02, 04/22/02-04/26/02
THICKENING CENTRIFUGE 4	01/31/02-02/11/02, 02/25/02-03/06/02
THICKENING CENTRIFUGE 5	02/25/02-03/06/02, 04/16/02-05/01/02

CENTRATE PUMPS

CENTRATE PUMP 2	01/25/02-02/05/02, 04/15/02-05/01/02, 08/01/02-08/12/02, 08/29/02-10/09/02, 09/16/02-10/09/02, 09/17/02-10/09/02
CENTRATE PUMP 3	01/25/02-02/05/02, 01/28/02-02/05/02, 02/19/02-04/11/02

DEGRITTING SYSTEM

GRIT SEPARATOR 1	04/02-/02-04/25/02, 04/04/02-04/17/02, 05/07/02-05/31/02
GRIT SEPARATOR 2	05/20/02-06/17/02, 07/23/02-07/24/02, 07/23/02-07/04/02, 07/24/02-07/24/02, 04/10/02-04/11/02
GRIT SEPARATOR 3	03/14/02-03/25/02, 03/15/02-03/25/02

BIOGAS FLARES

FLARE 1	12/10/02-12/10/02
FLARE 2	07/16/02-07/17/02, 07/17/02-10/28/02

DIGESTERS

DIGESTER 1	04/08/02-04/11/02, 04/08/02-04/11/02, 04/11/02-04/17/02, 04/15/02-08/06/02, 04/17/02-05/01/02, 04/17/02-05/01/02, 06/06/02-06/17/02
DIGESTER 2	03/18/02-05/01/02, 04/22/02-01/27/03, 04/25/02-05/01/02

FACILITIES THAT WERE OUT OF SERVICE IN 2001 BY DATE

Facility	From	To	Notes
DEWATERING CENTRIFUGE 1	01/18/02	01/30/02	Assist Alfa Laval with 6 Month PM
DEWATERING CENTRIFUGE 1	03/06/02	03/18/02	Remove then replace the cover for inspection prior to start of de-scaling test.
DEWATERING CENTRIFUGE 1	03/12/02	03/18/02	Replace Emergency stop button with button from DC#3 if spare part is not in warehouse.
DEWATERING CENTRIFUGE 1	03/25/02	04/03/02	Oil leaking at oil filter on dewatering centrifuge #1...tried to tighten filter with no results. Put absorbent down till maintenance can correct...Oil level stayed OK.
DEWATERING CENTRIFUGE 1	04/03/02	04/17/02	Replace heat exchanger and oil for unit.
DEWATERING CENTRIFUGE 1	05/06/02	08/06/02	Inspection Centrifuge for scale buildup. Notify Process Control to view DC.
DEWATERING CENTRIFUGE 1	07/10/02	07/15/02	Assist Alfa Laval with 12 month PM.
DEWATERING CENTRIFUGE 1	07/11/02	07/19/02	Weld two tiles on centrifuge.
DEWATERING CENTRIFUGE 1	08/07/02	08/27/02	Replace Heat exchanger on DC#1
DEWATERING CENTRIFUGE 1	10/07/02	10/09/02	Record motor amps on back drive motor and bowl speed and differential. Request sub work order for additional research.
DEWATERING CENTRIFUGE 1	10/07/02	10/21/02	Record motor amps on back drive motor and bowl speed and differential. Request sub work order for additional research.
DEWATERING CENTRIFUGE 1	11/18/02	12/02/02	(Emergency for Friday Nov 15)DC #1 tripped out due to BACKDRIVE malfunction while running at a 200 gpm feed rate.....Please have I & C reset the back drive.
DEWATERING CENTRIFUGE 1	11/27/02	12/02/02	Remove old heat exchanger and install new exchanger. Clean oil tank and replace oil.
DEWATERING CENTRIFUGE 1	12/16/02	12/17/02	Remove covers as required on units 1,2, &4 to determine serial numbers for Warranty verification.
DEWATERING CENTRIFUGE 1	12/18/02	12/18/02	Replace oil in system
DEWATERING CENTRIFUGE 2	01/25/02	02/05/02	Centrate visual inspection line (Second floor under Centrifuges) need to be cleared so Operators can judge what adjustments to make for optimum centrifuge use.
DEWATERING CENTRIFUGE 2	01/31/02	03/18/02	Unable to control differential in diff. mode. The diff. was locked @ 0.0 and the load shot up and tripped the unit on high torque. Performed C.I.P.

Facility	From	To	Notes
DEWATERING CENTRIFUGE 2	02/20/02	02/26/02	Remove access covers on two Centrifuges to for I & C to take reading for comparison to DC#2 Operations to determine which DC covers to remove.
DEWATERING CENTRIFUGE 2	03/06/02	03/18/02	Remove then replace the cover for inspection prior to start of de-scaling test.
DEWATERING CENTRIFUGE 2	03/11/02	05/02/02	Assist ABB representative with trouble shooting DC # 2 differential control problem.
DEWATERING CENTRIFUGE 2	03/21/02	04/03/02	Grease Conveyor bearing after CIP
DEWATERING CENTRIFUGE 2	03/29/02	04/17/02	DC #2 cannot start due to back drive malfunction. Tried to start-up twice.
DEWATERING CENTRIFUGE 2	03/29/02	08/06/02	DC #2 cannot start due to back drive malfunction. Unit is packed with sludge.
DEWATERING CENTRIFUGE 2	04/03/02	09/13/02	Continue Trouble shooting Back drive controls. DC #2 cannot start due to back drive malfunction.
DEWATERING CENTRIFUGE 2	04/22/02	04/26/02	Assist Alfa Laval with 6 month PM
DEWATERING CENTRIFUGE 2	08/27/02	09/12/02	Dewatering Centrifuge. #2, 76DC002, points on vibration sensors go to bad quality, Vibration alarm at starter room panel shuts down flow without alarm on DCS.
DEWATERING CENTRIFUGE 2	08/27/02	08/29/02	Check all electrical controls after PT's check mechanical assembly.
DEWATERING CENTRIFUGE 2	08/29/02	09/09/02	Take VA readings on DC #2 to compare to those from the permanently mounted system.
DEWATERING CENTRIFUGE 2	08/29/02	09/12/02	Remove all the vibration sensors (accelerometers) and deliver to Steve Taylor for testing.
DEWATERING CENTRIFUGE 2	08/29/02	09/09/02	CHECK THE ACCELEROMETERS FOR ACCURACY.
DEWATERING CENTRIFUGE 2	09/16/02	09/25/02	Work with Operations and MBC personnel to test the permanently mounted VA to try to isolate the cause of the bad signal. (EVALUATION WO) we will create another sub work order for that actual work after a procedure is established.
DEWATERING CENTRIFUGE 2	09/18/02	09/19/02	Work with the RMG group to help isolate the cause
DEWATERING CENTRIFUGE 2	09/19/02	09/27/02	Complete work on VA sensors for DC2
DEWATERING CENTRIFUGE 2	10/07/02	10/21/02	Assist Alfa Laval with 24 month PM
DEWATERING CENTRIFUGE 2	10/08/02	10/21/02	Weld tiles as required.
DEWATERING CENTRIFUGE 2	10/30/02	12/02/02	Assist Contractor conducting test on back drive VFD

Facility	From	To	Notes
DEWATERING CENTRIFUGE 2	11/05/02	12/02/02	Belts on back drive motor have failed.
DEWATERING CENTRIFUGE 2	11/12/02	12/02/02	Remove cover for inspection of scale to accommodate Vendors chemical project.
DEWATERING CENTRIFUGE 2	11/19/02	11/26/02	Remove cover and provide assist to vendor for scale inspection.
DEWATERING CENTRIFUGE 2	11/26/02	12/02/02	Remove and replace DC cover for contractor to inspect for scale buildup rotated to chemical treatment project.
DEWATERING CENTRIFUGE 2	12/03/02	12/03/02	Remove and replace DC cover for Vendor to inspect for scale buildup.
DEWATERING CENTRIFUGE 2	12/16/02	12/16/02	Common fail Alarm on DC #2.....Need to be reset inside panel.
DEWATERING CENTRIFUGE 2	12/16/02	12/18/02	Verify Carry Frequency on VFD for Alfa Laval rep.
DEWATERING CENTRIFUGE 3	01/23/02	01/28/02	Assist Alfa Laval with 6 month PM
DEWATERING CENTRIFUGE 3	01/28/02	03/18/02	Assemble DEWATERING CENTRIFUGE 3.
DEWATERING CENTRIFUGE 3	04/24/02	05/01/02	Assist Alfa Laval in the assembling of the Centrifuge rotating assembly.
DEWATERING CENTRIFUGE 3	04/30/02	08/27/02	Check and verify all mechanical devices and assemblies, mount bolts, heat exchanger, hoses and piping to assure proper installation and operation.
DEWATERING CENTRIFUGE 3	05/22/02	08/06/02	Check all electrical and instrumentation to prepare this unit to be put into service.
DEWATERING CENTRIFUGE 3	07/05/02	07/05/02	Assist Alfa Laval with 12 Month PM.
DEWATERING CENTRIFUGE 3	07/05/02	07/23/02	Assist Alfa Laval with 12 Month PM.
DEWATERING CENTRIFUGE 3	07/25/02	07/05/02	Please CIP unit, inspect bowl area, grease conveyor bearing, return to service.
DEWATERING CENTRIFUGE 3	07/25/02	08/06/02	Please trouble shoot cause of High/ High torques alarm, reset and return to service.
DEWATERING CENTRIFUGE 3	07/29/02	08/27/02	Inspect grease seals on conveyor
DEWATERING CENTRIFUGE 3	08/19/02	10/21/02	Please trouble shoot cause of High/ High torques alarm, reset and return to service.
DEWATERING CENTRIFUGE 3	08/22/02	09/12/02	Trouble shoot conveyor bearing and seals. (Spare conveyor)
DEWATERING CENTRIFUGE 3	09/27/02	10/09/02	Please free centrifuge of sludge.
DEWATERING CENTRIFUGE 3	11/05/02	12/02/02	DC #3 oil Pressure too high...63 psi while normal reading is approx. 20 psi...

Facility	From	To	Notes
DEWATERING CENTRIFUGE 3	11/12/02	11/26/02	Assist Alfa Laval rep with removal and replacement of pillows.
DEWATERING CENTRIFUGE 3	11/18/02	11/26/02	Check cause and repair hydraulic leak on DC#3
DEWATERING CENTRIFUGE 3	11/19/02	11/26/02	DC #3 has a data link failure problem, please have I&C reset the data link.
DEWATERING CENTRIFUGE 3	11/20/02	11/26/02	DC #3 has a data link failure problem, please have I&C reset the data link.
DEWATERING CENTRIFUGE 3	11/26/02	12/02/02	DC 3 tripping off on common fail immediately upon start-up.
DEWATERING CENTRIFUGE 3	12/02/02	12/10/02	Trouble shoot temperature transmitter and find cause of alarm.
DEWATERING CENTRIFUGE 3	12/09/02	12/10/02	Remove, inspect and replace as necessary, seal holder. O-ring and Quad ring on tension bar nut.
DEWATERING CENTRIFUGE 4	01/04/02	02/19/02	Assist Alfa Laval with 12 month PM
DEWATERING CENTRIFUGE 4	01/09/02	02/13/02	Troubleshoots cause of sheave/pulley unusual wear. Remove and replace wore accelerator.
DEWATERING CENTRIFUGE 4	01/09/02	01/14/02	Replace approximately 25 conveyor tiles.
DEWATERING CENTRIFUGE 4	01/28/02	02/26/02	Please check out the high vibration readings on the Y-2 & Z axis.
DEWATERING CENTRIFUGE 4	01/29/02	02/05/02	Centrate visual inspection line (Second floor under Centrifuges) need to be cleared so Operators can judge what adjustments to make for optimum centrifuge use.
DEWATERING CENTRIFUGE 4	01/29/02	02/05/02	Lost power to control panel and PLC
DEWATERING CENTRIFUGE 4	02/19/02	02/25/02	The conveyor have 6 defective tiles that the Welder need to replace.
DEWATERING CENTRIFUGE 4	05/21/02	06/17/02	Please reset overloads in MCC bucket. Verify that Data line is correct
DEWATERING CENTRIFUGE 4	07/11/02	07/11/02	Assist Alfa Laval with 6 month PM
DEWATERING CENTRIFUGE 4	07/11/02	07/17/02	Assist Alfa Laval Staff in performing Semi-annual PM
DEWATERING CENTRIFUGE 4	09/16/02	10/09/02	DC #4 will not start, alarms indicated are fail to stop, high motor temperature and Data link failure. DC #4 was shut down with a sludge load.
DEWATERING CENTRIFUGE 4	09/16/02	10/09/02	DC #4 will not start, alarms indicated are fail to stop, high motor temperature and Data link failure. DC #4 was shut down with a sludge load.
DEWATERING CENTRIFUGE 4	09/16/02	10/28/02	DC #4 will not start, alarms indicated are fail to stop, high motor temperature and Data link failure. DC #4 was shut down with a sludge load.

Facility	From	To	Notes
DEWATERING CENTRIFUGE 4	11/06/02	12/02/02	DC#4 needs to be reset inside starter panel by Electrician...Comm. Fail. Centrifuge shows starting but its not !!!
DEWATERING CENTRIFUGE 5	01/14/02	01/30/02	Assist Alfa Laval with 12 month PM
DEWATERING CENTRIFUGE 5	01/14/02	01/22/02	Repair 10 to 15 Damaged tiles on DC conveyor.
DEWATERING CENTRIFUGE 5	01/20/02	01/30/02	D.C #5 alarms in High Torque, D.C #5 leaking sludge and water, discharging from bearing.
DEWATERING CENTRIFUGE 5	01/20/02	01/30/02	D.C #5 alarms in High Torque, Please trouble shoot electrical controls.
DEWATERING CENTRIFUGE 5	02/05/02	05/15/02	Replace Rotork Valve Actuator. MB76MV0205 water valve.
DEWATERING CENTRIFUGE 5	02/05/02	03/05/02	76HV0127 is not seating and is leaking by. This valve is located on the UWLP line to DC#5
DEWATERING CENTRIFUGE 5	03/28/02	05/01/02	The oil reservoir is heavily contaminated with water, suspected internal in the heat exchanger. Need to replace the heat exchanger right away. Found during PM WO# 02-10347
DEWATERING CENTRIFUGE 5	04/11/02	06/17/02	Program the actuator to operate motor operated valve, MB76MV0205.
DEWATERING CENTRIFUGE 5	04/12/02	05/01/02	Open strainer to check for blockage and clear as necessary.
DEWATERING CENTRIFUGE 5	05/08/02	06/17/02	Disconnect the Motorized Valve electrically. Notify PT's when completed, so they can remove valve and actuator.
DEWATERING CENTRIFUGE 5	05/08/02	05/13/02	Remove motorized valve from valve. Manually open valve and leave in open position. Notify operation when complete.
DEWATERING CENTRIFUGE 5	07/05/02	10/22/02	D.C #5 poly and sludge feed pumps continue to go into manual from auto on DCS.
DEWATERING CENTRIFUGE 5	07/05/02	07/29/02	D.C #5 poly and sludge feed pumps continue to go into manual from auto on DCS.
DEWATERING CENTRIFUGE 5	07/11/02	07/11/02	Assist Alfa Laval with 6 month PM
DEWATERING CENTRIFUGE 5	07/22/02	08/27/02	Remove feed tube.
DEWATERING CENTRIFUGE 5	09/12/02	10/09/02	Trouble shoot cause of leaking, isolated and repair leak. Test
DEWATERING CENTRIFUGE 5	10/29/02	12/02/02	Clean lube oil strainer to correct high lube oil pressure
DEWATERING CENTRIFUGE 5	11/18/02	12/16/02	Replace Accelerator with new liner and holder, also provide outline of procedure for replacement of holder and liner for work order preplan.

Facility	From	To	Notes
DEWATERING CENTRIFUGE 5	12/17/02	12/17/02	DEWATERING CENTRIFUGE #05 VARIABLE FREQUENCY DRIVE OVERVOLTAGE FAILURE ALARM.
DEWATERING CENTRIFUGE 5	12/20/02	12/20/02	PLEASE CHECK HYDRAULIC LEAK FROM CENTRIFUGE Pillow Block.
DEWATERING CENTRIFUGE 6	04/22/02	04/26/02	Assist Alfa Laval with 6 month PM
DEWATERING CENTRIFUGE 6	05/06/02	05/13/02	Front pillow block temperature is 142 this is a little on the hot side. Rear pillow block temperature is 128. Max oil temperature is 155.
DEWATERING CENTRIFUGE 6	08/13/02	08/27/02	Replace solenoid with rebuild Kit.
DEWATERING CENTRIFUGE 6	10/16/02	10/28/02	DC # 6 is making a grinding noise. Shut down and CIPed for possible maintenance inspection
DEWATERING CENTRIFUGE 6	10/18/02	10/29/02	Weld three tiles in place on Centrifuge Monday 10/21/02
DEWATERING CENTRIFUGE 6	10/21/02	10/28/02	Assist Alfa Laval with 24 month PM.
DEWATERING CENTRIFUGE 7	01/29/02	02/05/02	Centrate visual inspection line (Second floor under Centrifuges) need to be cleared so Operators can judge what adjustments to make for optimum centrifuge use.
DEWATERING CENTRIFUGE 7	04/17/02	04/22/02	Assist Alfa Laval with 6 Month PM
DEWATERING CENTRIFUGE 7	05/08/02	06/17/02	The System Information Management (SIM) system on Dewatering Centrifuge #7 is frozen and we cannot access alarms, amps, transition times, etc... ALSO, when we started DC7 today the load would fluctuate from 48 to 80 when it usually only changes 2 to 3 numbers, (like from 60 to 62).
DEWATERING CENTRIFUGE 7	05/08/02	06/17/02	Transfer display panel from DC3 to DC7 and test unit. Install new Information Management System after warranty part is received from Alfa Laval.
DEWATERING CENTRIFUGE 7	07/15/02	10/11/02	Dewatering Centrifuge #7 will not stay running...trips on "common Fail motor overload...Poly pump in "standby mode", will not go into "normal mode".
DEWATERING CENTRIFUGE 7	10/03/02	10/24/02	Assist Alfa Laval with 24 month PM as required.
DEWATERING CENTRIFUGE 8	01/23/02	01/30/02	Assist Alfa Laval with 6 Month PMs

Facility	From	To	Notes
DEWATERING CENTRIFUGE 8	01/29/02	02/05/02	Centrate visual inspection line (Second floor under Centrifuges) needs to be cleared so Operators can judge what adjustments to make for optimum centrifuge use.
DEWATERING CENTRIFUGE 8	03/07/02	03/18/02	Please check source of vibration.
DEWATERING CENTRIFUGE 8	04/10/02	04/11/02	DC # 8 was shut down and CIPed today due to high motor amp readings. Please grease unit so that it can be run again to see if the amps come down.
DEWATERING CENTRIFUGE 8	06/20/02	06/20/02	The drive belts were flapping and making noise. Please check the drive belts.
DEWATERING CENTRIFUGE 8	06/25/02	06/25/02	Need to please clean the corrugated centrate lines on all DC's 1,2,4,5,6,7, & 8..to allow us to see centrate to judge chemical dosing.
DEWATERING CENTRIFUGE 8	06/25/02	06/26/02	Need to please clean the corrugated centrate lines on all DC's 1,2,4,5,6,7, & 8..to allow us to see centrate to judge chemical dosing.
DEWATERING CENTRIFUGE 8	07/11/02	07/17/02	Assist Alfa Laval with 12 month PM
DEWATERING CENTRIFUGE 8	08/22/02	08/27/02	Centrifuge flush valve # M760208 shows open on DCS will not open at valve, have to open electrically at local controls on valve...once open, valve does respond to close command from DCS.
DEWATERING CENTRIFUGE 8	11/08/02	01/06/03	Replace 76-HV-0155 hot water flush valve.
DEWATERING CENTRIFUGE 8	11/26/02	12/10/02	DC 8 polymer flow fluctuating. Unable to control the polymer flow in either local, manual, or auto.
THICKENING CENTRIFUGE 1	01/24/02	01/30/02	Oil level is low, needs to be added.
THICKENING CENTRIFUGE 1	04/02/02	05/01/02	Assist Alfa Laval with 12 Month PM.
THICKENING CENTRIFUGE 1	04/16/02	04/22/02	Please have welder to repair or replace four tiles on the thickening conveyor.
THICKENING CENTRIFUGE 1	07/22/02	08/27/02	TC #1 centrifuge, plugged up. Performed CIP before shut down. Needs to be checked out.
THICKENING CENTRIFUGE 1	09/09/02	09/18/02	Repeated vibration alarms on TC #1. (Bearing #1 "Y" axisBearing #2 "X" & "Z" axis) Unusual clicking sound coming from the drive belt end.....decided to shutdown TC #1.....
THICKENING CENTRIFUGE 1	09/12/02	10/09/02	Repeated vibration alarms on TC #1. (Bearing #1 "Y" axisBearing #2 "X" & "Z" axis) Unusual clicking sound coming from the drive belt end.....decided to shutdown TC #1.....
THICKENING CENTRIFUGE 2	02/14/02	02/26/02	Reset alarm inside main control panel, clear alarms and test unit.

Facility	From	To	Notes
THICKENING CENTRIFUGE 2	04/09/02	05/01/02	Assist Alfa Laval with 12 month PM
THICKENING CENTRIFUGE 2	07/22/02	07/22/02	Thickening centrifuge #2 76-TC-002 X-Y vibration sensors all read 0 76-VT-2200 & 76-VT-2202 transmitters.
THICKENING CENTRIFUGE 3	01/29/02	02/05/02	M76-HV-1211 Hand valve for Poly Injection port #1 shows as in travel on the DCS, need tech to adjust OPEN position limits on valve.
THICKENING CENTRIFUGE 3	02/07/02	02/15/02	The sharples Systems Information Manager display window is blank. The Centrifuge will not start with out the Information Manager. The local control panel has power.
THICKENING CENTRIFUGE 3	02/13/02	02/26/02	Seal the area around the centrate discharge box on the TC floor.
THICKENING CENTRIFUGE 3	03/01/02	03/06/02	Hydraulic level is about 1/2" low.
THICKENING CENTRIFUGE 3	04/18/02	05/01/02	Assist Alfa Laval with 12 month PM
THICKENING CENTRIFUGE 3	04/22/02	04/26/02	Need Welder to replace about two (02) broken tiles
THICKENING CENTRIFUGE 4	01/31/02	02/11/02	Remove gearbox, drain oil and secure on pallet in preparation for shipping.
THICKENING CENTRIFUGE 4	02/04/02		Thickening Centrifuge #4 has a bad gearbox as per Wayne with Alpha Laval.
THICKENING CENTRIFUGE 4	02/25/02	03/06/02	Remove the belt guard to the main drive to enable the Operators to rotate the OOS equipment to protect the bearings.
THICKENING CENTRIFUGE 5	02/25/02	03/06/02	Remove the belt guard to the main drive to enable the Operators to rotate the OOS equipment to protect the bearings.
THICKENING CENTRIFUGE 5	04/16/02	05/01/02	Install repaired information manager display controller.
CENTRATE PUMP 2	01/25/02	02/05/02	Check the control pane, repair or adjust as necessary to make the pump operational.
CENTRATE PUMP 2	04/15/02	05/01/02	Centrate pump #2, (94-P-02)...Repeating alarm "out of saturate #4".
CENTRATE PUMP 2	08/01/02	08/12/02	Centrate pump #94-P-02 went into alarm and shut off. Alarm indicating Drive Fault Total=1. and #1 out of saturate No. 4.
CENTRATE PUMP 2	08/29/02	10/09/02	Please check cause for PLC alarm (out of Saturate No. 4)
CENTRATE PUMP 2	09/16/02	10/09/02	Replace control transformer.
CENTRATE PUMP 2	09/17/02	10/09/02	Replace Base Drive circuit Board.

Facility	From	To	Notes
CENTRATE PUMP 3	01/25/02	02/05/02	Check the pump speed controller, repair /adjust as necessary.
CENTRATE PUMP 3	01/28/02	02/05/02	Install new Base driver Circuit Board, Transistor Module, and Control Transformer.
CENTRATE PUMP 3	02/19/02	04/11/02	Very alignment and check to ensure the pump is running on the curve.
GRIT SEPARATOR 1	04/02/02	04/25/02	Conveyor is in alarm and at zero speed and conveyor will not run. Trips out after reset. See Carol (Stacker) Brassfield for further details.
GRIT SEPARATOR 1	04/04/02	04/17/02	the snail conveyor is not draining properly, it has bubbles on them like a (bad tire) made several adjustments to the flow of water to reduce the amount that goes into the bins. it just isnt doing the job.
GRIT SEPARATOR 1	05/07/02	05/31/02	NEED WORK ORDER TO TROUBLESHOOT AND REPLACE SENSOR MB-76-AE2356A EMPAC# SENSOR 9316 BATTERY 23539 (1ea). NO MANLIFT NEEDED. 1person 2 hrs. Reference W.O. No. 2-10217
GRIT SEPARATOR 2	05/20/02	06/17/02	Please check torque alarm on screw conveyor and clear problem.
GRIT SEPARATOR 2	07/23/02	07/24/02	2) The grit classifier will operate in manual but trips off at different times, need Mechanical tech to investigate unit and see if it binding.
GRIT SEPARATOR 2	07/23/02	07/04/02	Two problems with the Grit Classifier: 1) When the DCS in auto, the classifier will not operate due to a Zero Speed alarm which will not clear. Need an I & C tech to investigate and repair as needed the Zero speed switch. 2) The grit classifier will operate in manual but trips off at different times, need Mechanical tech to investigate unit and see if it binding.
GRIT SEPARATOR 2	07/24/02	07/24/02	Trouble shoot the classifier.
GRIT SEPARATOR 2	04/10/02	04/11/02	# 2 grit separator obstruction in grit cyclone. possibly needs cleaning...lost flow/ recirculation. flow dropped ...switched to Grit Cyclone #1 and flows returned to normal
GRIT SEPARATOR 3	03/14/02	03/25/02	76-MV-1112 WILL NOT OPEN ;GRIT SEPARATOR # 3
GRIT SEPARATOR 3	03/15/02	03/25/02	Valve is frozen, please exercise.
FLARE 1	12/10/02	12/10/02	Biogas flare #1 & 2 shows local on the DCS when unit in computer at local station, looks like no power to either flare 1 or 2....Reached 22+ feet and did not flare (normal flare @20.5 ft.)

Facility	From	To	Notes
FLARE 2	07/16/02	07/17/02	DCS information shows that this flare is generating "GAS FLARE 2 IGNITION SYSTEM" alarms and has failed over to flare #1.
FLARE 2	07/17/02	10/28/02	Exercise main gas valve until it is free.
DIGESTER 1	04/08/02	04/11/02	Biogas pressure is too high, (80PT2601 press. trans.@ 15+ p.s.i.). Vents on top of digester both venting biogas & sludge until dig.1 level lowered. Then only gas venting (w/out sludge). Biogas flow at 0 scfm, (80FT2600) gas being produced but venting out of vents ...none going to Biogas storage tank. Possible blockage in gas line?
DIGESTER 1	04/08/02	04/11/02	Finish clean up.
DIGESTER 1	04/11/02	04/17/02	Open and clean lower flame arrestor,
DIGESTER 1	04/15/02	08/06/02	Condensate leaking out of flame trap on ground level, # 80FT06.
DIGESTER 1	04/17/02	05/01/02	Need tech to check out the Pressure Transmitter M80-PT-2601 for Digester #1, unit has been exposed to sludge at least three times and may not be working properly. Unit needs to be inspected, cleaned and recalibrated as needed. Results of findings need to be conveyed to chuck Lockhart or George Wendorf.
DIGESTER 1	04/17/02	05/01/02	Clear flame arrestor screens and Use vactor truck to lower Condensation pit.
DIGESTER 1	06/06/02	06/17/02	Sweep and collect excess sludge debris from base of walls, Use hose to wash remaining sludge dust to drain with collar. Scrub sludge stain from center tower wall. Control the amount of water used to direct to drain with collar. Dump dried sludge material to hopper in Area 86.
DIGESTER 2	03/18/02	05/01/02	Install new hood for relief valve on top of Digester
DIGESTER 2	04/22/02	01/27/03	Modify Ferric injection to enter through the roof via the old view port.
DIGESTER 2	04/25/02	05/01/02	Please repair and calibrate units.

G. Solids Handling Annual Report
(Analyses of dried & disposal sludge)

This sub-section is an excerpt from the Annual Sludge Disposal Report without most attachments.

2002 Annual Sludge Disposal Report

Facilities:

<u>Sources of biosolids:</u>	<u>Biosolids treatment and processing:</u>
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 1902 Gatchell Rd., San Diego, CA

The Point Loma Wastewater Treatment Plant and the North City Water Reclamation Plant produced and disposed of 123,617 wet tons/36,343 dry tons /32,993 dry metric tons (based on 29.4% average solids) of digested sludge in 2002.

Essentially all biosolids produced at the Pt. Loma WWTP were pumped to the Metro Biosolids Center (MBC) for further dewatering by centrifuges. The biosolids were then hauled to a disposal site (Local Landfill) or beneficially used at the local landfill as Alternative Daily Cover (ADC). 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 screening, thickening, dewatering, digestion and blended with the digested solids from the PLWWTP prior to dewatering. The MBC Monthly Biosolids Processing reports includes the biosolids processed from the PLWWTP and the NCWRP. Copies of the MBC Monthly Biosolids Processing reports and the MBC Biosolids Use and Disposal Monthly Summary reports detailing daily biosolids processing and disposal are included as Enclosures 4. and 5. respectively.

During 2002, 117,969 wet tons of the 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, and were disposed of in sanitary landfills, 5,648 wet tons of the biosolids produced were beneficially used as Alternative Daily Cover (ADC) at the Otay Landfill.

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 at one of the landfill sites or beneficially used as ADC at the Otay Landfill, Table 1A and Table 2A respectively.

The digested biosolids, centrate and dewatered cake are sampled on a daily bases 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 collects 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 preformed by Wastewater Plant Operators who are certified by the State of California and in conformance with established sampling techniques listed in Standards Methods.

Additional analyses, including the rest of the "priority pollutant list"⁵, were performed during 2002 and the reports of analysis are included in Enclosure 7.

Landfill locations used during 2002

Table 1A.

Otay Landfill 1700 Maxwell Rd. Chula Vista, CA. 91911	121,928 wet tons (32,542 dry metric tons) based on 29.4% average solids) disposed of from January to December 2002 at this landfill.
Sycamore Canyon Landfill 8514 Mast Blvd. Santee CA. 92071	1,689 wet tons (451dry metric tons) based on 29.4% average solids) disposed of from January to December 2002 at this landfill.

5,648 wet tons of biosolids were certified as Class B by the City of San Diego and were disposed of as Alternative daily cover at the Otay Landfill.

There was no biosolids stored at any site other than as indicated above.
There were no biosolids disposed of or beneficially used by any other method than those listed above.

⁵ Includes volatile organic compounds, phenols, base/neutral organic compounds, organophosphorus pesticides, chlorinated pesticides and PCBs.

Enclosure 1

Solids Production
Table 1B.

Point Loma Annual Monitoring Report
Solids Report - TOTALS

Month	Pt. Loma Raw sludge		Pt. Loma Digested Sludge		MBC Combined Centrate		MBC Dewatered Sludge	
	Gallons	Tons	Gallons	Tons	Gallons	Tons	Wet Tons	Dry Tons
01	30,429,127	5,700	30,291,000	3,062	66,909,000	740	10,369	3,029
02	26,174,515	4,842	24,508,495	2,513	59,152,000	526	8,256	2,112
03	34,058,333	5,787	35,010,604	3,247	72,798,000	728	9,444	2,912
04	35,604,478	5,665	35,384,584	3,134	71,163,000	762	9,856	2,922
05	34,917,761	5,909	34,775,000	3,263	69,443,700	776	10,514	3,129
06	35,199,170	5,849	34,825,495	3,304	64,684,400	662	10,127	2,997
07	34,471,522	6,281	33,632,440	3,366	54,870,000	822	10,811	3,040
08	35,348,030	6,009	33,550,270	3,300	72,322,652	870	11,438	3,269
09	34,478,353	5,679	33,285,170	3,199	71,814,347	841	10,466	2,969
10	34,999,803	5,775	34,089,320	3,245	71,192,444	809	11,515	3,301
11	34,802,038	5,607	33,722,070	3,168	73,304,527	839	9,776	2,992
12	35,770,257	5,855	34,582,330	3,259	75,182,463	896	11,047	3,373
avg	33,854,449	5,747	33,138,065	3,172	68,569,711	773	10,302	3,004
sum	406,253,387	68,959	397,656,778	38,060	822,836,533	9,272	123,618	36,045

Solids Production
Table 1C.

Solids Report - Daily Averages by Month

Month	Pt. Loma Raw sludge		Pt. Loma Digested Sludge		MBC Combined Centrate		MBC Dewatered Sludge	
	Gallons	%TS	Tons	Gallons	%TS	Tons	Wet Tons	Dry Tons
01	981,585	4.5	184	977,129	2.4	98	23.9	101.0
02	934,804	4.4	175	875,303	2.5	87	18.8	81.2
03	1,098,656	4.1	188	1,129,374	2.2	107	23.5	100.4
04	1,186,816	3.8	187	1,179,486	2.1	105	25.4	97.4
05	1,126,379	4.1	191	1,121,774	2.3	105	25.0	100.9
06	1,173,306	4.0	194	1,160,850	2.3	110	24.5	99.9
07	1,111,985	4.4	203	1,084,917	2.4	109	26.5	98.1
08	1,140,259	4.1	193	1,082,267	2.4	105	28.1	105.5
09	1,149,278	4.0	190	1,109,506	2.3	106	28.0	99.0
10	1,129,026	4.0	187	1,099,655	2.3	106	26.1	106.5
11	1,160,068	3.9	187	1,124,069	2.3	106	28.0	99.7
12	1,153,879	3.9	188	1,115,559	2.3	103	28.9	108.8
avg	1,112,170	4.1	189	1,088,324	2.3	104	25.6	99.9

Table 2A. Annual Biosolids Landfill & Reuse Solids Disposal Summary

2002 Month:	Otay Landfill Biosolids (wet Tons)	Otay Landfill BeneficialUse ¹ (wet Tons)	Otay Landfill Total (wet Tons)	Sycamore Canyon Landfill MBC Biosolids (wet Tons)	Landfill Total (wet Tons)	Total Landfill Biosolids Disposal (dry metric tons)*
January	9,722.92		9,722.92	644.42	10,367.34	2,767
February	7,546.51		7,546.51	710.23	8,256.74	2,204
March	9,111.68		9,111.68	333.88	9,445.56	2,521
April	9,854.5		9,854.5		9,854.50	2,630
May	10,514.52		10,514.52		10,514.52	2,806
June	10,126.12		10,126.12		10,126.12	2,703
July	10,811.2		10,811.2		10,811.20	2,885
August	10,819.61	618.33	11,437.94		11,437.94	3,053
September	8,124.44	2,341.27	10,465.71		10,465.71	2,793
October	10,367.33	1,147.76	11,515.09		11,515.09	3,073
November	8,235.49	1,540.17	9,775.66		9,775.66	2,609
December	11,046.57		11,046.57		11,046.57	2,948
Total:	116,280.89	5,647.53	121,928.42	1688.53	123,616.95	32,992
Monthly Average:	9,690.07	1,411.88	10,160.7			2,749

* Calculated based on 2002 annual average total solids of 29.4% for MBC dewatered sludge.
¹ beneficial use as Alternative Daily Cover.

Table 2B. Other Solids Disposal (weights are gross wet weight)

Month:	*Copper Mountain Landfill Scum (Tons)	Miramar Landfill Grit (Tons)	Miramar Landfill Rags & Screenings (Tons)
January	29.58	211.92	208.11
February	47.69	191.38	166.22
March	32.82	213.20	177.75
April	25.60	165.60	171.10
May	28.37	138.60	184.6
June	45.54	172.19	150.53
July	41.11	206.07	234.96
August	29.77	194.02	176.30
September	28.83	202.71	193.22
October	27.65	180.60	223.00
November	47.79	174.45	221.12
December	39.62	164.67	215.6
Total:	424.37	2,215.41	2,322.51
Average:	35.36	184.62	193.54

* January through August 2002 scum amounts were inadvertently reported as disposed of at the Butterfield Station Landfill in gallons. All scum removed from the Point Loma Treatment Plant was disposed of at the Copper Mountain Landfill and reported in wet tons.

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

From: 01-JAN-2002 to: 31-DEC-2002

SAMPLED BY: MBC Personnel
ANALYZED BY: BOA,G8C,JRF,IEN,LXP,DXS,JRV,SCV,JZI

Source:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:		31-JAN-2002	28-FEB-2002	31-MAR-2002	30-APR-2002	31-MAY-2002	30-JUN-2002
Sample ID:	MDL Units	P130538	P132668	P134917	P138469	P172122	P175397
=====	=====	=====	=====	=====	=====	=====	=====
pH	PH	7.72	7.90	7.87	7.68	7.54	7.98
Total Solids	WT%	27.2	27.7	29.2	29.2	28.6	26.6
Total Volatile Solids	WT%	54.3	54.5	54.2	53.6	50.6	54.6
Total Kjeldahl Nitrogen	.04 WT%	NA	4.42	NA	NA	3.71	NA
Total Nitrogen	1.1 WT%	4.85	4.74	4.49	4.66	4.38	4.56
Sulfides-Total	50 MG/KG	23200	14100	17200	14100	18700	15300
Sulfides-Reactive	490 MG/KG	<221	<217	<206	<206	<210	<214
Cyanides,Total	.1 MG/KG	NA	4.58	NA	NA	1.72	NA
Aluminum	11 MG/KG	13100	13900	13000	13200	12700	13700
Antimony	50 MG/KG	ND	ND	ND	ND	ND	ND
Arsenic	.68 MG/KG	6.02	6.16	6.01	5.77	4.99	1.64
Barium	.5 MG/KG	462	485	453	453	510	436
Beryllium	.2 MG/KG	ND	ND	ND	ND	ND	ND
Cadmium	5 MG/KG	ND	ND	ND	ND	ND	ND
Chromium	7 MG/KG	65	63	58	53	55	53
Cobalt	2.8 MG/KG	ND	<2.8	6.9	<2.8	ND	5.6
Copper	4 MG/KG	598	618	582	606	598	629
Iron	6 MG/KG	75300	72600	72400	73500	79100	82300
Lead	29 MG/KG	ND	31	<29	<29	37	<29
Manganese	.8 MG/KG	377	346	310	313	326	331
Mercury	.4 MG/KG	1.61	1.27	1.37	1.26	0.80	0.15
Molybdenum	2.8 MG/KG	15	17	15	16	15	16
Nickel	4 MG/KG	37	33	33	37	36	36
Selenium	1.52 MG/KG	5.19	5.11	5.42	4.56	4.34	1.64
Silver	3 MG/KG	30	30	20	25	29	22
Thallium	23 MG/KG	ND	ND	ND	ND	ND	ND
Vanadium	1.5 MG/KG	26	27	27	25	24	27
Zinc	50 MG/KG	817	871	847	833	836	842

Source:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Date:		31-JUL-2002	31-AUG-2002	30-SEP-2002	31-OCT-2002	30-NOV-2002	31-DEC-2002
Sample ID:	MDL Units	P182161	P185889	P189535	P193559	P196905	P199870
=====	=====	=====	=====	=====	=====	=====	=====
pH	PH	7.98	7.76	7.78	7.89	NA	7.80
Total Solids	WT%	27.7	27.0	27.3	28.0	29.4	29.3
Total Volatile Solids	WT%	47.7	54.6	54.0	54.9	56.1	48.1
Total Kjeldahl Nitrogen	.04 WT%	NA	4.59	NA	4.41	NA	NA
Total Nitrogen	1.1 WT%	4.28	4.72	4.67	5.24	4.53	4.38
Sulfides-Total	50 MG/KG	20600	18200	22100	17900	18900	22400
Sulfides-Reactive	490 MG/KG	<217	<223	<220	<490	ND	21
Cyanides,Total	.1 MG/KG	NA	2.41	NA	0.29	NA	NA
Aluminum	11 MG/KG	14600	13600	13500	13300	13500	12600
Antimony	50 MG/KG	ND	ND	ND	ND	ND	ND
Arsenic	.68 MG/KG	6.07	5.89	6.41	4.05	4.61	4.25
Barium	.5 MG/KG	471	430	603	381	421	421
Beryllium	.2 MG/KG	ND	ND	ND	ND	ND	ND
Cadmium	5 MG/KG	ND	ND	ND	ND	ND	ND
Chromium	7 MG/KG	55	55	44	55	59	59
Cobalt	2.8 MG/KG	3.4	<2.8	<2.8	<2.8	ND	ND
Copper	4 MG/KG	718	769	785	860	805	737
Iron	6 MG/KG	84700	82300	85200	83000	85300	86500
Lead	29 MG/KG	33	<29	35	38	ND	ND
Manganese	.8 MG/KG	341	338	345	302	305	344
Mercury	.4 MG/KG	0.86	0.97	1.02	ND	1.57	1.82
Molybdenum	2.8 MG/KG	23	20	22	22	21	22
Nickel	4 MG/KG	36	38	40	41	40	38
Selenium	1.52 MG/KG	8.05	10.20	6.30	4.81	4.28	4.51
Silver	3 MG/KG	30	31	31	25	34	25
Thallium	23 MG/KG	ND	ND	ND	ND	ND	ND
Vanadium	1.5 MG/KG	29	29	28	23	25	24
Zinc	50 MG/KG	890	908	945	891	870	810

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
ANNUAL DEWATERED SLUDGE COMPOSITES

Annual - Total Nitrogen Analysis

From 01-JAN-2002 to 31-DEC-2002

Date:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Sample:	MDL Units	31-JAN-2002	28-FEB-2002	31-MAR-2002	30-APR-2002	31-MAY-2002	30-JUN-2002	31-JUL-2002
		P130538	P132668	P134917	P138469	P172122	P175397	P182161
=====								
Total Nitrogen	1.1 WT%	4.9	4.7	4.5	4.7	4.4	4.6	4.3

Date:		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Sample:	MDL Units	31-AUG-2002	30-SEP-2002	31-OCT-2002	30-NOV-2002	31-DEC-2002
		P185889	P189535	P193559	P196905	P199870
=====						
Total Nitrogen	1.1 WT%	4.7	4.7	5.2	4.5	4.4

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

POINT LOMA WASTEWATER TREATMENT PLANT
METRO BIOSOLIDS CENTER
ANNUAL DEWATERED SLUDGE COMPOSITES
Radioactivity

From: 01-JAN-2002 to: 31-DEC-2002

SAMPLED BY: MBC Personnel

ANALYZED BY: Truesdail Labs Inc.

Source	Sample Date	Sample ID	Gross Alpha Radiation	Gross Beta Radiation
MBCDEWCN	28-FEB-2002	P132668	3560±1090	3060±1050
MBCDEWCN	31-MAY-2002	P172122	4020±2040	2440±1140
MBCDEWCN	31-AUG-2002	P185889	3580±2075	2800±1235
MBCDEWCN	31-OCT-2002	P193559	3460±1710	4650±1380
AVERAGE			3655±1729	3238±1201

ND= Not Detected

NA= Not Analyzed

NS= Not Sampled

NR= Not Required

Units in picocuries/kilogram (pCi/Kg)

MBCDEWCN= Metro Biosolids Center Dewatered Centrifuged Sludge.

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE - Chlorinated Pesticide Analysis
From 01-JAN-2002 To 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			31-JAN-2002 P130538	28-FEB-2002 P132668	31-MAR-2002 P134917	30-APR-2002 P138469	31-MAY-2002 P172122
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	45000	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	<18000	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	52000	ND	ND	44000	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	28000	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	28000	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	45000	NG/KG	0	0	0	0	0
DDT and derivatives	71000	NG/KG	52000	0	0	44000	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	52000	0	0	44000	0

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE - Chlorinated Pesticide Analysis
From 01-JAN-2002 To 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			30-JUN-2002 P175397	31-JUL-2002 P182161	31-AUG-2002 P185889	30-SEP-2002 P189535	31-OCT-2002 P193559
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	45000	NG/KG	ND	ND	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	26500	ND	21000	<18000	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	43000	38500	49500	34500	31000
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	28000	NG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	28000	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	<18000	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	45000	NG/KG	26500	0	21000	0	0
DDT and derivatives	71000	NG/KG	43000	38500	49500	34500	31000
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	69500	38500	70500	34500	31000

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE - Chlorinated Pesticide Analysis
From 01-JAN-2002 To 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	Annual Average
			30-NOV-2002 P196905	31-DEC-2002 P199870	
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	45000	NG/KG	ND	ND	ND
BHC, Gamma isomer	18000	NG/KG	ND	ND	3958
BHC, Delta isomer	28000	NG/KG	ND	ND	ND
p,p-DDD	18000	NG/KG	ND	ND	ND
p,p-DDE	28000	NG/KG	<28000	41000	27792
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	28000	NG/KG	ND	ND	ND
Heptachlor epoxide	28000	NG/KG	ND	ND	ND
Alpha (cis) Chlordane	28000	NG/KG	ND	ND	ND
Gamma (trans) Chlordane	48000	NG/KG	ND	ND	ND
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	0
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	45000	NG/KG	0	0	3958
DDT and derivatives	71000	NG/KG	0	41000	27792
Chlordane + related cmpds.	48000	NG/KG	0	0	0
Polychlorinated biphenyls	580000	NG/KG	0	0	0
=====					
Chlorinated Hydrocarbons	580000	NG/KG	0	41000	31750

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

POINT LOMA WASTEWATER TREATMENT PLANT
 Quarterly Sludge Project
 Herbicide Analysis
 From 01-JAN-2002 To 31-DEC-2002

Sampling: AM Analysis: KD

Date:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Sample:	MDL	Units	31-JAN-2002	31-MAR-2002	30-APR-2002	30-JUN-2002
=====	=====	=====	P130538	P134917	P138469	P175397
2,4-dichlorophenoxyacetic acid	6.84	MG/KG	ND	ND	ND	ND
2,4,5-TP (Silvex)	6.33	MG/KG	ND	ND	ND	ND

Date:			MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
Sample:	MDL	Units	31-JUL-2002	30-SEP-2002	30-NOV-2002	31-DEC-2002
=====	=====	=====	P182161	P189535	P196905	P199870
2,4-dichlorophenoxyacetic acid	6.84	MG/KG	ND	ND	ND	ND
2,4,5-TP (Silvex)	6.33	MG/KG	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
From 01-JAN-2002 to 31-DEC-2002
ANNUAL SLUDGE - Base/Neutrals

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			28-FEB-2002 P132668	31-MAY-2002 P172122	31-AUG-2002 P185889	31-OCT-2002 P193559
bis(2-chloroethyl) ether	1650	UG/KG	ND	ND	ND	ND
1,3-dichlorobenzene	1650	UG/KG	ND	ND	ND	ND
1,4-dichlorobenzene	1650	UG/KG	ND	ND	ND	ND
1,2-dichlorobenzene	1650	UG/KG	ND	ND	ND	ND
Bis-(2-chloroisopropyl) ether	1650	UG/KG	ND	ND	ND	ND
N-nitrosodi-n-propylamine	1650	UG/KG	ND	ND	ND	ND
Nitrobenzene	1650	UG/KG	ND	ND	ND	ND
Hexachloroethane	1650	UG/KG	ND	ND	ND	ND
Isophorone	1650	UG/KG	ND	ND	ND	ND
bis(2-chloroethoxy)methane	1650	UG/KG	ND	ND	ND	ND
1,2,4-trichlorobenzene	1650	UG/KG	ND	ND	ND	ND
Naphthalene	1650	UG/KG	ND	ND	ND	ND
Hexachlorobutadiene	1650	UG/KG	ND	ND	ND	ND
Hexachlorocyclopentadiene	1650	UG/KG	ND	ND	ND	ND
2-chloronaphthalene	1650	UG/KG	ND	ND	ND	ND
Acenaphthylene	1650	UG/KG	ND	ND	ND	ND
Dimethyl phthalate	1650	UG/KG	ND	ND	2110	ND
2,6-dinitrotoluene	1650	UG/KG	ND	ND	ND	ND
Acenaphthene	1650	UG/KG	ND	ND	ND	ND
2,4-dinitrotoluene	1650	UG/KG	ND	ND	ND	ND
Fluorene	1650	UG/KG	ND	ND	ND	ND
4-chlorophenyl phenyl ether	1650	UG/KG	ND	ND	ND	ND
Diethyl phthalate	1650	UG/KG	ND	ND	ND	ND
N-nitrosodiphenylamine	1650	UG/KG	ND	ND	ND	ND
4-bromophenyl phenyl ether	1650	UG/KG	ND	ND	ND	ND
Hexachlorobenzene	1650	UG/KG	ND	ND	ND	ND
Phenanthrene	1650	UG/KG	ND	1810	ND	3530
Anthracene	1650	UG/KG	ND	ND	ND	ND
Di-n-butyl phthalate	1650	UG/KG	965	<870	ND	ND
N-nitrosodimethylamine	1650	UG/KG	ND	ND	ND	ND
Fluoranthene	1650	UG/KG	ND	ND	ND	ND
Pyrene	1650	UG/KG	ND	ND	ND	ND
Benzidine		UG/KG	*	*	*	*
Butyl benzyl phthalate	1650	UG/KG	6780	7190	7420	7780
Chrysene	1650	UG/KG	ND	ND	ND	ND
Benzo[A]anthracene	1650	UG/KG	ND	ND	ND	ND
Bis-(2-ethylhexyl) phthalate	1650	UG/KG	141000	148000	156000	153000
Di-n-octyl phthalate	1650	UG/KG	10100	9920	15800	9520
3,3-dichlorobenzidine		UG/KG	*	*	*	*
Benzo[K]fluoranthene	1650	UG/KG	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	1650	UG/KG	ND	ND	ND	ND
Benzo[A]pyrene	1650	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	1650	UG/KG	ND	ND	ND	ND
Dibenzo(A,H)anthracene	1650	UG/KG	ND	ND	ND	ND
Benzo[G,H,I]perylene	1650	UG/KG	ND	ND	ND	ND
1,2-diphenylhydrazine	1650	UG/KG	ND	ND	ND	ND
=====						
PolyNuc. Aromatic Hydrocarbons	1650	UG/KG	0	1810	0	3530
Dichlorobenzenes	1650	UG/KG	0	0	0	0
=====						
Base/Neutral Compounds	1650	UG/KG	158845	167790	181330	173830
Additional analytes determined;						
=====						
1-methylnaphthalene	1650	UG/KG	ND	1720	ND	3190
2-methylnaphthalene	1650	UG/KG	ND	2260	1850	4770
2,6-dimethylnaphthalene	1650	UG/KG	2650	3110	3710	7200
2,3,5-trimethylnaphthalene	1650	UG/KG	ND	ND	ND	4400
1-methylphenanthrene	1650	UG/KG	ND	ND	ND	ND
Benzo[e]pyrene	1650	UG/KG	ND	ND	ND	ND
Perylene	1650	UG/KG	ND	ND	ND	ND
Biphenyl	1650	UG/KG	ND	ND	ND	ND
Pyridine	1650	UG/KG	ND	ND	ND	ND

nd= not detected

NA= not analyzed

NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE
Phenolics
From 01-JAN-2002 to 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	Average
			28-FEB-2002	31-MAY-2002	31-AUG-2002	31-OCT-2002	
			P132668	P172122	P185889	P193559	4000
							UG/KG
2,4,6-trichlorophenol	1650	UG/KG	ND	ND	ND	ND	0
2,4-dichlorophenol	1650	UG/KG	ND	ND	ND	ND	0
2,4-dimethylphenol	1650	UG/KG	ND	ND	ND	ND	0
2,4-dinitrophenol	1650	UG/KG	ND	ND	ND	ND	0
2-methyl-4,6-dinitrophenol	4000	UG/KG	ND	ND	ND	ND	0
2-chlorophenol	1650	UG/KG	ND	ND	ND	ND	0
2-nitrophenol	1650	UG/KG	ND	ND	ND	ND	0
4-chloro-3-methylphenol	1650	UG/KG	ND	<830	ND	ND	208
4-nitrophenol	4000	UG/KG	ND	ND	ND	ND	0
Pentachlorophenol	4000	UG/KG	ND	ND	ND	ND	0
Phenol	1650	UG/KG	113000	73300	53700	61900	75475
Total Non-Chlorinated Phenols	4000	UG/KG	162100	197300	130000	133100	155625
Total Chlorinated Phenols	4000	UG/KG	0	830	0	0	208
Phenols	4000	UG/KG	162100	198130	130000	133100	155833

Additional analytes determined;

2-methylphenol	1650	UG/KG	ND	ND	ND	ND	0
3-methylphenol(4-MP is unresolved)	1650	UG/KG	ND	ND	ND	ND	0
4-methylphenol(3-MP is unresolved)	1650	UG/KG	49100	124000	76300	71200	80150
2,4,5-trichlorophenol	4000	UG/KG	ND	ND	ND	ND	0

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE Purgeables

From 01-JAN-2002 to 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			31-JAN-2002 P130538	28-FEB-2002 P132668	31-MAR-2002 P134917	30-JUN-2002 P175397	31-JUL-2002 P182161	31-AUG-2002 P185889
Chloromethane	25.8	UG/KG	ND	ND	ND	42	ND	ND
Vinyl chloride	26.2	UG/KG	ND	ND	ND	ND	ND	ND
Bromomethane	29.2	UG/KG	ND	35	ND	33	ND	ND
Chloroethane	61	UG/KG	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	28	UG/KG	ND	ND	ND	ND	ND	ND
1,1-dichloroethene	25.1	UG/KG	ND	ND	ND	ND	ND	ND
Carbon disulfide	34	UG/KG	59	56	ND	65	<34	57
Acetone	185	UG/KG	8960	5410	1460	8200	3410	4840
Methylene chloride	62.5	UG/KG	ND	ND	ND	5240	ND	ND
trans-1,2-dichloroethene	25	UG/KG	ND	ND	ND	ND	ND	ND
1,1-dichloroethane	25.7	UG/KG	ND	ND	ND	ND	ND	ND
2-butanone		UG/KG	6580	2910	1010	4920	1290	2120
Chloroform	25.6	UG/KG	ND	ND	ND	ND	ND	ND
1,1,1-trichloroethane	27.4	UG/KG	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	17	UG/KG	ND	ND	ND	ND	ND	ND
Benzene	26.5	UG/KG	ND	ND	ND	ND	ND	ND
1,2-dichloroethane	20.5	UG/KG	ND	ND	ND	ND	ND	ND
Trichloroethene	25.3	UG/KG	ND	ND	ND	ND	ND	ND
1,2-dichloropropane	25.5	UG/KG	ND	ND	ND	ND	ND	ND
Bromodichloromethane	17	UG/KG	ND	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	53.6	UG/KG	ND	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	21.5	UG/KG	ND	ND	ND	ND	ND	ND
Toluene	48	UG/KG	33	37	ND	ND	ND	ND
trans-1,3-dichloropropene	17	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2-trichloroethane	35.1	UG/KG	ND	ND	ND	ND	ND	ND
Tetrachloroethene	21.5	UG/KG	ND	ND	ND	ND	ND	ND
Dibromochloromethane	24.2	UG/KG	ND	ND	ND	ND	ND	ND
Chlorobenzene	31.1	UG/KG	ND	ND	ND	ND	ND	ND
Ethylbenzene	90.5	UG/KG	<26	86	ND	ND	ND	ND
Bromoform	26.1	UG/KG	ND	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	64	UG/KG	ND	ND	ND	ND	ND	ND
1,3-dichlorobenzene	17	UG/KG	ND	ND	ND	ND	ND	ND
1,4-dichlorobenzene		UG/KG	284	390	53	393	312	451
1,2-dichlorobenzene	28.7	UG/KG	ND	ND	ND	ND	ND	ND
Purgeable Compounds	275	UG/KG	15632	8534	2470	18500	4700	7017

Additional analytes determined;

Acrolein	70.9	UG/KG	ND	ND	ND	ND	ND	ND
Methyl Iodide	19	UG/KG	ND	ND	ND	77	ND	ND
Allyl chloride	25	UG/KG	ND	ND	ND	ND	ND	ND
Methyl tert-butyl ether	34	UG/KG	ND	ND	ND	ND	ND	ND
Acrylonitrile	275	UG/KG	ND	ND	ND	ND	ND	ND
Chloroprene	17	UG/KG	ND	ND	ND	ND	NA	ND
Dibromofluoromethane		UG/KG	830	875	690	841	746	780
Methyl methacrylate	36	UG/KG	ND	ND	ND	ND	ND	ND
2-nitropropane		UG/KG	ND	ND	ND	ND	ND	ND
4-methyl-2-pentanone	24	UG/KG	ND	ND	ND	ND	ND	ND
1,2-dibromoethane	17	UG/KG	ND	ND	ND	ND	ND	ND
meta,para xylenes	35	UG/KG	<35	53	ND	54	ND	43
ortho-xylene	23	UG/KG	<23	28	ND	<23	ND	24
Isopropylbenzene	17	UG/KG	ND	ND	ND	ND	ND	ND
Styrene	19	UG/KG	<19	26	ND	<19	ND	ND
Benzyl chloride	38	UG/KG	ND	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	17	UG/KG	ND	ND	ND	ND	ND	ND

nd= not detected

NA= not analyzed

NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE Purgeables

From 01-JAN-2002 to 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	Average
			30-SEP-2002 P189535	31-OCT-2002 P193559	30-NOV-2002 P196905	31-DEC-2002 P199870	
Chloromethane	25.8	UG/KG	ND	ND	ND	ND	4
Vinyl chloride	26.2	UG/KG	ND	ND	ND	ND	ND
Bromomethane	29.2	UG/KG	ND	ND	ND	ND	7
Chloroethane	61	UG/KG	ND	ND	ND	ND	ND
Trichlorofluoromethane	28	UG/KG	ND	ND	ND	ND	ND
1,1-dichloroethene	25.1	UG/KG	ND	ND	ND	ND	ND
Carbon disulfide	34	UG/KG	93	446	582	88	145
Acetone	185	UG/KG	9830	9210	21600	14000	8692
Methylene chloride	62.5	UG/KG	75	ND	ND	*	591
trans-1,2-dichloroethene	25	UG/KG	ND	ND	ND	ND	ND
1,1-dichloroethane	25.7	UG/KG	ND	ND	ND	ND	ND
2-butanone		UG/KG	5300	4530	9170	15900	5373
Chloroform	25.6	UG/KG	ND	ND	ND	ND	ND
1,1,1-trichloroethane	27.4	UG/KG	ND	ND	ND	ND	ND
Carbon tetrachloride	17	UG/KG	ND	ND	ND	ND	ND
Benzene	26.5	UG/KG	ND	ND	ND	ND	ND
1,2-dichloroethane	20.5	UG/KG	ND	ND	ND	ND	ND
Trichloroethene	25.3	UG/KG	ND	ND	ND	ND	ND
1,2-dichloropropane	25.5	UG/KG	ND	ND	ND	ND	ND
Bromodichloromethane	17	UG/KG	ND	ND	ND	ND	ND
2-chloroethylvinyl ether	53.6	UG/KG	ND	ND	ND	ND	ND
cis-1,3-dichloropropene	21.5	UG/KG	ND	ND	ND	ND	ND
Toluene	48	UG/KG	ND	<48	ND	ND	7
trans-1,3-dichloropropene	17	UG/KG	ND	ND	ND	ND	ND
1,1,2-trichloroethane	35.1	UG/KG	ND	ND	ND	ND	ND
Tetrachloroethene	21.5	UG/KG	ND	ND	ND	ND	ND
Dibromochloromethane	24.2	UG/KG	ND	ND	ND	ND	ND
Chlorobenzene	31.1	UG/KG	ND	ND	ND	ND	ND
Ethylbenzene	90.5	UG/KG	ND	ND	99	ND	19
Bromoform	26.1	UG/KG	ND	ND	ND	ND	ND
1,1,2,2-tetrachloroethane	64	UG/KG	ND	ND	ND	ND	ND
1,3-dichlorobenzene	17	UG/KG	ND	ND	ND	ND	ND
1,4-dichlorobenzene		UG/KG	365	630	654	494	403
1,2-dichlorobenzene	28.7	UG/KG	ND	ND	ND	ND	ND
Purgeable Compounds	275	UG/KG	15298	14186	31451	29988	14778

Additional analytes determined:

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	Average
Acrolein	70.9	UG/KG	ND	ND	ND	*	ND
Methyl Iodide	19	UG/KG	ND	ND	30	ND	11
Allyl chloride	25	UG/KG	ND	ND	ND	ND	ND
Methyl tert-butyl ether	34	UG/KG	ND	ND	ND	ND	ND
Acrylonitrile	275	UG/KG	ND	ND	ND	ND	ND
Chloroprene	17	UG/KG	ND	ND	ND	ND	ND
Dibromofluoromethane		UG/KG	800	837	726	790	792
Methyl methacrylate	36	UG/KG	ND	ND	ND	ND	ND
2-nitropropane		UG/KG	ND	ND	ND	ND	ND
4-methyl-2-pentanone	24	UG/KG	ND	ND	ND	ND	ND
1,2-dibromoethane	17	UG/KG	ND	ND	ND	ND	ND
meta,para xylenes	35	UG/KG	40	212	172	63	64
ortho-xylene	23	UG/KG	ND	94	91	<23	24
Isopropylbenzene	17	UG/KG	ND	40	40	<17	8
Styrene	19	UG/KG	ND	<19	57	28	11
Benzyl chloride	38	UG/KG	ND	ND	ND	ND	ND
1,2,4-trichlorobenzene	17	UG/KG	ND	ND	ND	ND	ND

nd= not detected * Analyte failed QC, not reportable.
NA= not analyzed
NS= not sampled

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL SLUDGE - Dioxins analysis

From 01-JAN-2002 to 31-DEC-2002

Analyte	MDL	Units	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
			28-FEB-2002 P132668	31-MAY-2002 P172122	31-AUG-2002 P185889	31-OCT-2002 P193559
2,3,7,8-tetra CDD	1	NG/KG	ND	ND	ND	ND
1,2,3,7,8-penta CDD	5	NG/KG	ND	ND	ND	ND
1,2,3,4,7,8-hexa_CDD	5	NG/KG	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDD	5	NG/KG	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDD	5	NG/KG	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDD	5	NG/KG	40	55	48	62
octa CDD	10	NG/KG	630	655	600	690
2,3,7,8-tetra CDF	1	NG/KG	ND	5	ND	ND
1,2,3,7,8-penta CDF	5	NG/KG	ND	ND	ND	ND
2,3,4,7,8-penta CDF	5	NG/KG	ND	ND	ND	ND
1,2,3,4,7,8-hexa CDF	5	NG/KG	ND	ND	ND	ND
1,2,3,6,7,8-hexa CDF	5	NG/KG	ND	ND	ND	ND
1,2,3,7,8,9-hexa CDF	5	NG/KG	ND	ND	ND	ND
2,3,4,6,7,8-hexa CDF	5	NG/KG	ND	ND	ND	ND
1,2,3,4,6,7,8-hepta CDF	5	NG/KG	ND	23	ND	ND
1,2,3,4,7,8,9-hepta CDF	5	NG/KG	ND	ND	ND	ND
octa CDF	10	NG/KG	95	130	150	150

Above are permit required CDD/CDF isomers.

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

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.

2002 POINT LOMA WASTEWATER TREATMENT PLANT ANNUAL REPORT

CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TEST (TITLE 22)

METRO BIOSOLIDS CENTER (MBC)

METALS

ANALYTE	TTLc Wet wt mg/Kg	WET WEIGHT Concentration (calculated)											
		MBCDEWCN JAN 2002 P130538	MBCDEWCN FEB 2002 P132668	MBCDEWCN MAR 2002 P134917	MBCDEWCN APR 2002 P138469	MBCDEWCN MAY 2002 P172122	MBCDEWCN JUN 2002 P175397	MBCDEWCN JUL 2002 P182161	MBCDEWCN AUG 2002 P185889	MBCDEWCN SEP 2002 P189535	MBCDEWCN OCT 2002 P193559	MBCDEWCN NOV 2002 P196905	MBCDEWCN DEC 2002 P199870
ANTIMONY	500	< 13.60	< 13.85	< 14.60	< 14.60	< 14.30	< 13.30	< 13.85	< 13.50	< 13.65	< 14.00	< 14.70	< 14.65
ARSENIC	500	1.6	1.7	1.8	1.7	1.4	0.4	1.7	1.6	1.7	1.1	1.4	1.3
BARIUM	10000	126	134	132	132	146	116	130	116	165	107	124	123
BERYLLIUM	75	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CADMIUM	100	< 1.4	< 1.4	< 1.5	< 1.5	< 1.4	< 1.3	< 1.4	< 1.4	< 1.4	< 1.4	< 1.5	< 1.5
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	18	17	17	15	16	14	15	15	12	15	17	17
COBALT	8000	< 0.8	< 0.8	2.0	< 0.8	< 0.8	1.5	0.9	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
COPPER	2500	163	171	170	177	171	167	199	208	214	241	237	216
LEAD	1000	8	9	8	8	11	9	9	8	10	11	9	8
MERCURY	20	0.44	0.36	0.41	0.38	0.23	0.03	0.25	0.27	0.27	< 0.01	0.47	0.53
MOLYBDENUM	3500	4.1	4.7	4.4	4.7	4.3	4.3	6.4	5.4	6.0	6.2	6.2	6.4
NICKEL	2000	10	9	10	11	10	10	10	10	11	11	12	11
SELENIUM	100	1.4	1.4	1.6	1.3	1.2	0.4	2.2	2.8	1.7	1.3	1.3	1.3
SILVER	500	8	8	6	7	8	6	8	8	8	7	10	7
THALLIUM	700	< 6.26	< 6.37	< 6.72	< 6.72	< 6.58	< 6.12	< 6.37	< 6.21	< 6.28	< 6.44	< 6.76	< 6.74
VANADIUM	2400	7	7	8	7	7	7	8	8	8	6	7	7
ZINC	5000	222	241	160	243	239	224	247	245	258	249	256	237
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	< 60	< 60	< 60	< 60	< 60	< 57	< 60	< 60	< 60	< 137	< 144	6
SULFIDES-TOTAL	NA	6310	3906	5022	4117	5348	4070	5706	4914	6033	5012	5557	6563
TOTAL SOLIDS (%)		27.2	27.7	29.2	29.2	28.6	26.6	27.7	27.0	27.3	28.0	29.4	29.3

ANALYTE	TTLc Wet wt mg/Kg	DRY WEIGHT Concentration											
		MBCDEWCN JAN 2002 P130538	MBCDEWCN FEB 2002 P132668	MBCDEWCN MAR 2002 P134917	MBCDEWCN APR 2002 P138469	MBCDEWCN MAY 2002 P172122	MBCDEWCN JUN 2002 P175397	MBCDEWCN JUL 2002 P182161	MBCDEWCN AUG 2000 P185889	MBCDEWCN SEP 2002 P189535	MBCDEWCN OCT 2002 P193559	MBCDEWCN NOV 2002 P196905	MBCDEWCN DEC 2002 P199870
ANTIMONY	500	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
ARSENIC	500	6.0	6.2	6.0	5.8	5.0	1.6	6.1	5.9	6.4	4.1	4.6	4.3
BARIUM	10000	462	485	453	453	510	436	471	430	603	381	421	421
BERYLLIUM	75	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CADMIUM	100	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
CHROMIUM(VI)	500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM(total)	2500	65	63	58	53	55	53	55	55	44	55	59	59
COBALT	8000	< 2.8	< 2.8	6.9	< 2.8	< 2.8	5.6	3.4	< 2.8	< 2.8	< 2.8	< 2.8	< 2.8
COPPER	2500	598	618	582	606	598	629	718	769	785	860	805	737
LEAD	1000	< 29	31	< 29	< 29	37	< 29	33	< 29	35	38	< 29	< 29
MERCURY	20	1.6	1.3	1.4	1.3	0.8	0.1	0.9	1.0	1.0	< 0.1	1.6	1.8
MOLYBDENUM	3500	15	17	15	16	15	16	23	20	22	22	21	22
NICKEL	2000	37	33	33	37	36	36	36	38	40	41	40	38
SELENIUM	100	5.2	5.1	5.4	4.6	4.3	1.6	8.1	10.2	6.3	4.8	4.3	4.5
SILVER	500	29.6	29.7	19.6	24.5	29.4	22.2	30.2	30.8	30.6	25.2	33.7	24.9
THALLIUM	700	< 23	< 23	< 23	< 23	< 23	< 23	< 23	< 23	< 23	< 23	< 23	< 23
VANADIUM	2400	25.5	26.7	26.6	24.6	24.3	27.1	28.9	28.5	27.6	22.8	25.2	24.3
ZINC	5000	817	871	547	833	836	842	890	908	945	891	870	810
FLUORIDE	18000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFIDES-REACTIVE	NA	< 221	< 217.0	< 206	< 206	< 210.0	< 214	< 217	< 223	< 220	< 490	< 490	21
SULFIDES-TOTAL	NA	23200	14100	17200	14100	18700	15300	20600	18200	22100	17900	18900	22400

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

ANALYTE	TTLc Wet wt mg/Kg	WET WEIGHT Concentration (calculated)											
		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
		JAN 2002	FEB 2002	MAR 2002	APR 2002	MAY 2002	JUN 2002	JUL 2002	AUG 2002	SEP 2002	OCT 2002	NOV 2002	DEC 2002
		P130538	P132668	P134917	P138469	P172122	P175397	P182161	P185889	P189535	P193559	P196905	P199870
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CHLORDANE	2.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
DDT,DDE,DDD	1.0	0.0520	nd	nd	0.0128	nd	0.0029	0.0107	0.0134	0.0094	0.0087	0.0046	0.0120
2,4-DCPAA	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
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	0.002	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	nd	nd	NA	NA	nd	NA	NA	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	NA	nd	nd	nd	nd	nd	nd	nd
2,4,5-TCPPA	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
TOTAL SOLIDS (%)		27.2	27.7	29.2	29.2	28.6	26.6	27.7	27.0	27.3	28.0	29.4	29.3
pH	>6-<9	7.65	7.78	7.83	7.61	8.31	8.00	7.94	7.76	7.76	7.83	7.71	7.83

ANALYTE	TTLc Wet wt mg/Kg	DRY WEIGHT Concentration												MDL mg/Kg
		MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	
		JAN 2002	FEB 2002	MAR 2002	APR 2002	MAY 2002	JUN 2002	JUL 2002	AUG 2002	SEP 2002	OCT 2002	NOV 2002	DEC 2002	
		P130538	P132668	P134917	P138469	P172122	P175397	P182161	P185889	P189535	P193559	P196905	P199870	
ALDRIN	1.4	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00002
CHLORDANE	2.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.000014
DDT,DDE,DDD	1.0	0.052	nd	nd	0.044	nd	0.011	0.039	0.04950	0.03450	0.031	0.0155	0.041	0.00004
2,4-DCPAA	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.4
DIELDRIN	8.0	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00002
ENDRIN	0.20	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00003
HEPTACHLOR	4.7	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.000003
KEPONE	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINDANE	4	nd	nd	nd	nd	nd	0.007	nd	nd	nd	nd	nd	nd	0.00001
METHOXYCHLOR	100	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NA
MIREX	21	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00002
PENTACHLOROPHENOL	17	NA	nd	NA	nd	nd	NA	NA	nd	NA	NA	NA	NA	0.8
PCBs (TOTAL)	50	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	NA
TOXAPHENE	5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	0.00024
TRICHLOROETHENE	2040	NA	nd	nd	nd	NA	nd	nd	nd	nd	nd	nd	nd	0.0253
2,4,5-TCPPA	10	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.4

TTLc = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

WASTE EXTRACTION TEST - METALS

ANALYTE	STLC	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
	Wet wt mg/L	JAN 2002 P130538	FEB 2002 P132668	MAR 2002 P134917	APR 2002 P138469	MAY 2002 P172122	JUN 2002 P175397	JUL 2002 P182161	AUG 2002 P185889	SEP 2002 P189535	OCT 2002 P193559	NOV 2002 P196905	DEC 2002 P199870
ANTIMONY	15	*	*	*	*	*	*	*	*	*	*	*	*
ARSENIC	5.0	*	*	*	*	*	*	*	*	*	*	*	*
BARIUM	100	*	*	*	*	*	*	*	*	*	*	*	*
BERYLLIUM	0.75	*	*	*	*	*	*	*	*	*	*	*	*
CADMIUM	1.0	*	*	*	*	*	*	*	*	*	*	*	*
CHROMIUM(VI)	5.0	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA	NA
CHROMIUM(total)	560	*	*	*	*	*	*	*	*	*	*	*	*
COBALT	80	*	*	*	*	*	*	*	*	*	*	*	*
COPPER	25	*	*	*	*	*	*	*	*	*	*	*	*
LEAD	5.0	*	*	*	*	*	*	*	*	*	*	*	*
MERCURY	0.2	*	*	*	*	*	*	*	*	*	*	*	*
MOLYBDENUM	350	*	*	*	*	*	*	*	*	*	*	*	*
NICKEL	20	*	*	*	*	*	*	*	*	*	*	*	*
SELENIUM	1.0	*	*	*	*	*	*	*	*	*	*	*	*
SILVER	5.0	*	*	*	*	*	*	*	*	*	*	*	*
THALLIUM	7.0	*	*	*	*	*	*	*	*	*	*	*	*
VANADIUM	24	*	*	*	*	*	*	*	*	*	*	*	*
ZINC	250	*	*	*	*	*	*	*	*	*	*	*	*

* = Since the total concentrations are less than 10 times the the STLC, this substance is below STLC limits by definition.

WASTE EXTRACTION TEST - ORGANICS

ANALYTE	STLC	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN	MBCDEWCN
	Wet wt mg/L	JAN 2002 P130538	FEB 2002 P132668	MAR 2002 P134917	APR 2002 P138469	MAY 2002 P172122	JUN 2002 P175397	JUL 2002 P182161	AUG 2002 P185889	SEP 2002 P189535	OCT 2002 P193559	NOV 2002 P196905	DEC 2002 P199870
ALDRIN	0.14	*	*	*	*	*	*	*	*	*	*	*	*
CHLORDANE	0.25	*	*	*	*	*	*	*	*	*	*	*	*
DDT,DDE,DDD	0.1	*	*	*	*	*	*	*	*	*	*	*	*
2,4-DCPAA	10	*	*	*	*	*	*	*	*	*	*	*	*
DIELDRIN	0.8	*	*	*	*	*	*	*	*	*	*	*	*
ENDRIN	0.02	*	*	*	*	*	*	*	*	*	*	*	*
HEPTACHLOR	0.47	*	*	*	*	*	*	*	*	*	*	*	*
KEPONE	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
LINDANE	0.4	*	*	*	*	*	*	*	*	*	*	*	*
METHOXYCHLOR	10	*	*	*	*	*	*	*	*	*	*	*	*
MIREX	2.1	*	*	*	*	*	*	*	*	*	*	*	*
PENTACHLOROPHENOL	1.7	NA	*	NA	NA	NA	*	NA	*	NA	NA	NA	NA
PCBs (TOTAL)	5	*	*	*	*	*	NA	*	*	*	*	*	*
TOXAPHENE	0.5	*	*	*	*	*	*	*	*	*	*	*	*
TRICHLOROETHENE	204	*	*	*	*	*	*	*	*	*	*	*	*
2,4,5-TCPPA	1	*	*	*	*	*	*	*	*	*	*	*	*

TTLC = Total Threshold Limit Concentration

STLC = Soluble Threshold Limit Concentration

NA = Not Analyzed, NS = Not Sampled

* = Since the total concentrations are less than 10 times the the STLC, this substance is below STLC limits by definition.

