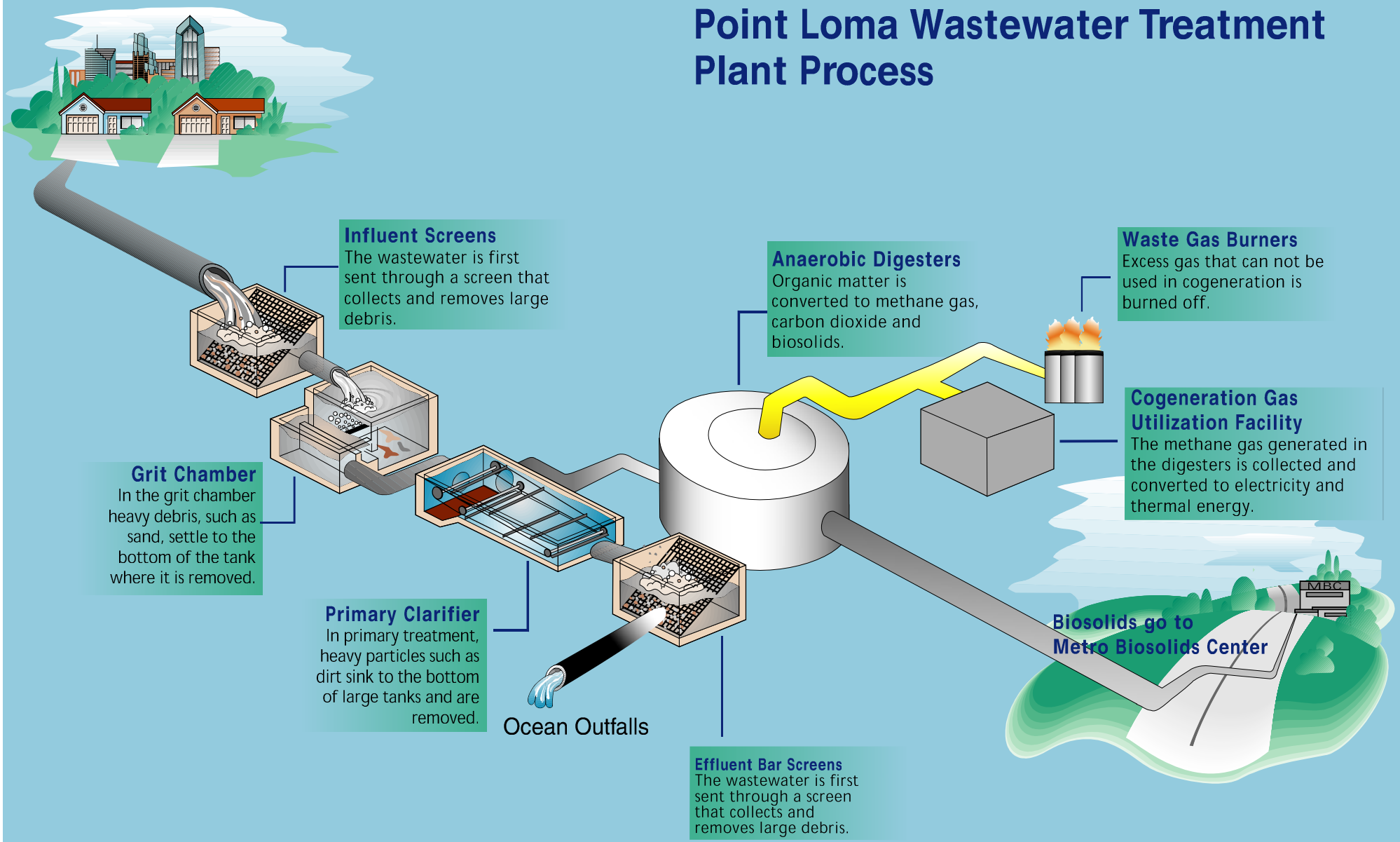
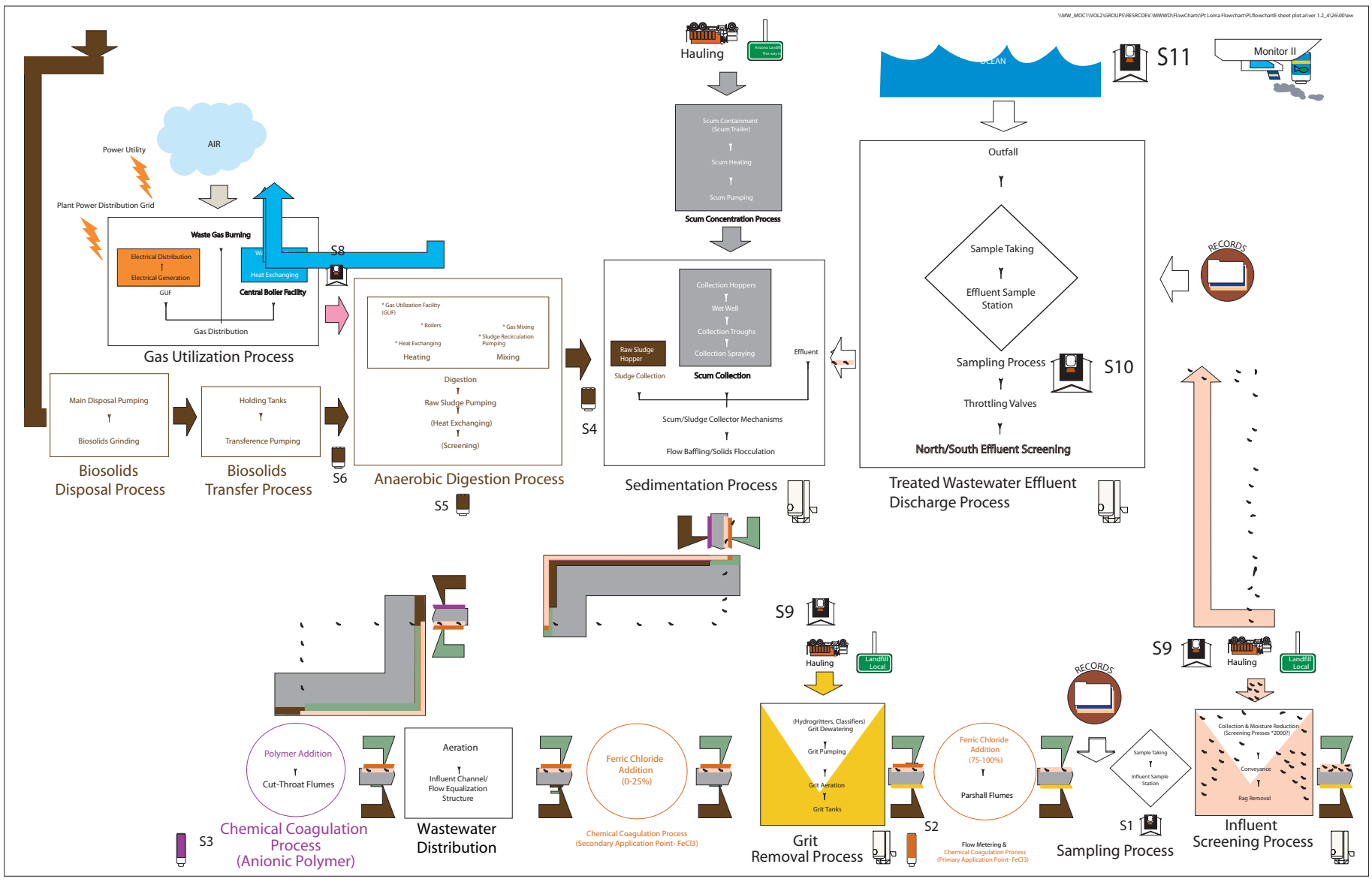
Point Loma Wastewater Treatment Plant Process

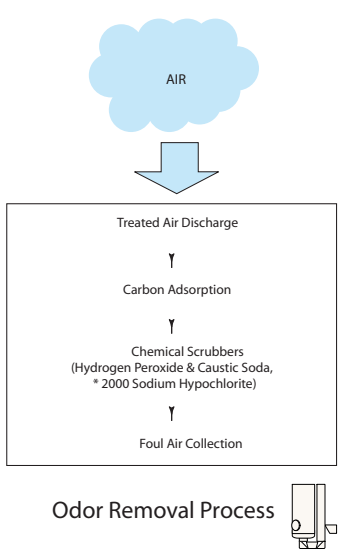


Metropolitan Biosolids Center

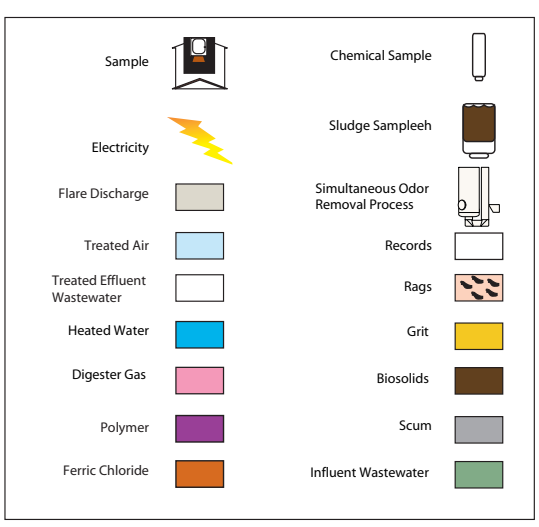
MBC



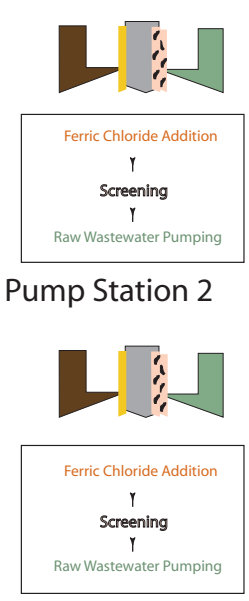
Point Loma Wastewater Treatment Plant

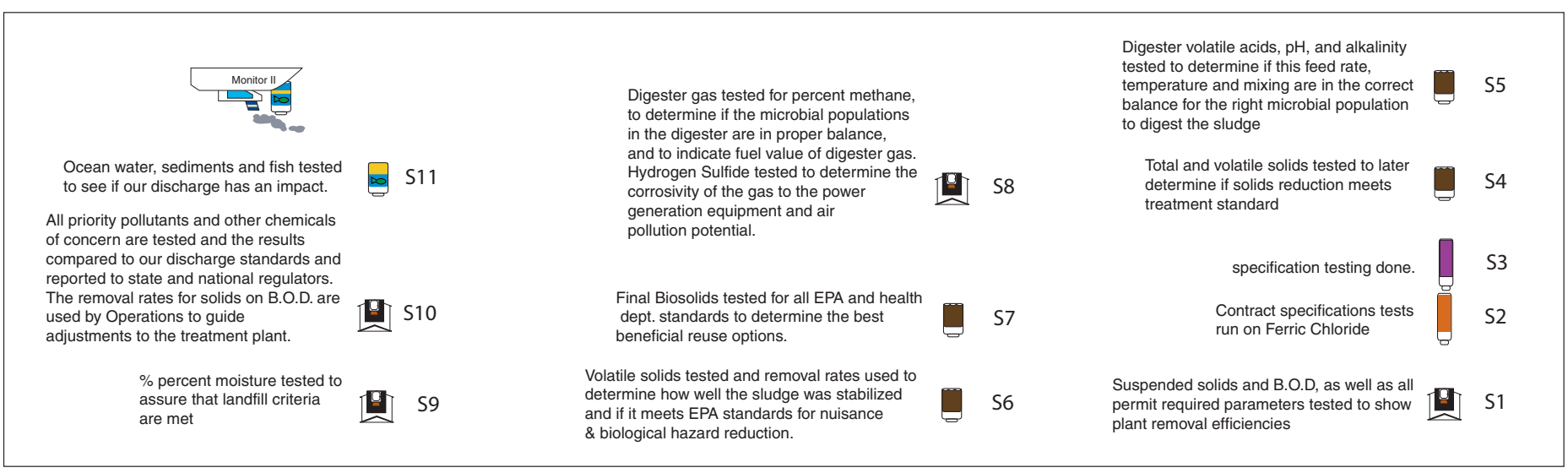


Odor Removal Process



Legend





Wastewater Laboratory Testing

POINT LOMA TREATMENT PLANT PROCESS FLOW DIAGRAM

III. Plant Operations Summary

A. Flows
B. Rain Days
C. Solids Production
D. Chemical usage
E. Gas Production
F. Graphs of Chemical Usage
G. Facilities Out-of-Service Report
H. Grit Analyses
I. Raw Sludge Data Summary
J. Digester and Digested Sludge Data Summary

A. Flows

Point Loma Wastewater Treatment Plant Annual Monitoring Report

Flow Report - 2002

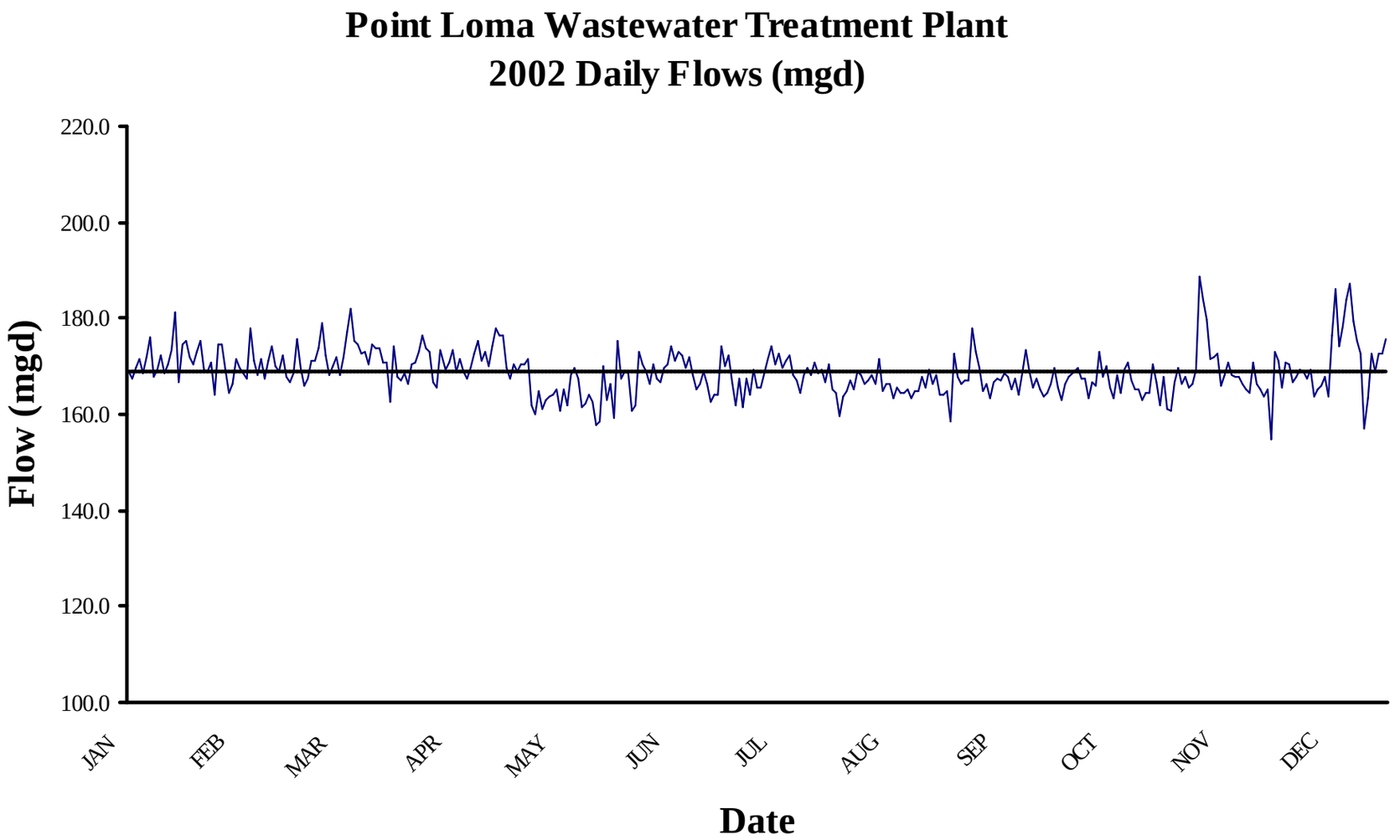
WASTEWATER FLOWS
Daily Average Flows - Millions of Gallons

Mon	Pt. L Gould	Pt. L ADS	PS#2 Flow	PS#2 Pumps	PS#1 Flows
01	171.1	169.8	168.1	168.0	61.2
02	170.3	173.4	172.6	172.6	60.8
03	171.8	175.6	175.8	175.8	61.5
04	171.4	175.0	171.6	171.6	64.4
05	165.1	169.8	162.6	162.6	61.3
06	168.5	171.6	165.8	162.4	60.9
07	168.2	176.9	163.0	163.5	61.2
08	165.8	173.8	168.0	164.6	58.2
09	167.4	174.6	170.0	168.5	61.0
10	166.6	173.5	165.3	164.8	60.2
11	168.8	177.2	168.9	182.7	59.7
12	171.3	180.4	171.3	182.6	60.4
avg	168.9	174.3	168.6	170.0	60.9
sum	2,026.3	2,091.7	2,022.9	2,039.9	730.6

WASTEWATER FLOWS
Monthly Total Flows - Millions of Gallons

Mon	Pt. L Gould	Pt. L ADS	PS#2 Flow	PS#2 Pumps	PS#1 Flows
01	5,133	4,755	5,210	5,210	1,896
02	4,599	4,681	2,934	2,934	1,701
03	5,326	5,445	5,451	5,451	1,905
04	4,971	5,250	5,148	5,149	1,932
05	5,117	5,264	5,040	4,877	1,900
06	5,054	4,461	4,973	4,872	1,826
07	5,215	3,361	5,053	4,905	1,896
08	5,140	5,388	5,207	4,610	1,804
09	5,022	5,238	5,100	1,180	1,829
10	5,163	5,379	5,125	5,109	1,865
11	5,065	5,316	5,068	5,482	1,792
12	5,309	5,593	5,309	5,662	1,873
avg	5,093	5,011	4,968	4,620	1,852
sum	61,115	60,132	59,618	55,441	22,219

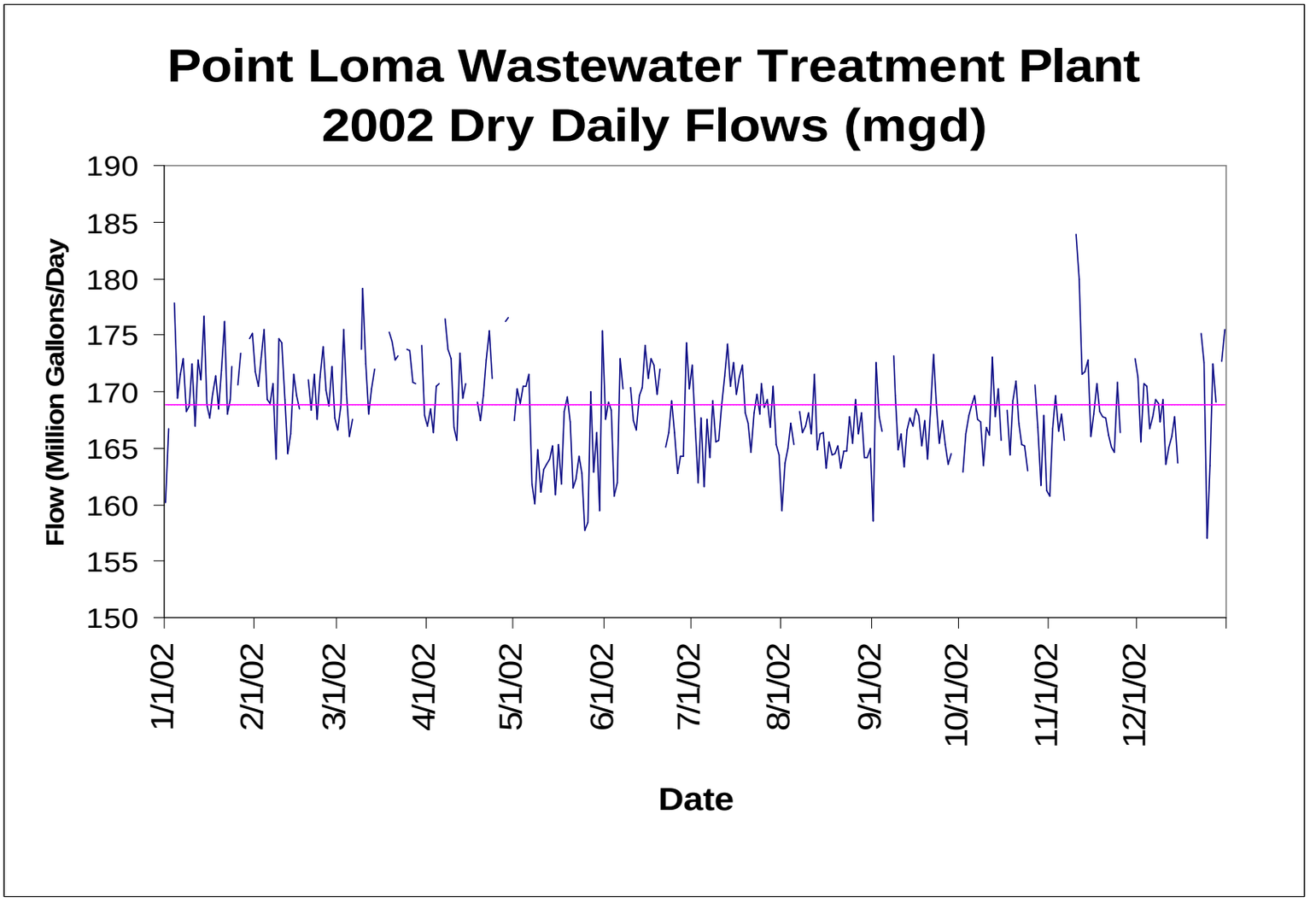
NOTES: The flows taken at the Pt. Loma WWTP are from the Parshall flumes at the headworks. Water depth in the flume is measured by 2 meters. The Gould meters measure water pressure. The ADS meters are sonar devices that measure the distance of the water level below the meter. The flows through Pump Station II(PS#2) are from venturi meters. PS#2 flow is the flow from the totalizer to which all of the venturi meters feed. PS#2 Pumps is the sum of the readings on the individual venturi meters which are connected to each of the pumps at the pump station. PS#1 is the flow from the venturi meters at Pump Station 1


Point Loma Wastewater Treatment Plant
2002 Daily Flows (mgd)
Flow (mgd)
220.0
200.0
180.0
160.0
140.0
120.0
100.0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
Date

Point Loma Wastewater Treatment Plant

2002 Flows (mgd)

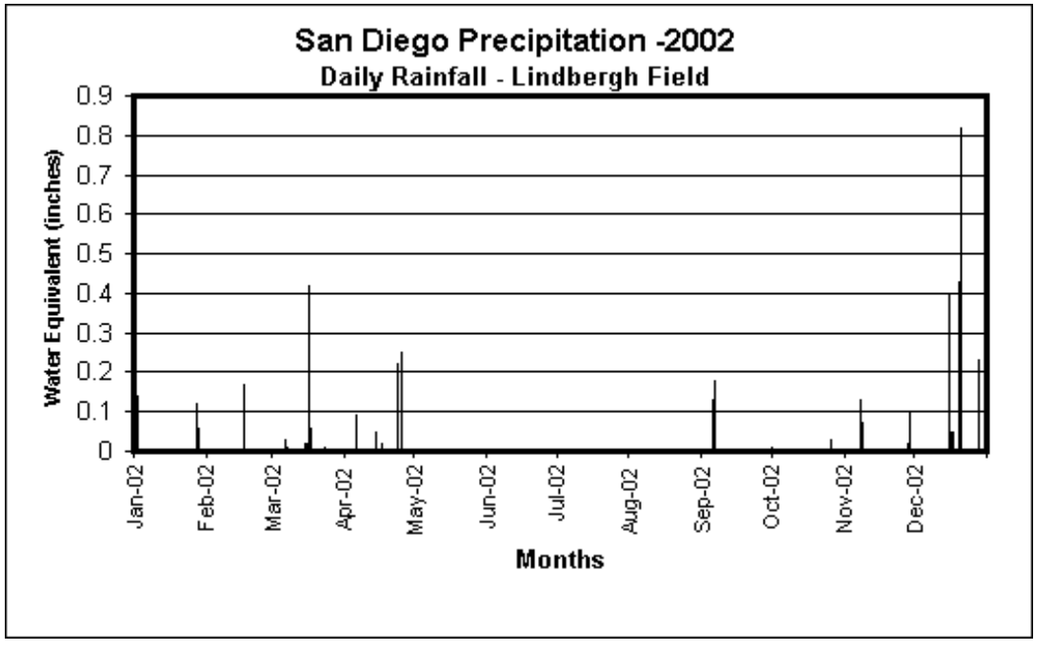
Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	160.1	171.8	166.6	167.0	167.4	167.6	172.4	159.5	158.5	165.6	160.8	171.3	
2	166.7	170.4	168.7	168.5	170.3	169.1	166.7	163.7	172.6	162.8	166.8	165.5	
3	170.2	173.1	175.5	166.4	169.0	168.4	161.9	164.9	167.8	166.3	169.6	170.7	
4	177.8	175.4	169.8	170.5	170.5	160.8	167.6	167.2	166.5	167.9	166.5	170.5	
5	169.4	169.4	166.1	170.7	170.4	161.9	161.6	165.4	167.2	168.8	168.0	166.8	
6	171.5	169.0	167.5	172.9	171.5	172.9	167.6	169.0	167.2	169.6	165.7	167.8	
7	172.9	170.7	171.3	176.5	161.8	170.3	164.2	168.2	178.1	167.5	166.5	169.3	
8	168.2	164.1	171.1	173.7	160.1	168.8	169.2	166.4	173.2	167.4	169.4	168.9	
9	168.7	174.7	173.7	173.0	164.9	166.5	165.5	167.0	169.6	163.4	188.6	167.4	
10	172.4	174.4	179.1	166.8	161.1	170.4	165.7	168.1	164.9	166.8	183.9	169.3	
11	167.0	169.3	172.5	165.7	163.2	167.4	168.8	166.3	166.3	166.1	179.9	163.6	
12	172.9	164.6	168.1	173.3	163.6	166.7	171.4	171.5	163.3	173.0	171.6	165.1	
13	171.1	166.3	170.2	169.4	164.0	169.7	174.2	164.9	166.7	167.7	171.8	166.1	
14	176.6	171.6	172.0	170.7	165.3	170.3	170.5	166.3	167.6	170.2	172.8	167.8	
15	168.9	169.7	168.3	173.4	160.9	174.1	172.6	166.4	166.9	165.7	166.0	163.7	
16	167.6	168.5	172.0	168.9	165.4	171.2	169.7	163.3	168.5	163.4	168.1	176.3	
17	169.7	167.6	177.1	171.4	161.8	172.9	171.3	165.6	167.8	168.3	170.7	186.2	
18	171.5	177.8	181.9	169.1	168.2	172.4	172.4	164.4	165.3	164.4	168.3	174.1	
19	168.5	171.0	175.3	167.4	169.6	169.8	168.1	164.5	167.4	169.2	167.8	178.4	
20	171.9	168.4	174.5	169.7	167.3	172.0	167.2	165.2	164.0	170.9	167.7	183.9	
21	176.2	171.5	172.8	172.8	161.5	168.2	164.6	163.2	168.6	167.2	166.2	187.2	
22	168.0	167.5	173.2	175.4	162.3	165.1	168.2	164.7	173.3	165.3	165.1	179.4	
23	169.3	171.3	170.3	171.2	164.3	166.4	169.7	164.8	168.8	165.2	164.6	175.2	
24	172.2	174.0	174.7	173.1	162.8	169.1	168.1	167.8	165.5	163.0	170.8	172.5	
25	168.6	170.1	173.8	169.9	157.7	166.4	170.7	165.4	167.4	164.6	166.4	157.0	
26	170.6	168.8	173.7	174.3	158.5	162.7	168.6	169.3	165.3	164.7	165.1	163.4	
27	173.4	172.2	170.8	177.9	170.0	164.2	169.4	166.3	163.6	170.6	163.6	172.5	
28	181.4	167.7	170.7	176.2	162.9	164.2	166.8	168.2	164.5	166.9	165.0	169.0	
29	166.9		162.5	176.5	166.3	174.3	170.5	164.2	166.4	161.8	154.9	172.5	
30	174.7		174.1	169.7	159.4	170.2	165.4	164.2	169.6	167.9	173.0	172.7	Annual
31	175.2		167.8		175.4		164.4	165.0		161.2		175.5	Summary
Average	171.0	170.4	171.8	171.4	165.1	168.5	168.2	165.8	167.4	166.6	168.8	171.3	168.8
Minimum	160.1	164.1	162.5	165.7	157.7	160.8	161.6	159.5	158.5	161.2	154.9	157.0	154.9
Maximum	181.4	177.8	181.9	177.9	175.4	174.3	174.2	171.5	178.1	173.0	188.6	187.2	188.6
Total	5300.0	4770.5	5325.7	5142.0	5117.0	5053.9	5215.0	5140.5	5022.4	5163.3	5065.0	5309.4	61624.6


Point Loma Wastewater Treatment Plant
2002 Dry Daily Flows (mgd)
Flow (Million Gallons/Day
190
185
180
175
170
165
160
155
150
1/1/02
2/1/02
3/1/02
4/1/02
5/1/02
6/1/02
7/1/02
8/1/02
9/1/02
10/1/02
11/1/02
12/1/02
Date

Point Loma Wastewater Treatment Plant
2002 Dry Flows (mgd)

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	160.1	171.8	166.6	167.0	167.4	167.6	172.4	159.5	158.5		160.8	171.3	
2	166.7	170.4	168.7	168.5	170.3	169.1	166.7	163.7	172.6	162.8	166.8	165.5	
3		173.1	175.5	166.4	169.0	168.4	161.9	164.9	167.8	166.3	169.6	170.7	
4	177.8	175.4	169.8	170.5	170.5	160.8	167.6	167.2	166.5	167.9	166.5	170.5	
5	169.4	169.4	166.1	170.7	170.4	161.9	161.6	165.4		168.8	168.0	166.8	
6	171.5	169.0	167.5		171.5	172.9	167.6			169.6	165.7	167.8	
7	172.9	170.7		176.5	161.8	170.3	164.2	168.2		167.5		169.3	
8	168.2	164.1		173.7	160.1		169.2	166.4	173.2	167.4		168.9	
9	168.7	174.7	173.7	173.0	164.9		165.5	167.0	169.6	163.4		167.4	
10	172.4	174.4	179.1	166.8	161.1	170.4	165.7	168.1	164.9	166.8	183.9	169.3	
11	167.0	169.3	172.5	165.7	163.2	167.4	168.8	166.3	166.3	166.1	179.9	163.6	
12	172.9	164.6	168.1	173.3	163.6	166.7	171.4	171.5	163.3	173.0	171.6	165.1	
13	171.1	166.3	170.2	169.4	164.0	169.7	174.2	164.9	166.7	167.7	171.8	166.1	
14	176.6	171.6	172.0	170.7	165.3	170.3	170.5	166.3	167.6	170.2	172.8	167.8	
15	168.9	169.7			160.9	174.1	172.6	166.4	166.9	165.7	166.0	163.7	
16	167.6	168.5		168.9	165.4	171.2	169.7	163.3	168.5		168.1		
17	169.7				161.8	172.9	171.3	165.6	167.8	168.3	170.7		
18				169.1	168.2	172.4	172.4	164.4	165.3	164.4	168.3		
19	168.5	171.0	175.3	167.4	169.6	169.8	168.1	164.5	167.4	169.2	167.8	178.4	
20	171.9	168.4	174.5	169.7	167.3	172.0	167.2	165.2	164.0	170.9	167.7		
21	176.2	171.5	172.8	172.8	161.5		164.6	163.2	168.6	167.2	166.2		
22	168.0	167.5	173.2	175.4	162.3	165.1	168.2	164.7	173.3	165.3	165.1		
23	169.3	171.3		171.2	164.3	166.4	169.7	164.8	168.8	165.2	164.6	175.2	
24	172.2	174.0			162.8	169.1	168.1	167.8	165.5	163.0	170.8	172.5	
25		170.1	173.8	169.9	157.7	166.4	170.7	165.4	167.4		166.4	157.0	
26	170.6	168.8	173.7		158.5	162.7	168.6	169.3	165.3			163.4	
27	173.4	172.2	170.8		170.0	164.2	169.4	166.3	163.6	170.6		172.5	
28		167.7	170.7	176.2	162.9	164.2	166.8	168.2	164.5	166.9		169.0	
29				176.5	166.3	174.3	170.5	164.2		161.8			
30	174.7		174.1		159.4	170.2	165.4	164.2		167.9	173.0	172.7	Annual
31	175.2		167.8		175.4		164.4	165.0		161.2		175.5	Summary
Average	170.8	170.2	171.7	170.8	165.1	168.5	168.2	165.7	167.0	166.9	169.2	168.7	168.6
Minimum	160.1	164.1	166.1	165.7	157.7	160.8	161.6	159.5	158.5	161.2	160.8	157.0	157.0
Maximum	177.8	175.4	179.1	176.5	175.4	174.3	174.2	171.5	173.3	173.0	183.9	178.4	183.9
Total	4441.5	4425.1	3776.4	3929.3	5117.0	4550.5	5215.0	4971.5	4173.9	4505.2	3891.9	4049.8	53046.9

B. Rain Days



Total Precipitation =4.23 A Maximum = 0.83A Trace = T

First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
Date	Rain	Date	Rain	Date	Rain	Date	Rain
3-Jan-02	0.14	6-Apr-02	0.09	6-Aug-02	T	1-Oct-02	0.01
18-Jan-02	T	15-Apr-02	0.05	5-Sep-02	T	16-Oct-02	T
25-Jan-02	T	17-Apr-02	0.02	6-Sep-02	0.13	25-Oct-02	T
28-Jan-02	0.12	24-Apr-02	0.22	7-Sep-02	0.18	26-Oct-02	0.03
29-Jan-02	0.06	26-Apr-02	0.25	29-Sep-02	T	7-Nov-02	T
17-Feb-02	0.17	27-Apr-02	T	30-Sep-02	T	8-Nov-02	0.13
18-Feb-02	T	30-Apr-02	T			9-Nov-02	0.07
7-Mar-02	0.03	8-Jun-02	T			26-Nov-02	T
8-Mar-02	0.01	9-Jun-02	T			27-Nov-02	T
15-Mar-02	0.02	21-Jun-02	T			28-Nov-02	0.02
16-Mar-02	0.02					29-Nov-02	0.1
17-Mar-02	0.31					16-Dec-02	0.4
18-Mar-02	0.06					17-Dec-02	0.05
23-Mar-02	T					18-Dec-02	0.05
24-Mar-02	0.01					20-Dec-02	0.43
29-Mar-02	T					21-Dec-02	0.82
						22-Dec-02	T
						29-Dec-02	0.23

C. Solids Production

Point Loma Annual Monitoring Report
Solids Report – TOTALS

From 01-JAN-2002 To 31-DEC-2002

Month	Pt. Loma Raw sludge Gallons	Tons	Pt.Loma Digested Sludge Gallons	Tons	MBC Combined Centrate Gallons	Tons	MBC Dewatered Sludge 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 Report - Daily Averages by Month
From 01-JAN-2002 To 31-DEC-2002

Month	Pt. Loma Raw sludge Gallons	%TS	Tons	Pt.Loma Digested Sludge Gallons	%TS	Tons	MBC Combined Centrate Gallons	%TS	Tons	MBC Dewatered Sludge Wet Tons	%TS	Dry Tons
01	981,585	4.5	184	977,129	2.4	98	2,158,355	0.30	23.9	346	29.2	101.0
02	934,804	4.4	175	875,303	2.5	87	2,112,571	0.20	18.8	295	28.7	81.2
03	1,098,656	4.1	188	1,129,374	2.2	107	2,348,323	0.20	23.5	305	30.9	100.4
04	1,186,816	3.8	187	1,179,486	2.1	105	2,372,100	0.30	25.4	329	29.7	97.4
05	1,126,379	4.1	191	1,121,774	2.3	105	2,240,119	0.30	25.0	339	30.0	100.9
06	1,173,306	4.0	194	1,160,850	2.3	110	2,156,147	0.30	24.5	338	29.4	99.9
07	1,111,985	4.4	203	1,084,917	2.4	109	1,770,000	0.40	26.5	349	28.3	98.1
08	1,140,259	4.1	193	1,082,267	2.4	105	2,332,989	0.30	28.1	369	28.5	105.5
09	1,149,278	4.0	190	1,109,506	2.3	106	2,393,812	0.30	28.0	349	28.3	99.0
10	1,129,026	4.0	187	1,099,655	2.3	106	2,296,531	0.30	26.1	371	28.8	106.5
11	1,160,068	3.9	187	1,124,069	2.3	106	2,443,484	0.30	28.0	326	30.5	99.7
12	1,153,879	3.9	188	1,115,559	2.3	103	2,425,241	0.30	28.9	356	30.7	108.8
avg	1,112,170	4.1	189	1,088,324	2.3	104	2,254,139	0.29	25.6	339	29.4	99.9

Note: A ton is a Ashort 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.

D. Chemical usage

Point Loma Annual Chemical Usage Report
Monthly Totals - 2002

Month	Polymer Pt.Loma Gallons	Polymer Pt.Loma Lbs.	ACTIVE Polymer Pt.Loma Lbs.	Ferric Chloride PS #2 Gallons	Ferric Chloride Pt.Loma Gallons	Sodium hydroxide PS #1 Gallons	Sodium hydroxide PS #2 Gallons	Sodium hydroxide Pt.Loma Gallons	Sodium Hypochlorite PS #1 Gallons	Sodium Hypochlorite PS #2 Gallons	Sodium Hypochlorite Pt.Loma Gallons	Salt PS #1 Lbs.	Salt PS #2 Lbs.	Salt Pt.Loma Lbs.
01	76,736	671,975		61,188	201,146	850		4,795	100		26,203	1,800		17,050
02	70,651	618,690		56,021	177,482	575		4,648			37,961	700		15,400
03	75,480	660,981		63,349	204,324	300		5,638			37,910	550		17,050
04	73,720	645,565		58,126	192,712			3,272			39,683	300		15,950
05	76,116	666,547		72,226	192,951	215		7,131	135		47,972			17,050
06	122,520		6,476	68,567	192,827	175		5,693	825		39,989	1,800		7,000
07	142,124		5,982	72,249	206,642	350		7,152	900		48,248	1,400		0
08	136,059		5,724	73,129	208,179	225		6,112	800	210	61,481	950		8,500
09	150,026		6,316	69,689	217,511	200	51	4,701	1,550	25	58,079	1,250		15,000
10	154,063		6,484	72,073	224,547	125		5,375	735	70	57,716	500		15,500
11	150,367		6,329	70,459	220,585	229	1,052	4,384	900	1,555	36,872	800	1,500	15,000
12	157,707		6,639	68,999	229,242	275	255	4,612	5,525	3,547	26,450	200	2,200	15,500
avg	115,464	652,752	6,279	67,173	205,679	320	453	5,293	1,274	1,081	43,214	932	1,850	13,250
sum	1,385,568	3,263,758	43,950	806,075	2,468,148	3,519	1,358	63,513	11,470	5,407	518,564	10,250	3,700	159,000

E. Gas Production

Point Loma Wastewater Treatment Plant
Gas Report – 2002

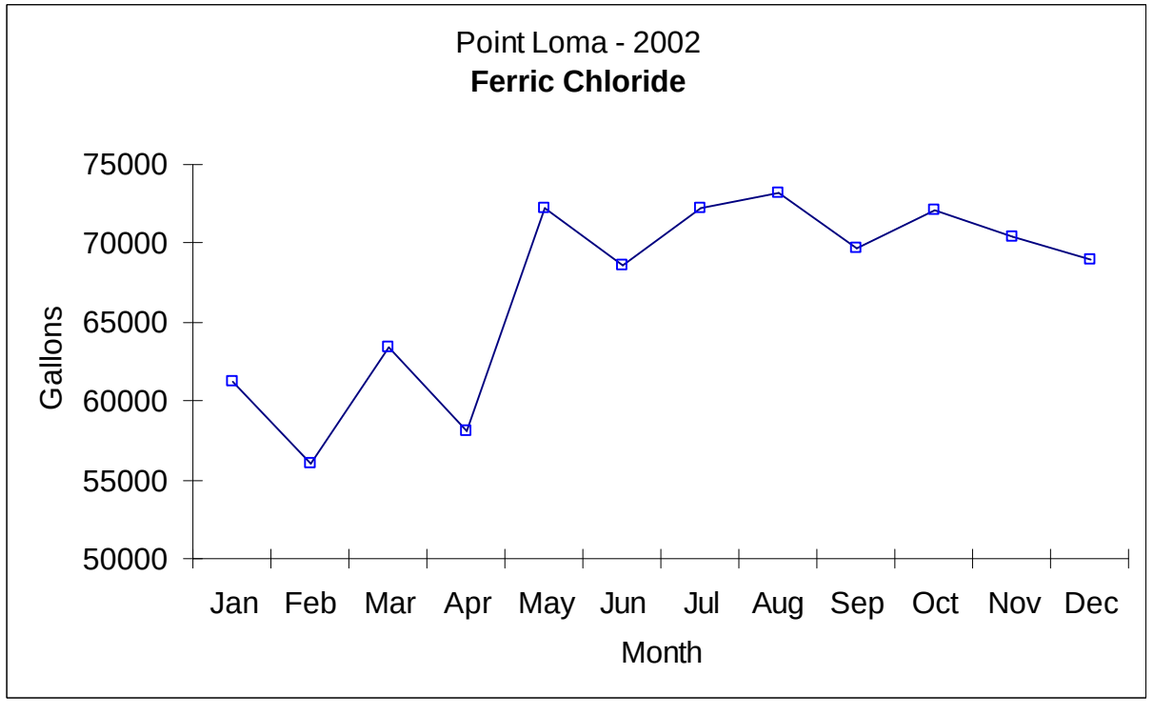
Daily Monthly Averages

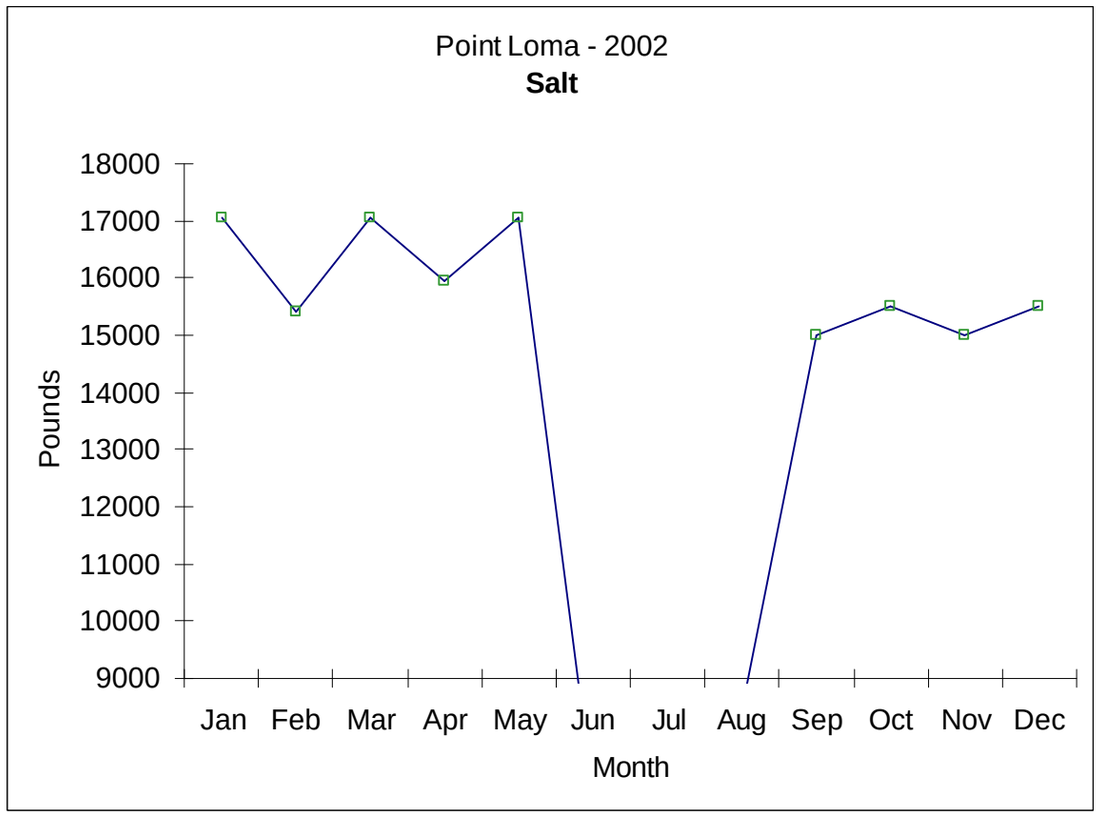
	GAS PRODUCTION (x1000 Cu. Ft.)						GAS CONSUMPTION (x1000 Cu. Ft.)					
Month	N-1-P	N-2-P	C-1-P	C-2-P	S-1-P	S-2-P	Dig 7	Total	Boilers	Burners	GUF	Total
01	661.4	856.3			408.2	993.5	140.6	2,919.3	209	1,659	1,106	2,975
02	616.3	761.4			423.7	879.6	156.5	2,681.0	246	1,506	1,144	2,896
03	492.5	648.7			442.7	766.9	69.4	2,350.8	174	1,212	1,685	3,072
04	513.1	626.5			401.9	669.6	66.5	2,211.1	150	1,184	1,723	3,057
05	517.0	631.9			399.2	668.9	53.2	2,216.9	38	2,047	1,061	3,146
06	516.3	632.1	.0	.0	403.7	671.9	46.3	2,224.1	17	1,631	1,435	3,083
07	525.7	639.6	.0	.0	407.3	640.4	53.1	2,213.0	30	1,331	1,755	3,117
08	498.8	633.8	.0	.0	387.7	531.8	55.6	2,052.0	37	1,203	1,752	2,991
09	497.2	610.3	.0	.0	364.4	470.7	52.5	1,942.6	42	1,296	1,547	2,884
10	470.0	591.0	.0	.0	388.0	571.7	52.6	2,020.7	43	1,157	1,632	2,831
11	491.4	619.1	.0	.0	415.2	618.0	51.1	2,143.6	10	1,230	1,694	2,935
12	504.8	632.8	.0	.0	427.8	627.3	69.9	2,192.6	161	1,271	1,524	2,956
avg	525.4	657.0	.0	.0	405.8	675.8	72.3	2,264.0	96	1,394	1,505	2,995

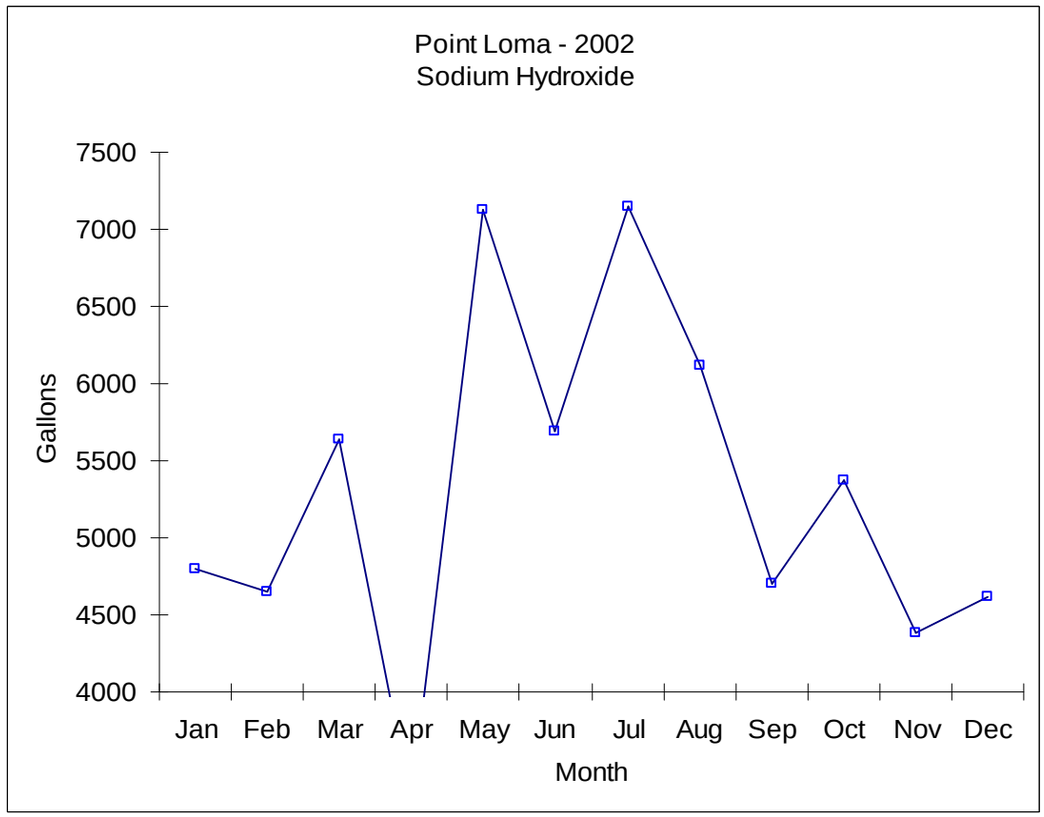
Monthly Totals

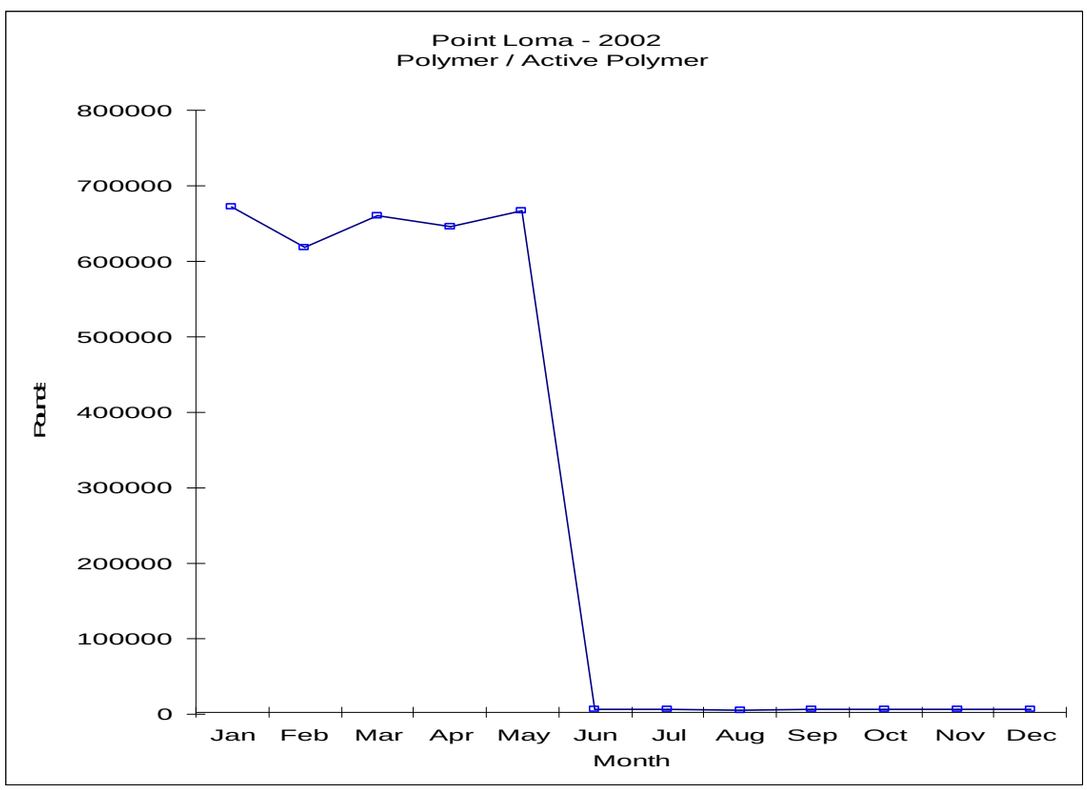
	GAS PRODUCTION (x1000 Cu. Ft.)						GAS CONSUMPTION (x1000 Cu. Ft.)					
Month	N-1-P	N-2-P	C-1-P	C-2-P	S-1-P	S-2-P	Dig 7	Total	Boilers	Burners	GUF	Total
01	20,502.0	26,546.0			12,654.0	30,797.0	4,358.0	90,499.0	6,481	51,433	34,300	92,214
02	17,257.0	21,318.0			11,864.0	24,629.0	4,381.0	75,068.0	6,900	42,159	32,037	81,096
03	15,266.0	20,109.0			13,725.0	23,775.0	2,149.9	72,875.0	5,406	37,572	52,249	95,227
04	15,392.0	18,796.0			12,057.0	20,088.0	1,993.9	66,333.0	4,488	35,526	51,695	91,709
05	16,026.0	19,588.0			12,374.0	20,737.0	1,648.2	68,725.0	1,180	63,459	32,898	97,537
06	15,489.5	18,963.4	.0	.0	12,112.4	20,156.4	1,388.8	66,721.7	504	48,929	43,056	92,489
07	16,298.0	19,828.0	.0	.0	12,627.0	19,851.0	1,646.0	68,604.0	944	41,273	54,408	96,625
08	15,462.0	19,647.0	.0	.0	12,018.0	16,485.0	1,724.0	63,612.0	1,138	37,280	54,303	92,721
09	14,915.0	18,310.0	.0	.0	10,931.0	14,122.0	1,576.0	58,278.0	1,245	38,878	46,404	86,527
10	14,569.0	18,321.0	.0	.0	12,029.0	17,722.0	1,631.0	62,641.0	1,325	35,858	50,584	87,767
11	14,742.0	18,572.0	.0	.0	12,455.0	18,539.0	1,534.0	64,308.0	300	36,907	50,833	88,040
12	15,648.0	19,617.0	.0	.0	13,262.0	19,445.0	2,167.0	67,972.0	4,989	39,391	47,244	91,624
avg	15,963.9	19,968.0	.0	.0	12,342.4	20,528.9	2,183.2	68,803.1	2,908	42,389	45,834	91,131
sum	191,566.5	239,615.4	.0	.0	148,108.4	246,346.4	26,197.8	825,636.7	34,900	508,665	550,011	1,093,576

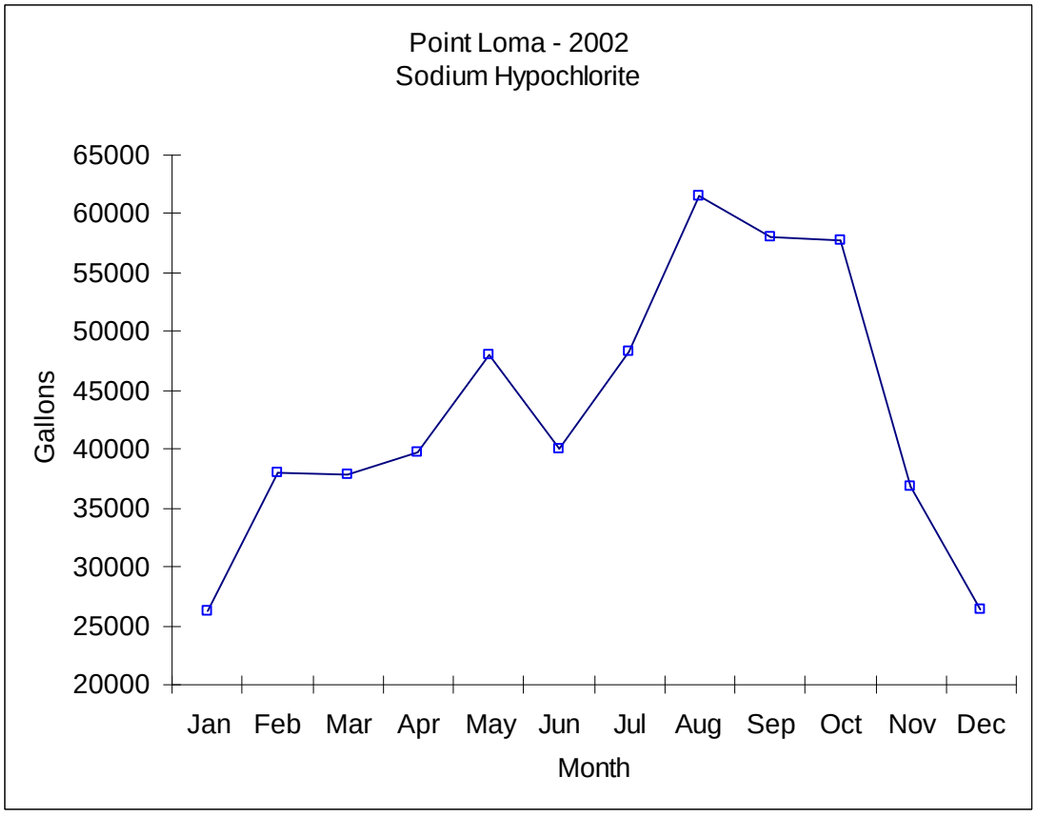
F. Graphs of Chemical Usage






Point Loma - 2002
Sodium Hydroxide
Gallons
7500
7000
6500
6000
5500
5000
4500
4000
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Month


Point Loma - 2002
Polymer / Active Polymer
800000
700000
600000
500000
400000
300000
200000
100000
0
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Month


Point Loma - 2002
Sodium Hypochlorite
Gallons
65000
60000
55000
50000
45000
40000
35000
30000
25000
20000
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Month

G. Facilities Out-of-service report (2002)

Facilities that were out of service In 2002 by date

FACILITY OOS	From	To	Reason
C1P Digester	01/01	12/31	Contractor rehabilitation
C2P Digester	01/01	12/31	Contractor rehabilitation
NEOC	01/01	01/03	Standard Operating Procedure
Sed Basin #9	01/01	09/19	Contractor work/preventive maintenance
Sed Basin #10	01/01	12/19	Contractor work/preventive maintenance
Sed Basin #11	01/01	01/06	Poor removals
Sed Basin #12	01/01	12/31	Contractor work
Influent Screen #5	01/01	01/18	Maintenance
SEOC	01/03	06/08	Contractor
Sed Basin #7	01/07	02/22	Broken Flights
Influent Screen #2	01/18	01/28	Maintenance
Influent Screen #4	01/28	01/29	Maintenance
Sed Basin #11	01/28	12/31	Contractor work
Influent Screen #2	01/29	03/27	Maintenance
East Influent Channel	02/01	06/05	Grit Scouring
Sed Basin #1	03/15	03/19	Water line repair
Influent Screen #3	03/28	05/21	Repair
Sed Basin #3	04/02	04/03	Polymer line repair
N1 Grit Basin	05/07	05/07	Line repair
N2 Grit Basin	05/12	05/13	Line repair
Influent Screen #1	05/21	10/02	Maintenance
West Influent Channel	06/05	07/09	Grit scouring
C2 Grit Basin	06/14	06/14	Weld grit hopper
East Influent Channel	07/09	08/28	Grit scouring
Sed Basin #8	07/18	07/25	Object Retrieval
N2 Grit Basin	07/31	07/31	Line repair
West Influent Channel	08/28	09/25	Grit scouring
N2 Grit Basin	09/02	09/02	Line repair
N1 Grit Basin	09/03	09/04	Line repair and equipment check
N2 Grit Basin	09/03	09/04	Line repair and equipment check
C1 Grit Basin	09/03	09/04	Line repair and equipment check
C2 Grit Basin	09/03	09/04	Line repair and equipment check
Sed Basin #1	09/20	09/24	Scum weir repair
East Influent Channel	09/25	10/24	Grit scouring
Sed Basin #6	09/24	10/05	Preventive Maintenance and scum repair
SEOC	10/01	10/01	Contractor Work
Sed Basin #9	10/05	10/10	No raw sludge pumps available
Sed Basin #6	10/10	12/19	Broken flights and scum repair
West Influent Channel	10/24	11/27	Grit scouring
N2 Grit Basin	11/25	11/25	Line repair
East Influent Channel	11/27	12/19	Grit Scouring
N2 Grit Basin	12/09	12/11	Line repair
Sed Basin #5	12/19	12/31	Preventive Maintenance and scum repair
West Influent Channel	12/19	12/31	Grit Scouring

FACILITY OOS	From	To	Reason
C1P Digester	01/01	12/31	Contractor rehabilitation
C2P Digester	01/01	12/31	Contractor rehabilitation
NEOC	01/01	01/03	Standard Operating Procedure
Sed Basin #8	12/19	12/31	Flight and scum trough repair

GRIT CHAMBERS

N1	5/7, 9/3-9/4
N2	5/12-5/13, 9/2, 9/3-9/4, 11/25, 12/9-12/11
C1	9/3-9/4
C2	6/14, 9/3-9/4
S1	1/01-12/31
S2	1/01-12/31

CHANNELS

EAST	2/1-6/5, 7/9-8/28, 9/25-10/24, 11/27-12/19
WEST	6/5-7/9, 8/28-9/25, 10/24-11/27, 12/19-12/31

BASINS

1	3/15-3/19, 9/20-9/24
2	
3	4/2-4/3
4	
5	12/19-12/31
6	9/24-10/5, 10/10-12/19
7	1/7-2/22,
8	7/18-7/25, 12/19-12/31
9	1/1-9/19, 10/5-10/10
10	1/1-12/19
11	1/1-1/6, 1/28-12/31
12	1/1-12/31

NORTH EFFLUENT SCREENS	1/1-1/3
SOUTH EFFLUENT SCREENS	1/3-6/8, 10/1
INFLUENT SCREEN #1	5/21-10/2
INFLUENT SCREEN #2	1/18-1/28, 1/29-3/27
INFLUENT SCREEN #3	3/28-5/21
INFLUENT SCREEN #4	1/28-1/29
INFLUENT SCREEN #5	1/1-1/18,

DIGESTERS

N1P	
N2P	
C1P	01/01-12/31
C2P	01/01-12/31
S1P	
S2P	
Dig 7	
Dig 8	01/01-02/18 (New construction)

SHUTDOWNS

DATE	FROM	TO	REASON
01/05	0200	0430	Pump Station 2 work
01/26	0200	0500	Build bulkhead in channel
01/27	0200	0615	Build bulkhead in channel
01/28	0200	0615	Build bulkhead in channel
04/27	0130	0545	Pump Station 2 work
08/29	0200	0600	Pump Station 2 work
08/30	0200	0600	Pump Station 2 work
10/05	0100	0515	Pump Station 2 work
10/06	0100	0545	Pump Station 2 work
11/15	0100	0430	Pump Station 2 work
12/13	0100	555	Pump Station 2 work
12/14	0055	0515	Pump Station 2 work

H. Grit Analyses

The following are reports of the analyses of grit samples taken from the Pt. Loma WWTP headworks (grit removal chambers) in 2002. Reports include Title 22 analyses and Total Solids. Although everywhere else in this report PLR refers to Point Loma WWTP raw Influent sewage, in this section, it refers to the grit removed from the grit chambers at the headworks building at the influent end of the plant. Samples from the grit bins are taken daily for 7-8 consecutive days and composited together to form the annual sample.

Point Loma Wastewater Treatment Plant
Total Solids - Grit and Rags 2002 (%WT)

Grit Monthly Averages %		Rags Monthly Averages %	
JAN	49.6	JAN	44.9
FEB	47.0	FEB	41.6
MAR	49.4	MAR	45.0
APR	56.2	APR	43.6
MAY	62.4	MAY	48.0
JUN	53.2	JUN	44.6
JUL	54.0	JUL	41.5
AUG	56.8	AUG	42.2
SEP	51.9	SEP	49.0
OCT	62.8	OCT	42.0
NOV	56.8	NOV	48.5
DEC	55.8	DEC	37.3
AVG	**54.7**	**AVG**	**44.0**

Point Loma Wastewater Treatment Plant

2002 Grit Total Solids (%WT) at Point Loma

Day	Jan %WT	Feb %WT	Mar %WT	Apr %WT	May %WT	Jun %WT	Jul %WT	Aug %WT	Sep %WT	Oct %WT	Nov %WT	Dec %WT
1	49.0	51.7	39.6	47.4	69.7	45.2	55.1	47.5	44.8	52.5	71.0	54.1
2	42.0	48.9	50.1	46.4	64.7	45.8	49.0	51.2	46.1	44.7	65.9	68.5
3	49.0	46.8	45.3	46.1	69.2	55.3	48.2	52.6	49.5	50.6	56.1	57.0
4	42.8	41.1	45.3	44.9	63.1	41.8	47.5	56.3	52.0	66.5	69.2	52.3
5	46.3	46.9	49.5	42.7	63.0	50.2	45.1	51.7	53.2	52.3	69.5	58.8
6	45.4	42.7	47.7	45.8	61.3	51.9	45.4	51.7	50.5	66.2	68.3	51.6
7	47.7	46.1	52.7	42.1	48.3	42.2	53.9	49.2	48.8	51.0	54.5	56.8
8	42.4	50.7	63.0	46.1	72.0	60.4	56.9	50.2	56.8	41.8	52.6	55.7
9	46.6	52.2	60.5	53.5	63.0	38.9	68.8	56.4	54.9	49.4	53.6	48.0
10	39.5	45.6	47.6	41.4	62.2	48.7	55.2	66.8	63.9	67.3	56.6	
11	44.1	44.6	43.2	54.8	61.5	51.3	46.9	75.3	44.0		58.6	46.0
12	43.4	43.9	40.9	66.4	43.9	50.4	59.3	66.2	51.2	76.8	65.1	50.1
13	58.5	45.1	40.9	60.0	64.2	68.8		67.2	49.9	78.9	65.6	49.2
14	52.5	46.4	50.0	59.5	68.0		56.6	72.6	50.2	51.7	60.1	59.2
15	52.4	44.1	44.2	49.3	44.4	65.2		57.2	49.5	66.3	52.8	42.4
16	41.8	47.5	47.0	60.0		67.0		67.9	54.3	66.5	48.1	50.1
17	49.8	57.0	56.5	70.9	63.2		69.7		52.7	50.9	51.8	53.2
18	48.7	50.3	43.6	65.4		66.3	70.9	62.6	51.8	71.7	68.1	51.8
19	43.6	45.3	48.2	46.4	65.8		46.8		55.6	73.6	46.5	78.4
20	50.6	41.8	52.1	57.1		60.5	53.8	63.4	57.3	65.0	50.1	60.8
21	48.4	42.5	47.4	52.8	66.0	48.7	55.4	49.4	49.4	68.3	51.5	50.9
22	54.7	47.9	47.4	63.6		55.2		52.4	49.3	70.2	53.3	54.2
23	59.2	50.3	55.4	63.1	69.5		45.2	56.0	50.9	68.5	56.5	56.8
24	45.6	49.0	52.4	52.6		49.9	48.9	56.1	62.0	81.8	47.4	50.1
25	55.2	40.5	46.0	69.6	63.2	58.8	48.7	58.2	43.4	62.7	53.5	44.3
26	63.1	53.5	53.9	60.1		54.8	51.6	51.4		76.2	55.4	35.5
27	51.6	45.9	56.4	65.5	67.1	55.1	55.5	50.6	49.2	53.0	61.6	70.1
28	54.7	48.6	45.2	76.8		55.1	52.1	49.3	62.3	52.3	56.7	73.5
29	59.5		47.8	65.2		47.0	56.9	55.5	49.0	70.1	45.8	51.8
30	48.5		60.6	70.6	73.1	48.3	58.0	53.2	52.1	63.7	38.4	68.0
31	59.8		50.9		48.5		55.6	49.5		72.2		76.0
Avg	49.6	47.0	49.4	56.2	62.4	53.2	54.0	56.8	51.9	62.8	56.8	55.8
Min	39.5	40.5	39.6	41.4	43.9	38.9	45.1	47.5	43.4	41.8	38.4	35.5
Max	63.1	57.0	63.0	76.8	73.1	68.8	70.9	75.3	63.9	81.8	71.0	78.4

Title 22 reports for Grit

POINT LOMA WASTEWATER TREATMENT PLANT
CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TESTS (Title 22)
Point Loma Quarterly Grit Composite

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

Sampled by: Point Loma Operations
Analyzed by: BOA,G8C,JRF,JZI,IEN,LXP,DXS,JRV,TSB,HHB,KOD,EVL
Source: PLR
Sample ID: P190180
Sample Date: 14-OCT-2002

INORGANICS Constituent	MDL	Units	Total Conc Dry Wt. mg/Kg	Total Conc Wet Wt. mg/Kg	TTLC Limit Wet Wt. mg/Kg	W.E.T. Conc Wet Wt. mg/L	STLC Limit Wet Wt. mg/L	CA Health& 40 CFR 503 Limits ** mg/Kg	Safety Code Limits *** mg/K g
Antimony	5	mg/kg	11	7	500	*	15	*	*
Arsenic	.33	mg/kg	2.9	1.9	500	*	5.0	41	*
Barium	.042	mg/kg	79	50	10000	*	100	*	*
Beryllium	.2	mg/kg	ND	ND	75	*	0.75	*	*
Cadmium	.5	mg/kg	0.8	0.5	100	*	1.0	39	*
Chromium (VI)	NA	mg/kg	NA	NA	500	*	5.0	*	*
Chromium	3	mg/kg	26	17	2500	*	560	1200	*
Cobalt	.8	mg/kg	ND	ND	8000	*	80	*	*
Copper	2	mg/kg	221	141	2500	*	25	1500	2500
Lead	5	mg/kg	8	5	1000	*	5.0	300	350
Mercury	.003	mg/kg	0.1	0.1	20	*	0.2	17	*
Molybdenum	.6	mg/kg	3	1.9	3500	*	350.0	*	*
Nickel	3	mg/kg	13	8	2000	*	20	420	2000
Selenium	.24	mg/kg	ND	ND	100	*	1.0	36	*
Silver	3	mg/kg	ND	ND	500	*	5.0	*	*
Thallium	10	mg/kg	ND	ND	700	*	7.0	*	*
Vanadium	1.4	mg/kg	10.8	6.9	2400	*	24	*	*
Zinc	4	mg/kg	273	174	5000	*	250	2800	*
Fluoride	NA	mg/kg	NA	NA	18000	*	180		
Sulfides-Reactive		mg/kg	NA	NA	*	NA			
Sulfides-Total		mg/kg	NA	NA	*	NA			
Total Solids	NA	Wt%	63.8		*	NA			
Total Volatile Solids	NA	Wt%	25.3		*	*			
pH	NA	pH Units	6.73		>2 - < 12	*			

ORGANICS Constituent	MDL	Units	Total Conc Dry Wt. mg/Kg	Total Conc Wet Wt. mg/Kg	TTLC Limit Wet Wt. mg/Kg	W.E.T. Conc Wet Wt. mg/L	STLC Limit Wet Wt. mg/L
Aldrin	0.00002	mg/Kg	ND	ND	1.4	*	0.14
Chlordanes	0.000014	mg/Kg	ND	ND	2.5	*	0.25
DDT, DDE, DDD	0.00004	mg/Kg	0.01080	0.00689	1.0	*	0.10
2,4-D	3.4	mg/Kg	ND	ND	100	*	10
Dieldrin	0.00002	mg/Kg	ND	ND	8.0	*	0.8
Endrin	0.00003	mg/Kg	ND	ND	0.2	*	0.02
Heptachlor	0.000003	mg/Kg	ND	ND	4.7	*	0.47
Kepone	NA	mg/Kg	NA	ND	21	*	2
Lindane	0.00001	mg/Kg	ND	ND	4.0	*	0.4
Methoxychlor	NA	mg/Kg	ND	ND	100	*	10
Mirex	0.00002	mg/Kg	ND	ND	21	*	2
Pentachlorophenol	0.8	mg/Kg	ND	ND	17	*	1.7
PCBs (Arochlors)	NA	mg/Kg	ND	ND	50	*	5.0
Toxaphene	0.00024	mg/Kg	ND	ND	5	*	0.5
Trichloroethene	0.0253	mg/Kg	ND **	ND **	2040	*	204
2,4,5-TP	4.4	mg/Kg	ND	ND	10	*	1

ND= not detected, NA = not analyzed
** = not reportable, failed QC criteria

TTLC = Total Threshold Limit Concentration.
STLC = Soluble Threshold Limit Concentration.
W.E.T. = Waste Extraction Technique.
* = The total concentration is less than 10 times the STLC. Therefore by definition, this substance is present in concentrations that are less than the limits for hazardous wastes.
** = Limits are in mg/Kg (dry weight) based on 40 CFR part 503.13 Table 3 "Limits for Land Application".
*** = The California State Health and Safety Code 25157.8 established lower a limit for Lead.
NA = Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required
MDL = Method Detection Limit (are in mg/Kg per dry weight; except for pH and Total and Volatile Solids)
MBCDEWCN = Metro Biosolids Center Dewatered Centrifuged Sludge.
TTLC = Total Threshold Limit Concentration.

POINT LOMA WASTEWATER TREATMENT PLANT
QUARTERLY GRIT COMPOSITES
Inorganics and Organics

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

Analyte:	MDL	Units:	GRIT COMP 14-OCT-2002 P190180
Aluminum	5	MG/KG	3020
Antimony	5	MG/KG	11.0
Arsenic	.33	MG/KG	2.87
Barium	.042	MG/KG	79.4
Beryllium	.2	MG/KG	ND
Cadmium	.5	MG/KG	0.8
Chromium	3	MG/KG	26
Cobalt	.8	MG/KG	ND
Copper	2	MG/KG	221
Iron	3	MG/KG	12900
Lead	5	MG/KG	8
Manganese	.48	MG/KG	151
Mercury	.003	MG/KG	0.14
Molybdenum	.6	MG/KG	3.2
Nickel	3	MG/KG	13
Selenium	.24	MG/KG	<0.24
Silver	3	MG/KG	ND
Thallium	10	MG/KG	ND
Vanadium	1.4	MG/KG	10.8
Zinc	4	MG/KG	273
Fluoride		MG/KG	NA
Sulfides-Reactive		MG/KG	NA
Sulfides-Total		MG/KG	NA
pH		PH	6.73
Total Solids	.24	WT%	63.8
Total Volatile Solids	.11	WT%	25.3
Aldrin	8000	MG/KG	ND
2,4-dichlorophenoxyacetic acid	6.84	MG/KG	ND
Dieldrin	16000	MG/KG	ND
Endrin	8000	MG/KG	ND
Heptachlor	6000	MG/KG	ND
Kepone		MG/KG	NA
BHC, Gamma isomer	2000	MG/KG	ND
Methoxychlor	71000	MG/KG	ND
Pentachlorophenol	5850	MG/KG	ND
Toxaphene	130000	MG/KG	ND
Trichloroethene		MG/KG	NA
2,4,5-TP (Silvex)	6.33	MG/KG	ND
Cyanides,Total		MG/KG	NA

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT- Chlorinated Pesticide Analysis

From 01-JAN-2002 To 31-DEC-2002

Sampling: AM Analysis: SV

Analyte	MDL	Units	PLR 14-OCT-2002 P190180
Aldrin	8000	NG/KG	ND
Dieldrin	16000	NG/KG	ND
BHC, Alpha isomer	4000	NG/KG	ND
BHC, Beta isomer	6000	NG/KG	ND
BHC, Gamma isomer	2000	NG/KG	ND
BHC, Delta isomer	4000	NG/KG	ND
o,p-DDD	6000	NG/KG	ND
o,p-DDE	6000	NG/KG	ND
o,p-DDT	4000	NG/KG	ND
p,p-DDD	4000	NG/KG	ND
p,p-DDE	4000	NG/KG	10800
p,p-DDT	6000	NG/KG	ND
Heptachlor	6000	NG/KG	ND
Heptachlor epoxide	6000	NG/KG	ND
Alpha (cis) Chlordane	6000	NG/KG	ND
Gamma (trans) Chlordane	4000	NG/KG	ND
Alpha Chlordene		NG/KG	NA
Gamma Chlordene		NG/KG	NA
Oxychlordane	6000	NG/KG	ND
Trans Nonachlor	4000	NG/KG	ND
Cis Nonachlor	4000	NG/KG	ND
Alpha Endosulfan	6000	NG/KG	ND
Beta Endosulfan	6000	NG/KG	ND
Endosulfan Sulfate	16000	NG/KG	ND
Endrin	8000	NG/KG	ND
Endrin aldehyde	6000	NG/KG	ND
Toxaphene	130000	NG/KG	ND
Mirex	16000	NG/KG	ND
Methoxychlor	71000	NG/KG	ND
PCB 1016	6000	NG/KG	ND
PCB 1221	260000	NG/KG	ND
PCB 1232	580000	NG/KG	ND
PCB 1242		NG/KG	ND
PCB 1248	310000	NG/KG	ND
PCB 1254	310000	NG/KG	ND
PCB 1260	130000	NG/KG	ND
PCB 1262		NG/KG	ND
Aldrin + Dieldrin	16000	NG/KG	0
Hexachlorocyclohexanes	6000	NG/KG	0
DDT and derivatives	6000	NG/KG	10800
Chlordane + related cmpds.	6000	NG/KG	0
Polychlorinated biphenyls	580000	NG/KG	0
Chlorinated Hydrocarbons	580000	NG/KG	10800

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

"Standards for alpha and gama chlordene are no longer available in the U.S. for the analysis of these compounds."

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL GRIT- ANALYSIS-ACID EXTRACTABLE COMPOUNDS

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

Sampled by: VB,LC,MC,NC,HD,JN,MS

Analyte	MDL	Units	PLR 14-OCT-2002 P190180
2-chlorophenol	6550	UG/KG	ND
2,4-dichlorophenol	4570	UG/KG	ND
4-chloro-3-methylphenol	9500	UG/KG	ND
2,4,6-trichlorophenol	8000	UG/KG	ND
Pentachlorophenol	5850	UG/KG	ND
Phenol	7200	UG/KG	ND
2-nitrophenol	8000	UG/KG	ND
2,4-dimethylphenol	5350	UG/KG	ND
2,4-dinitrophenol	1670	UG/KG	ND
4-nitrophenol	1670	UG/KG	ND
2-methyl-4,6-dinitrophenol	1670	UG/KG	ND
Total Chlorinated Phenols	9500	UG/KG	0.0
Total Non-Chlorinated Phenols	8000	UG/KG	0.0
Phenols	9500	UG/KG	0.0

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Priority Pollutants Base/Neutral Compounds

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

Sampled by: VB,LC,MC,NC,HD,JN,SKB

Analyte	MDL	Units	PLR 14-OCT-2002 P190180
bis(2-chloroethyl) ether	7100	UG/KG	ND
1,3-dichlorobenzene	3670	UG/KG	ND
1,2-dichlorobenzene	1710	UG/KG	ND
1,4-dichlorobenzene	6350	UG/KG	9320
Bis-(2-chloroisopropyl) ether	5450	UG/KG	ND
N-nitrosodi-n-propylamine	6800	UG/KG	ND
Nitrobenzene	14000	UG/KG	ND
Hexachloroethane	1910	UG/KG	ND
Isophorone	9100	UG/KG	ND
bis(2-chloroethoxy)methane	8150	UG/KG	ND
1,2,4-trichlorobenzene	4900	UG/KG	ND
Naphthalene	10800	UG/KG	ND
Hexachlorobutadiene	4700	UG/KG	ND
Hexachlorocyclopentadiene	9450	UG/KG	ND
2-chloronaphthalene	1670	UG/KG	ND
Acenaphthylene	2920	UG/KG	ND
Dimethyl phthalate	1780	UG/KG	ND
2,6-dinitrotoluene	9450	UG/KG	ND
Acenaphthene	4320	UG/KG	ND
2,4-dinitrotoluene	5150	UG/KG	ND
Fluorene	12600	UG/KG	ND
4-chlorophenyl phenyl ether	1810	UG/KG	ND
Diethyl phthalate	7000	UG/KG	ND
N-nitrosodiphenylamine	6650	UG/KG	ND
4-bromophenyl phenyl ether	5150	UG/KG	ND
Hexachlorobenzene	4070	UG/KG	ND
Phenanthrene	5200	UG/KG	ND
Anthracene	4930	UG/KG	ND
Di-n-butyl phthalate	7250	UG/KG	ND
N-nitrosodimethylamine		UG/KG	ND
Fluoranthene	1080	UG/KG	ND
Pyrene	5750	UG/KG	ND
Butyl benzyl phthalate	11100	UG/KG	ND
Chrysene	1760	UG/KG	ND
Benzo[A]anthracene	5500	UG/KG	ND
Bis-(2-ethylhexyl) phthalate	19800	UG/KG	<19800
Di-n-octyl phthalate	17300	UG/KG	ND
Benzo[K]fluoranthene	9650	UG/KG	ND
3,4-benzo(B)fluoranthene	5640	UG/KG	ND
Benzo[A]pyrene	3710	UG/KG	ND
Indeno(1,2,3-CD)pyrene	4770	UG/KG	ND
Dibenzo(A,H)anthracene	3080	UG/KG	ND
Benzo[G,H,I]perylene	1510	UG/KG	ND
1,2-diphenylhydrazine	7950	UG/KG	ND
Polynuc. Aromatic Hydrocarbons	12600	UG/KG	0
Total Dichlorobenzenes	3670	UG/KG	0
Base/Neutral Compounds	19800	UG/KG	<9320

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

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Priority Pollutants Purgeable Compounds, SW-846 8260B

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

Sampled by: Armando Martinez
Analyzed by: S.Evans

Analyte	MDL	Units	MBCDEWCN 14-FEB-2002 P190180
Chloromethane	25.8	UG/KG	ND*
Bromomethane	29.2	UG/KG	ND*
Vinyl chloride	26.2	UG/KG	ND*
Chloroethane	61	UG/KG	ND*
1,1-dichloroethane	25.7	UG/KG	ND*
Trichlorofluoromethane	28	UG/KG	ND*
Methylene chloride	62.5	UG/KG	166*
1,1-dichloroethene	25.1	UG/KG	ND*
trans-1,2-dichloroethene	24.9	UG/KG	ND*
Chloroform	25.6	UG/KG	80.5*
1,2-dichloroethane	20.5	UG/KG	ND*
1,1,1-trichloroethane	27.4	UG/KG	ND*
Carbon tetrachloride	15.6	UG/KG	ND*
Bromodichloromethane	17	UG/KG	ND*
1,2-dichloropropane	25.5	UG/KG	19.9*
trans-1,3-dichloropropene	17	UG/KG	ND*
Trichloroethene	25.3	UG/KG	ND*
Benzene	26.5	UG/KG	ND*
Dibromochloromethane	24.2	UG/KG	ND*
1,1,2-trichloroethane	35.1	UG/KG	ND*
cis-1,3-dichloropropene	21.5	UG/KG	ND*
2-chloroethylvinyl ether	53.6	UG/KG	ND*
Bromoform	26.1	UG/KG	ND*
1,1,2,2-tetrachloroethane	64	UG/KG	ND*
Tetrachloroethene	21.5	UG/KG	ND*
Chlorobenzene	31.1	UG/KG	ND*
Toluene	48	UG/KG	93.5*
Ethylbenzene	90.5	UG/KG	ND*
Acrylonitrile	275	UG/KG	ND*
Acrolein	70.9	UG/KG	ND*
Halomethane Purgeable Cmpnds	29.2	UG/KG	0.0
Purgeable Compounds	275	UG/KG	0.0

Additional analytes determined;			
Allyl chloride	25	UG/KG	ND*
4-methyl-2-pentanone	24	UG/KG	ND*
meta,para xylenes	35	UG/KG	ND*
Styrene	19	UG/KG	59.6*
1,2,4-trichlorobenzene	1650	UG/KG	ND*
Methyl Iodide	19	UG/KG	ND*
Chloroprene	17	UG/KG	ND*
Methyl methacrylate	36	UG/KG	ND*
2-nitropropane		UG/KG	ND*
1,2-dibromoethane	17	UG/KG	ND*
Isopropylbenzene	17	UG/KG	ND*
Benzyl chloride	38	UG/KG	ND*
ortho-xylene	23	UG/KG	ND*
Acetone	185	UG/KG	ND*
Carbon disulfide	34	UG/KG	59*
2-butanone		UG/KG	1110*
Methyl tert-butyl ether	34	UG/KG	ND*

* Failed QC criteria, results not reportable due to %RSD >30 for continuing calibration.
nd= not detected, NA= not analyzed, NS= not sampled (CCC).

POINT LOMA WASTEWATER TREATMENT PLANT
GRIT - Herbicides

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

Sampling: LC,MC,BGB,RJ,SKB,HHD,NC
Analysis: CW,TB,KD

Analyte	MDL	Units	PLR 14-OCT-2002 P190180
2,4-dichlorophenoxyacetic acid	6.84	UG/KG	ND
2,4,5-TP (Silvex)	6.33	UG/KG	ND

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

I. Raw Sludge Data Summary

POINT LOMA WASTEWATER TREATMENT PLANT ANNUAL REPORT
YEAR: 2002

Raw Sludge
Average of 3 Shifts

Month	pH	% Total Solids	%Total Volatile Solids
January	6.40	4.5	75.8
February	6.33	4.4	75.9
March	6.35	4.1	75.9
April	6.39	3.8	76.5
May	6.36	4.1	76.5
June	6.36	4.0	75.8
July	6.14	4.4	76.3
August	6.29	4.1	76.0
September	6.29	3.9	75.5
October	6.27	3.9	75.7
November	6.33	3.9	74.9
December	6.40	3.9	74.5
Averages	6.33	4.1	75.8

J. Digester and Digested Sludge Data Summary

Point Loma Wastewater Treatment Plant Annual Report
2002 Digesters

N1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2002	7.22	2.4	58.0	3040	60	62.5	37.1
FEBRUARY -2002	7.27	2.5	57.4	3230	60	62.7	36.9
MARCH -2002	7.25	2.3	56.7	2940	67	62.7	37.0
APRIL -2002	7.25	2.1	57.1	2670	58	62.5	37.1
MAY -2002	7.26	2.3	57.3	2740	57	62.8	36.9
JUNE -2002	7.28	2.3	57.2	2650	54	62.9	36.8
JULY -2002	7.26	2.4	57.7	2700	58	62.9	36.6
AUGUST -2002	7.21	2.4	57.2	2750	56	63.2	36.5
SEPTEMBER-2002	7.19	2.3	56.9	2670	52	63.2	36.4
OCTOBER -2002	7.25	2.3	56.7	2700	52	63.3	36.2
NOVEMBER -2002	7.24	2.2	56.4	2800	51	63.3	36.3
DECEMBER -2002	7.23	2.3	56.2	2870	52	63.3	36.3
Average:	7.24	2.3	57.1	2813	56	62.9	36.7

N2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2002	7.22	2.5	57.1	3030	59	62.6	37.0
FEBRUARY -2002	7.27	2.5	57.0	3260	60	62.6	37.0
MARCH -2002	7.22	2.3	56.2	2950	58	62.7	36.9
APRIL -2002	7.23	2.2	56.5	2710	58	62.6	37.0
MAY -2002	7.30	2.3	56.9	2780	58	62.9	36.7
JUNE -2002	7.30	2.3	56.5	2710	55	63.0	36.6
JULY -2002	7.26	2.4	56.3	2720	58	63.1	36.4
AUGUST -2002	7.24	2.4	57.2	2700	58	63.2	36.3
SEPTEMBER-2002	7.23	2.3	56.2	2660	54	63.2	36.3
OCTOBER -2002	7.26	2.3	55.5	2710	53	63.2	36.3
NOVEMBER -2002	7.26	2.3	55.3	2800	52	63.2	36.3
DECEMBER -2002	7.26	2.3	55.2	2910	52	63.4	36.2
	7.25	2.3	56.3	2828	56	63.0	36.6

C1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2002				OUT OF SERVICE			
FEBRUARY -2002							
MARCH -2002							
APRIL -2002							
MAY -2002							
JUNE -2002							
JULY -2002							
AUGUST -2002							
SEPTEMBER-2002							
OCTOBER -2002							
NOVEMBER -2002							
DECEMBER -2002							
	*	*	*	*	*	*	*

*Out of Service

Point Loma Wastewater Treatment Plant Annual Report
2002 Digesters

C2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)
JANUARY -2002				OUT OF SERVICE			
FEBRUARY -2002							
MARCH -2002							
APRIL -2002							
MAY -2002							
JUNE -2002							
JULY -2002							
AUGUST -2002							
SEPTEMBER-2002							
OCTOBER -2002							
NOVEMBER -2002							
DECEMBER -2002							
	*	*	*	*	*	*	*

*Out of Service

S1P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2002	7.21	2.4	57.0	3010	59	62.6	37.0	*
FEBRUARY -2002	7.28	2.4	56.5	3230	59	62.5	37.1	*
MARCH -2002	7.21	2.2	56.2	2880	58	62.7	37.0	*
APRIL -2002	7.22	2.1	56.5	2650	60	62.7	37.0	*
MAY -2002	7.27	2.2	56.4	2850	61	62.8	36.8	*
JUNE -2002	7.26	2.3	56.7	2730	57	63.0	36.6	*
JULY -2002	7.24	2.4	56.9	2740	60	63.2	36.3	*
AUGUST -2002	7.20	2.4	57.0	2710	58	63.2	36.4	45
SEPTEMBER-2002	7.23	2.3	55.9	2650	54	63.4	36.3	*
OCTOBER -2002	7.23	2.3	55.9	2690	54	63.3	36.3	*
NOVEMBER -2002	7.23	2.2	56.3	2790	53	63.2	36.4	*
DECEMBER -2002	7.25	2.2	55.3	2880	54	63.3	36.3	*
	7.24	2.3	56.4	2818	57	63.0	36.6	45

*Out of Service

S2P

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JANUARY -2002	7.20	2.4	57.9	2910	58	62.8	36.9	34
FEBRUARY -2002	7.23	2.4	57.3	3120	60	62.5	37.2	33
MARCH -2002	7.19	2.2	57.5	2740	60	63.0	36.8	33
APRIL -2002	7.22	2.1	57.1	2590	60	62.9	36.8	36
MAY -2002	7.26	2.2	56.9	2740	59	63.1	36.6	33
JUNE -2002	7.26	2.3	57.2	2660	57	63.1	36.6	35
JULY -2002	7.26	2.4	58.1	2720	61	63.2	36.5	38
AUGUST -2002	7.19	2.4	57.2	2680	59	63.5	36.3	37
SEPTEMBER-2002	7.19	2.3	56.9	2600	54	63.5	36.3	34
OCTOBER -2002	7.23	2.3	56.4	2650	53	63.4	36.3	32
NOVEMBER -2002	7.21	2.3	56.4	2730	53	63.3	36.3	31
DECEMBER -2002	7.25	2.3	55.6	2810	54	63.5	36.2	27
	7.22	2.3	57.0	2746	57	63.2	36.6	34

Point Loma Wastewater Treatment Plant Annual Report
2002 Digesters

DIG 7

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
JUNE -1905	*	*	*	*	*	*	*	*
JANUARY -2002	7.31	2.2	56.4	3260	60	63.5	36.0	*
FEBRUARY -2002	7.33	2.2	56.6	3450	60	63.3	36.1	*
MARCH -2002	7.29	2.0	55.8	3040	57	63.2	36.4	*
APRIL -2002	7.29	1.9	55.7	2870	58	63.2	36.2	*
MAY -2002	7.32	2.1	55.8	2970	57	62.9	36.4	*
JUNE -2002	7.34	2.1	56.0	2890	56	63.2	36.1	*
JULY -2002	7.33	2.2	56.8	2920	59	63.4	36.1	*
AUGUST -2002	7.28	2.2	55.8	2910	58	62.9	36.5	*
SEPTEMBER-2002	7.31	2.2	55.4	2830	54	62.9	36.4	*
OCTOBER -2002	7.33	2.1	55.0	2860	52	62.9	36.5	*
NOVEMBER -2002	7.29	2.1	54.6	2960	51	62.7	36.7	*
DECEMBER -2002	7.29	2.3	52.5	3070	54	63.1	36.2	*
	7.31	2.1	55.5	3003	56	63.1	36.3	*

*Out of Service

DIG 8

	pH	Total Solids (%)	Volatile Solids (%)	Alkal-inity (mg/L)	Volatile Acids (mg/L)	Methane (%)	Carbon Dioxide (%)	H2S ppm
FEBRUARY -2002	7.26	0.7	52.9	1960	46	67.1	32.1	*
MARCH -2002	7.17	1.4	56.2	2430	51	63.0	36.5	*
APRIL -2002	7.21	1.9	56.3	2770	58	63.2	36.3	*
MAY -2002	7.27	2.1	56.9	2850	57	63.3	36.2	*
JUNE -2002	7.30	2.2	56.5	2990	56	63.2	36.3	*
JULY -2002	7.25	2.3	57.3	2840	60	63.3	36.2	40
AUGUST -2002	7.23	2.3	57.0	2790	59	63.3	36.2	*
SEPTEMBER-2002	7.26	2.2	56.0	2730	55	63.4	36.3	*
OCTOBER -2002	7.25	2.2	56.0	2770	54	63.3	36.4	*
NOVEMBER -2002	7.26	2.2	55.8	2860	53	63.4	36.3	*
DECEMBER -2002	7.24	2.2	55.3	2970	51	63.3	36.3	*
	7.25	2.0	56.0	2724	55	63.6	35.9	40

*Out of Service