

- V. Ocean Monitoring Data Summary
  - A. Ocean Sediment Chemistry Data Tables.
  - B. Fish Tissue Chemistry Data Tables.

Maps of sampling sites are included in this section.

#### Summary of Sampling Technique<sup>16</sup>:

##### Sediments

Benthic sediment is obtained using a 0.1m<sup>2</sup>, chain-rigged Tandem van Veen grab sampler deployed from a City ocean monitoring vessel. Sediment samples are collected from the top 2 cm of an undisturbed grab surface and then placed into an appropriately labeled sample container. Subsamples are placed on ice and subsequently shipped to the laboratory for chemical analysis. Preservatives are used in accordance with the requirements of 40 CFR and our Quality Assurance Plan. Sediment concentrations are based on the dry weight of a sample.

##### Fish Tissue

Several species of flatfish and rockfish are collected by otter trawl and/or rig fishing. Dissected muscle and liver tissues from these fish are frozen and delivered to the laboratory for analysis. Tissue samples are kept frozen until prepared for analyses. Addendum 1 (June 2003) to MRP R9-2002-0025/NPDES CA0107409 changed the station definitions for trawl and rig fishing sampling, primarily eliminating or redefining stations. Trawl stations SD-7 through SD-14 were reorganized into zones as shown in Section B. In previous years' reports, samples from stations involved in the South Bay Ocean Outfall Predischarge Monitoring, such as SD-15, SD-17 thru SD-21 and RF-3 & RF-4 were included in this Pt. Loma Outfall Report. Since this data is now reported in the South Bay Outfall Monitoring reports, they are no longer contained in this report. Additionally, determinations of Poly Aromatic Hydrocarbon (PAHs) were removed by the modifications.

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<sup>16</sup> For complete description of the sampling protocols, dissection techniques, equipment, vessels, etc. related to the sampling of ocean sediments and fish, please refer to the City of San Diego, Annual Receiving Waters Monitoring Report for the Point Loma Ocean Outfall 2008.

A. Ocean Sediment Chemistries.

The data for Biochemical Oxygen Demand (BOD) and Total Volatile Solids (TVS), all measures of organic enrichment, as well as total sulfides and temperature, are all presented by quarter and averaged. The quarterly particle size analysis does not lend itself to summarization and each quarter's analysis is presented separately. For the data from all the metals, cyanide, radiation and all of the numerous organic priority pollutant analyses (except dioxin, presented by quarter) only the average of the four quarters is presented here; the values for each quarter has been reported in the Quarterly Monitoring Reports and are on file.

Sampling stations may also be identified by either a 3-digit number and/or a letter-number identification code. All "A" stations are 100 series and "B" stations are 200 series designations. For example, the station A-15 is also called 115 and station B-7 would be 207.

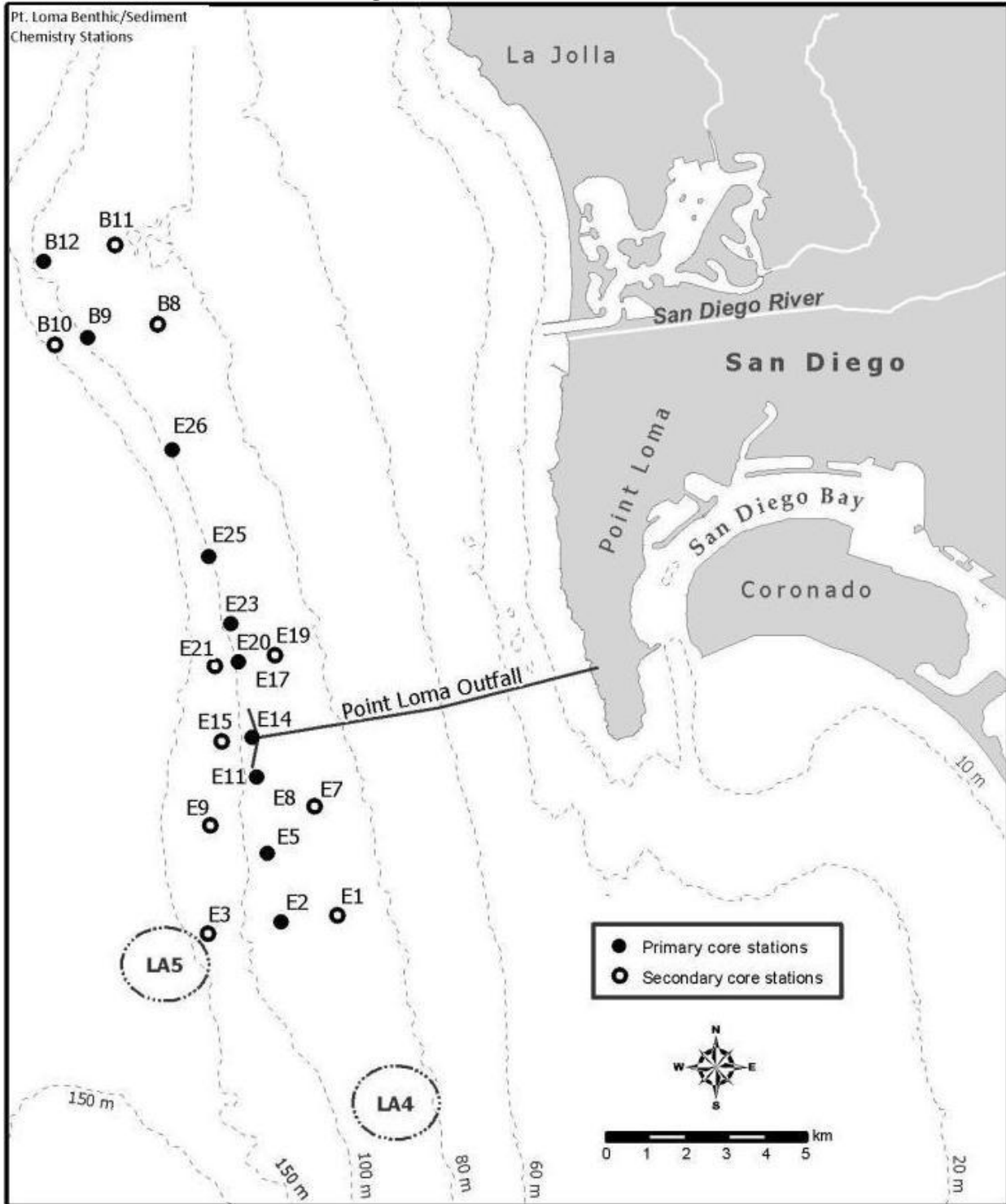
Chemistries for benthic sediments for 22 "Core Stations" are identified in the following table.

Core Stations			
B-8	E-1	E-9	E-20
B-9	E-2	E-11	E-21
B-10	E-3	E-14	E-23
B-11	E-5	E-15	E-25
B-12	E-7	E-17	E-26
	E-8	E-19	

NPDES Permit No. CA 0107409/SDRWQCB Order No. R9-2002-0025 was modified in 2005 to incorporate 8 "Recovery Stations" (listed in following table) in the regular monitoring program as an on-going special study. The suite of analyses is not inclusive, e.g. BOD and PAHs are not a required part of the monitoring program for these stations and may not be included.

Recovery Stations	
A-2	A-15
A-5	A-16
A-8	B-3
A-9	B-5

# San Diego Benthic (chemistries) stations



POINT LOMA WASTEWATER TREATMENT PLANT  
OCEAN SEDIMENT ANNUAL

Annual 2012

Biochemical Oxygen Demand  
(mg/Kg)

STATION	First Quarter	Third Quarter	Average of All Quarters
B-8	337	NS	337
B-9	231	200	216
B-10	318	NS	318
B-11	424	NS	424
B-12	377	168	273
E-1	168	NS	168
E-2	251	135	135
E-3	141	NS	141
E-5	249	164	207
E-7	268	NS	268
E-8	280	135	208
E-9	293	NS	293
E-11	272	178	225
E-14	360	212	286
E-15	244	NS	244
E-17	333	183	258
E-19	308	NS	308
E-20	410	150	280
E-21	250	NS	250
E-23	249	150	200
E-25	192	121	157
E-26	224	204	214

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

POINT LOMA WASTEWATER TREATMENT PLANT  
OCEAN SEDIMENT ANNUAL

Annual 2012

Sulfides, Total  
(mg/Kg)

STATION	First Quarter	Third Quarter	Average of All Quarters
A-2	NS	2.5	2.5
A-5	NS	2.6	2.6
A-8	NS	1.5	1.5
A-9	NS	8.3	8.3
A-15	NS	3.6	3.6
A-16	NS	3.8	3.8
B-3	NS	2.8	2.8
B-5	NS	1.0	1.0
B-8	9.7	NS	9.7
B-9	9.6	1.1	5.4
B-10	19.3	NS	19.3
B-11	8.1	NS	8.1
B-12	10.4	4.4	7.4
E-1	1.4	NS	1.4
E-2	11.1	2.0	6.6
E-3	2.3	NS	2.3
E-5	3.5	1.2	2.4
E-7	4.3	NS	4.3
E-8	3.4	2.3	2.9
E-9	4.3	NS	4.3
E-11	2.4	7.1	4.8
E-14	24.2	30.8	27.5
E-15	6.5	NS	6.5
E-17	17.6	5.3	11.5
E-19	5.3	NS	5.3
E-20	19.6	2.4	11.0
E-21	7.3	NS	7.3
E-23	3.0	1.4	2.2
E-25	11.6	2.7	7.2
E-26	5.1	5.0	5.1

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

POINT LOMA WASTEWATER TREATMENT PLANT  
OCEAN SEDIMENT ANNUAL

Annual 2012

Total Volatile Solids  
(% Weight)

STATION	DATE	First Quarter	Third Quarter	Average of All Quarters
A-2		NS	2.3	2.3
A-5		NS	2.7	2.7
A-8		NS	2.5	2.5
A-9		NS	2.6	2.6
A-15		NS	2.5	2.5
A-16		NS	2.7	2.7
B-3		NS	2.3	2.3
B-5		NS	2.9	2.9
B-8		3.0	NS	3.0
B-9		2.9	2.9	2.9
B-10		2.4	NS	2.4
B-11		3.7	NS	3.7
B-12		3.3	3.0	3.2
E-1		1.9	NS	1.9
E-2		3.1	2.4	2.8
E-3		1.8	NS	1.8
E-5		2.0	2.1	2.1
E-7		2.2	NS	2.2
E-8		2.0	2.1	2.1
E-9		2.3	NS	2.3
E-11		1.9	2.3	2.1
E-14		1.7	1.9	1.8
E-15		2.2	NS	2.2
E-17		1.8	1.8	1.8
E-19		2.4	NS	2.4
E-20		2.1	2.0	2.1
E-21		2.0	NS	2.0
E-23		2.2	2.2	2.2
E-25		2.3	2.2	2.3
E-26		2.4	2.5	2.5

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

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT Grain Size  
 (all values are in percent distribution)

Annual 2012

Analyte	A-2	A-5	A-8	A-9	A-15	A-16	B-3
	P623837 03-JUL-2012	P623839 03-JUL-2012	P623844 03-JUL-2012	P623851 03-JUL-2012	P623826 03-JUL-2012	P623832 03-JUL-2012	P623555 02-JUL-2012
>0.5 to 1.0	0.000	0.216	0.000	0.099	0.000	0.100	0.099
>1.0 to 2.0	0.848	0.985	0.888	0.924	0.862	0.914	0.932
>2.0 to 3.9	2.310	2.500	2.420	2.540	2.270	2.490	2.570
>3.9 to 7.8	5.550	5.530	5.590	5.910	5.220	5.860	6.080
>7.8 to 15.6	8.290	8.260	8.180	8.770	7.840	8.710	9.130
>15.6 to 31	9.450	11.000	9.520	10.600	9.570	10.300	10.800
>31 to 62.5	20.000	25.600	20.200	23.100	21.300	22.300	21.000
>62.5 to 125	38.600	35.500	38.500	35.600	38.800	36.500	34.900
>125 to 250	13.800	9.670	13.600	11.300	13.100	11.800	13.400
>250 to 500	1.140	0.804	1.130	1.080	1.090	1.030	1.110
>500 to 1000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
>1000 to 2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	99.988	100.065	100.028	99.923	100.052	100.004	100.021

Analyte	B-5	B-9	B-12	E-2	E-5	E-8	E-11
	P623560 02-JUL-2012	P623571 02-JUL-2012	P623564 02-JUL-2012	P623859 03-JUL-2012	P623868 03-JUL-2012	P623874 03-JUL-2012	P623853 03-JUL-2012
>0.5 to 1.0	0.101	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0	1.030	0.954	0.694	0.890	0.456	0.807	0.646
>2.0 to 3.9	3.170	2.830	2.540	2.480	1.860	2.080	2.070
>3.9 to 7.8	7.920	6.770	6.360	5.470	4.360	4.380	4.900
>7.8 to 15.6	11.300	9.370	8.370	7.640	6.100	6.020	6.870
>15.6 to 31	10.900	9.820	7.320	9.020	7.190	7.640	7.790
>31 to 62.5	18.300	19.700	11.200	18.400	18.300	20.100	19.700
>62.5 to 125	32.200	35.500	26.100	33.200	40.900	41.700	40.900
>125 to 250	13.800	13.800	31.200	20.200	19.000	16.100	15.800
>250 to 500	1.320	1.250	6.200	2.610	1.790	1.210	1.250
>500 to 1000	0.000	0.000	0.056	0.036	0.030	0.000	0.000
>1000 to 2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND	ND
Totals:	100.041	99.994	100.040	99.946	99.986	100.037	99.926

\*=A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT Grain Size  
 (all values are in percent distribution)

Annual 2012

Analyte	E-14	E-17	E-20	E-23	E-25	E-26
	P623575	P623585	P623589	P623597	P623603	P623609
	02-JUL-2012	02-JUL-2012	02-JUL-2012	02-JUL-2012	02-JUL-2012	02-JUL-2012
>0.5 to 1.0	0.000	0.000	0.000	0.000	0.000	0.000
>1.0 to 2.0	0.601	0.641	0.603	0.834	0.670	0.878
>2.0 to 3.9	2.010	1.970	2.020	2.260	2.180	2.580
>3.9 to 7.8	4.780	4.420	4.970	5.210	5.270	6.350
>7.8 to 15.6	6.380	6.090	7.260	7.760	7.780	9.370
>15.6 to 31	6.590	7.210	8.570	9.920	9.240	10.800
>31 to 62.5	17.300	19.800	21.600	24.100	21.300	23.300
>62.5 to 125	44.900	43.500	40.900	38.000	38.000	35.700
>125 to 250	16.500	15.400	13.100	11.100	14.400	10.300
>250 to 500	0.945	1.040	0.991	0.777	1.160	0.683
>500 to 1000	0.000	0.000	0.000	0.000	0.000	0.000
>1000 to 2000	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND
Totals:	100.006	100.071	100.014	99.961	100.000	99.961

\*=A value in this field reflects a percentage of 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.



POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT SEMI-ANNUAL  
 Grain Size  
 (all values are in percent distribution)

Annual 2012

Analyte	B-8	B-9	B-10	B-11	B-12	E-1
	P602519 06-JAN-2012	P602525 06-JAN-2012	P602496 06-JAN-2012	P602503 06-JAN-2012	P602508 06-JAN-2012	P602371 05-JAN-2012
<0.500 microns, Phi 11	0.000	0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10	0.287	0.105	0.000	0.212	0.105	0.099
>1 to 1.5 microns, Phi 9.5	0.538	0.475	0.380	0.503	0.450	0.433
>1.5 to 2 microns, Phi 9	0.648	0.597	0.472	0.639	0.551	0.519
>2.0 to 2.4 microns	0.583	0.554	0.440	0.601	0.513	0.467
>2.4 to 2.9 microns, Phi 8.5	0.759	0.740	0.592	0.810	0.688	0.607
>2.9 to 3.4 microns	0.780	0.775	0.625	0.858	0.724	0.623
>3.4 to 3.9 microns, Phi 8	0.837	0.849	0.689	0.951	0.797	0.666
>3.9 to 4 microns	0.173	0.175	0.142	0.198	0.163	0.137
>4.0 to 4.3 microns	0.496	0.503	0.407	0.570	0.468	0.392
>4.3 to 4.5 microns	0.319	0.324	0.262	0.368	0.301	0.252
>4.5 to 5 microns	0.845	0.862	0.698	0.989	0.798	0.664
>5 to 5.5 microns	0.839	0.849	0.680	0.982	0.776	0.654
>5.5 to 5.7 microns	0.324	0.327	0.261	0.379	0.297	0.252
>5.7 to 5.9 microns, Phi 7.5	0.319	0.321	0.257	0.373	0.292	0.247
>5.9 to 7.8 microns, Phi 7	3.000	2.970	2.330	3.500	2.640	2.300
>7.8 to 8 microns	0.312	0.297	0.226	0.354	0.254	0.235
>8 to 8.5 microns	0.748	0.711	0.540	0.847	0.609	0.562
>8.5 to 8.9 microns	0.577	0.545	0.412	0.650	0.464	0.433
>8.9 to 9.1 microns	0.298	0.274	0.203	0.328	0.228	0.221
>9.1 to 9.5 microns	0.578	0.530	0.393	0.635	0.442	0.429
>9.5 to 9.8 microns	0.418	0.383	0.284	0.459	0.319	0.310
>9.8 to 10.1 microns	0.405	0.372	0.275	0.445	0.310	0.301
>10.1 to 10.6 microns	0.711	0.629	0.454	0.758	0.510	0.520
>10.6 to 11.1 microns	0.678	0.600	0.433	0.724	0.486	0.496
>11.1 to 11.3 microns	0.263	0.233	0.168	0.280	0.188	0.192
>11.3 to 11.7 microns, Phi 6.5	0.521	0.453	0.323	0.546	0.363	0.379
>11.7 to 14 microns	2.840	2.360	1.630	2.830	1.820	2.040
>14 to 14.8 microns	0.924	0.741	0.499	0.889	0.559	0.655
>14.8 to 15.6 microns	0.913	0.713	0.471	0.850	0.525	0.641
>15.6 to 16 microns	0.456	0.347	0.225	0.412	0.250	0.317
>16 to 20 microns	4.220	3.100	1.960	3.650	2.170	2.900
>20 to 23 microns, Phi 5.5	2.950	2.010	1.200	2.310	1.310	1.980
>23 to 27 microns	3.820	2.440	1.390	2.740	1.500	2.480
>27 to 31 microns, Phi 5	3.770	2.330	1.290	2.530	1.340	2.390
>31 to 32 microns	0.959	0.588	0.320	0.619	0.322	0.596
>32 to 35.6 microns	3.410	2.100	1.150	2.180	1.130	2.100
>35.6 to 37 microns, Phi 4.75	1.360	0.845	0.463	0.849	0.436	0.822
>37 to 39.6 microns	2.440	1.540	0.848	1.530	0.787	1.480
>39.6 to 43.6 microns	3.970	2.600	1.490	2.480	1.290	2.380
>43.6 to 44 microns, Phi 4.5	0.377	0.247	0.142	0.235	0.122	0.226
>44 to 45 microns	0.935	0.617	0.356	0.585	0.304	0.561
>45 to 46.4 microns	1.450	1.030	0.641	0.925	0.497	0.879
>46.4 to 53 microns, Phi 4.25	6.420	4.700	3.010	4.150	2.270	3.940
>53 to 62.5 microns, Phi 4	8.600	7.220	5.380	5.960	3.530	5.650
>62.5 to 64 microns	1.260	1.150	0.936	0.917	0.574	0.875
>64 to 71.7 microns	5.860	5.830	5.250	4.540	3.020	4.410
>71.7 to 74 microns	1.590	1.700	1.650	1.300	0.908	1.280
>74 to 79.6 microns	3.500	3.990	4.160	3.030	2.230	3.060
>79.6 to 87.6 microns	4.260	5.360	6.190	4.030	3.190	4.200

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT SEMI-ANNUAL  
 Grain Size  
 (all values are in percent distribution)

Annual 2012

Analyte	B-8	B-9	B-10	B-11	B-12	E-1
	P602519 06-JAN-2012	P602525 06-JAN-2012	P602496 06-JAN-2012	P602503 06-JAN-2012	P602508 06-JAN-2012	P602371 05-JAN-2012
>87.6 to 88 microns, Phi 3.5	0.203	0.255	0.294	0.192	0.152	0.200
>88 to 90 microns	0.880	1.230	1.580	0.939	0.819	1.040
>90 to 105 microns, Phi 3.25	5.420	8.110	11.200	6.360	5.990	7.310
>105 to 125 microns, Phi 3	4.480	7.740	12.200	6.750	7.770	8.560
>125 to 149 microns, Phi 2.75	2.980	5.780	9.730	5.980	8.780	8.200
>149 to 160 microns	0.791	1.650	2.810	2.030	3.760	2.870
>160 to 177 microns, Phi 2.5	0.906	1.940	3.290	2.600	5.370	3.700
>177 to 197 microns	0.629	1.400	2.280	2.170	5.540	3.050
>197 to 210 microns, Phi 2.25	0.264	0.591	0.921	1.010	2.990	1.380
>210 to 217 microns	0.118	0.265	0.403	0.473	1.480	0.636
>217 to 245 microns	0.343	0.766	1.130	1.420	4.770	1.860
>245 to 250 microns, Phi 2	0.045	0.099	0.138	0.193	0.697	0.243
>250 to 300 microns, Phi 1.75	0.295	0.633	0.839	1.260	4.690	1.520
>300 to 320 microns	0.061	0.121	0.143	0.235	0.839	0.260
>320 to 350 microns, Phi 1.5	0.068	0.155	0.180	0.297	1.040	0.326
>350 to 360 microns	0.000	0.034	0.038	0.061	0.185	0.065
>360 to 400 microns	0.000	0.124	0.135	0.218	0.646	0.229
>400 to 420 microns, Phi 1.25	0.000	0.043	0.046	0.069	0.166	0.071
>420 to 440 microns	0.000	0.041	0.043	0.066	0.158	0.067
>440 to 500 microns, Phi 1	0.000	0.023	0.024	0.141	0.285	0.143
>500 to 590 microns, Phi 0.75	0.000	0.000	0.000	0.035	0.065	0.035
>590 to 630 microns	0.000	0.000	0.000	0.000	0.000	0.000
>630 to 696 microns	0.000	0.000	0.000	0.000	0.000	0.000
>696 to 710 microns, Phi 0.5	0.000	0.000	0.000	0.000	0.000	0.000
>710 to 773 microns	0.000	0.000	0.000	0.000	0.000	0.000
>773 to 840 microns, Phi 0.25	0.000	0.000	0.000	0.000	0.000	0.000
>840 to 850 microns	0.000	0.000	0.000	0.000	0.000	0.000
>850 to 930 microns	0.000	0.000	0.000	0.000	0.000	0.000
>930 to 1000 microns, Phi 0	0.000	0.000	0.000	0.000	0.000	0.000
1000 to 1100 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1100 to 1190 microns, Phi -0.25	0.000	0.000	0.000	0.000	0.000	0.000
>1190 to 1300 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1300 to 1410 microns, Phi -0.5	0.000	0.000	0.000	0.000	0.000	0.000
>1410 to 1680 microns, Phi -0.75	0.000	0.000	0.000	0.000	0.000	0.000
>1680 to 2000 microns, Phi -1	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND
Totals:	100.023	100.011	100.021	99.999	100.012	100.017

\*=A value in this field reflects a percentage of the 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT SEMI-ANNUAL  
 Grain Size  
 (all values are in percent distribution)

Annual 2012

Analyte	E-3	E-5	E-7	E-8	E-11	E-14
	P602384 05-JAN-2012	P603379 10-JAN-2012	P603382 10-JAN-2012	P603392 10-JAN-2012	P603350 10-JAN-2012	P603353 10-JAN-2012
<0.500 microns, Phi 11	0.000	0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10	0.106	0.000	0.103	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5	0.513	0.390	0.429	0.381	0.383	0.250
>1.5 to 2 microns, Phi 9	0.682	0.475	0.487	0.446	0.446	0.421
>2.0 to 2.4 microns	0.647	0.433	0.425	0.395	0.394	0.385
>2.4 to 2.9 microns, Phi 8.5	0.864	0.571	0.546	0.510	0.510	0.511
>2.9 to 3.4 microns	0.900	0.592	0.555	0.520	0.520	0.532
>3.4 to 3.9 microns, Phi 8	0.984	0.640	0.587	0.552	0.553	0.579
>3.9 to 4 microns	0.201	0.131	0.120	0.112	0.112	0.118
>4.0 to 4.3 microns	0.577	0.375	0.345	0.323	0.322	0.340
>4.3 to 4.5 microns	0.371	0.241	0.222	0.207	0.207	0.218
>4.5 to 5 microns	0.982	0.636	0.582	0.542	0.540	0.576
>5 to 5.5 microns	0.961	0.621	0.572	0.529	0.524	0.560
>5.5 to 5.7 microns	0.369	0.238	0.220	0.203	0.201	0.215
>5.7 to 5.9 microns, Phi 7.5	0.362	0.234	0.216	0.199	0.197	0.211
>5.9 to 7.8 microns, Phi 7	3.310	2.140	2.010	1.830	1.780	1.910
>7.8 to 8 microns	0.326	0.212	0.206	0.183	0.176	0.186
>8 to 8.5 microns	0.780	0.508	0.494	0.437	0.422	0.445
>8.5 to 8.9 microns	0.596	0.389	0.381	0.336	0.323	0.340
>8.9 to 9.1 microns	0.297	0.195	0.196	0.170	0.162	0.168
>9.1 to 9.5 microns	0.574	0.378	0.379	0.329	0.314	0.326
>9.5 to 9.8 microns	0.415	0.273	0.274	0.238	0.227	0.236
>9.8 to 10.1 microns	0.403	0.265	0.266	0.231	0.220	0.229
>10.1 to 10.6 microns	0.675	0.448	0.461	0.393	0.371	0.379
>10.6 to 11.1 microns	0.644	0.427	0.440	0.375	0.354	0.362
>11.1 to 11.3 microns	0.250	0.165	0.171	0.145	0.137	0.140
>11.3 to 11.7 microns, Phi 6.5	0.483	0.323	0.337	0.285	0.268	0.272
>11.7 to 14 microns	2.460	1.700	1.840	1.510	1.410	1.400
>14 to 14.8 microns	0.765	0.537	0.596	0.484	0.447	0.436
>14.8 to 15.6 microns	0.722	0.521	0.590	0.473	0.436	0.418
>15.6 to 16 microns	0.347	0.256	0.295	0.234	0.215	0.203
>16 to 20 microns	3.030	2.310	2.740	2.130	1.950	1.810
>20 to 23 microns, Phi 5.5	1.860	1.540	1.930	1.450	1.320	1.170
>23 to 27 microns	2.130	1.940	2.540	1.860	1.700	1.440
>27 to 31 microns, Phi 5	1.870	1.920	2.570	1.860	1.720	1.420
>31 to 32 microns	0.440	0.494	0.669	0.482	0.451	0.369
>32 to 35.6 microns	1.500	1.790	2.430	1.760	1.660	1.360
>35.6 to 37 microns, Phi 4.75	0.561	0.732	0.996	0.722	0.691	0.565
>37 to 39.6 microns	0.997	1.340	1.820	1.320	1.270	1.040
>39.6 to 43.6 microns	1.510	2.320	3.130	2.310	2.270	1.890
>43.6 to 44 microns, Phi 4.5	0.143	0.220	0.297	0.219	0.216	0.180
>44 to 45 microns	0.354	0.551	0.742	0.550	0.542	0.452
>45 to 46.4 microns	0.521	0.946	1.250	0.954	0.963	0.828
>46.4 to 53 microns, Phi 4.25	2.310	4.350	5.650	4.400	4.470	3.890
>53 to 62.5 microns, Phi 4	3.150	6.940	8.490	7.120	7.420	6.820
>62.5 to 64 microns	0.478	1.130	1.330	1.170	1.230	1.170
>64 to 71.7 microns	2.410	5.890	6.580	6.120	6.480	6.370
>71.7 to 74 microns	0.698	1.750	1.890	1.830	1.950	1.960
>74 to 79.6 microns	1.690	4.220	4.350	4.410	4.690	4.830
>79.6 to 87.6 microns	2.370	5.870	5.710	6.140	6.530	6.950

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Analyte	E-3	E-5	E-7	E-8	E-11	E-14
	P602384 05-JAN-2012	P603379 10-JAN-2012	P603382 10-JAN-2012	P603392 10-JAN-2012	P603350 10-JAN-2012	P603353 10-JAN-2012
>87.6 to 88 microns, Phi 3.5	0.113	0.279	0.271	0.292	0.311	0.330
>88 to 90 microns	0.616	1.410	1.280	1.470	1.550	1.700
>90 to 105 microns, Phi 3.25	4.590	9.660	8.360	10.100	10.600	11.700
>105 to 125 microns, Phi 3	6.450	9.940	7.820	10.300	10.500	11.600
>125 to 149 microns, Phi 2.75	8.040	7.850	5.740	8.030	7.870	8.530
>149 to 160 microns	3.680	2.280	1.600	2.310	2.190	2.280
>160 to 177 microns, Phi 2.5	5.350	2.690	1.850	2.720	2.530	2.580
>177 to 197 microns	5.580	1.890	1.280	1.900	1.720	1.680
>197 to 210 microns, Phi 2.25	2.930	0.773	0.527	0.779	0.694	0.659
>210 to 217 microns	1.440	0.340	0.233	0.343	0.303	0.283
>217 to 245 microns	4.470	0.956	0.661	0.967	0.850	0.782
>245 to 250 microns, Phi 2	0.629	0.119	0.083	0.120	0.105	0.094
>250 to 300 microns, Phi 1.75	3.990	0.726	0.525	0.741	0.646	0.572
>300 to 320 microns	0.641	0.127	0.098	0.131	0.115	0.100
>320 to 350 microns, Phi 1.5	0.787	0.160	0.126	0.166	0.146	0.127
>350 to 360 microns	0.136	0.034	0.028	0.036	0.032	0.028
>360 to 400 microns	0.475	0.123	0.091	0.128	0.115	0.089
>400 to 420 microns, Phi 1.25	0.123	0.042	0.000	0.044	0.040	0.000
>420 to 440 microns	0.118	0.040	0.000	0.042	0.038	0.000
>440 to 500 microns, Phi 1	0.219	0.022	0.000	0.023	0.021	0.000
>500 to 590 microns, Phi 0.75	0.051	0.000	0.000	0.000	0.000	0.000
>590 to 630 microns	0.000	0.000	0.000	0.000	0.000	0.000
>630 to 696 microns	0.000	0.000	0.000	0.000	0.000	0.000
>696 to 710 microns, Phi 0.5	0.000	0.000	0.000	0.000	0.000	0.000
>710 to 773 microns	0.000	0.000	0.000	0.000	0.000	0.000
>773 to 840 microns, Phi 0.25	0.000	0.000	0.000	0.000	0.000	0.000
>840 to 850 microns	0.000	0.000	0.000	0.000	0.000	0.000
>850 to 930 microns	0.000	0.000	0.000	0.000	0.000	0.000
>930 to 1000 microns, Phi 0	0.000	0.000	0.000	0.000	0.000	0.000
1000 to 1100 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1100 to 1190 microns, Phi -0.25	0.000	0.000	0.000	0.000	0.000	0.000
>1190 to 1300 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1300 to 1410 microns, Phi -0.5	0.000	0.000	0.000	0.000	0.000	0.000
>1410 to 1680 microns, Phi -0.75	0.000	0.000	0.000	0.000	0.000	0.000
>1680 to 2000 microns, Phi -1	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND
Totals:	100.016	100.028	100.032	100.021	100.070	100.014

\*=A value in this field reflects a percentage of the 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

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Analyte	E-15	E-17	E-19	E-20	E-21	E-23
	P603359	P603367	P603371	P602528	P602536	P602543
	10-JAN-2012	10-JAN-2012	10-JAN-2012	06-JAN-2012	06-JAN-2012	06-JAN-2012
<0.500 microns, Phi 11	0.000	0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10	0.000	0.000	0.218	0.000	0.000	0.099
>1 to 1.5 microns, Phi 9.5	0.396	0.378	0.464	0.400	0.400	0.421
>1.5 to 2 microns, Phi 9	0.482	0.444	0.527	0.471	0.475	0.497
>2.0 to 2.4 microns	0.441	0.398	0.461	0.420	0.428	0.448
>2.4 to 2.9 microns, Phi 8.5	0.584	0.522	0.592	0.549	0.562	0.588
>2.9 to 3.4 microns	0.608	0.540	0.602	0.567	0.582	0.609
>3.4 to 3.9 microns, Phi 8	0.662	0.582	0.638	0.610	0.630	0.658
>3.9 to 4 microns	0.135	0.119	0.131	0.125	0.129	0.135
>4.0 to 4.3 microns	0.389	0.342	0.375	0.359	0.370	0.388
>4.3 to 4.5 microns	0.250	0.220	0.241	0.231	0.238	0.250
>4.5 to 5 microns	0.661	0.580	0.631	0.610	0.628	0.660
>5 to 5.5 microns	0.645	0.567	0.621	0.599	0.614	0.648
>5.5 to 5.7 microns	0.248	0.218	0.239	0.230	0.236	0.250
>5.7 to 5.9 microns, Phi 7.5	0.243	0.214	0.234	0.226	0.232	0.245
>5.9 to 7.8 microns, Phi 7	2.220	1.960	2.180	2.090	2.120	2.270
>7.8 to 8 microns	0.218	0.194	0.222	0.211	0.210	0.228
>8 to 8.5 microns	0.522	0.465	0.532	0.504	0.503	0.546
>8.5 to 8.9 microns	0.399	0.357	0.410	0.388	0.385	0.420
>8.9 to 9.1 microns	0.199	0.179	0.210	0.197	0.193	0.213
>9.1 to 9.5 microns	0.386	0.347	0.407	0.381	0.374	0.412
>9.5 to 9.8 microns	0.279	0.251	0.294	0.275	0.270	0.298
>9.8 to 10.1 microns	0.271	0.243	0.286	0.267	0.262	0.289
>10.1 to 10.6 microns	0.453	0.410	0.495	0.456	0.442	0.494
>10.6 to 11.1 microns	0.432	0.391	0.472	0.435	0.421	0.471
>11.1 to 11.3 microns	0.168	0.152	0.183	0.169	0.163	0.182
>11.3 to 11.7 microns, Phi 6.5	0.326	0.296	0.362	0.331	0.318	0.358
>11.7 to 14 microns	1.690	1.550	1.960	1.760	1.660	1.910
>14 to 14.8 microns	0.529	0.491	0.636	0.563	0.523	0.609
>14.8 to 15.6 microns	0.509	0.476	0.630	0.551	0.505	0.596
>15.6 to 16 microns	0.248	0.233	0.315	0.273	0.247	0.295
>16 to 20 microns	2.220	2.110	2.920	2.490	2.210	2.690
>20 to 23 microns, Phi 5.5	1.440	1.400	2.070	1.700	1.450	1.830
>23 to 27 microns	1.780	1.770	2.730	2.180	1.800	2.360
>27 to 31 microns, Phi 5	1.720	1.750	2.800	2.180	1.750	2.360
>31 to 32 microns	0.441	0.455	0.736	0.568	0.446	0.615
>32 to 35.6 microns	1.600	1.670	2.690	2.070	1.620	2.240
>35.6 to 37 microns, Phi 4.75	0.653	0.691	1.110	0.853	0.660	0.922
>37 to 39.6 microns	1.190	1.270	2.030	1.560	1.210	1.690
>39.6 to 43.6 microns	2.100	2.270	3.520	2.740	2.130	2.940
>43.6 to 44 microns, Phi 4.5	0.199	0.215	0.334	0.260	0.202	0.279
>44 to 45 microns	0.499	0.540	0.835	0.651	0.506	0.698
>45 to 46.4 microns	0.879	0.959	1.400	1.130	0.895	1.190
>46.4 to 53 microns, Phi 4.25	4.080	4.450	6.350	5.160	4.160	5.440
>53 to 62.5 microns, Phi 4	6.820	7.390	9.350	8.170	7.020	8.430
>62.5 to 64 microns	1.140	1.230	1.440	1.320	1.180	1.340
>64 to 71.7 microns	6.090	6.470	6.950	6.720	6.340	6.740
>71.7 to 74 microns	1.850	1.940	1.950	1.970	1.930	1.950
>74 to 79.6 microns	4.500	4.680	4.390	4.630	4.700	4.530
>79.6 to 87.6 microns	6.360	6.530	5.530	6.220	6.650	6.000

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Analyte	E-15	E-17	E-19	E-20	E-21	E-23
	P603359	P603367	P603371	P602528	P602536	P602543
	10-JAN-2012	10-JAN-2012	10-JAN-2012	06-JAN-2012	06-JAN-2012	06-JAN-2012
>87.6 to 88 microns, Phi 3.5	0.303	0.311	0.263	0.296	0.316	0.285
>88 to 90 microns	1.540	1.550	1.180	1.420	1.600	1.340
>90 to 105 microns, Phi 3.25	10.500	10.500	7.400	9.340	10.900	8.730
>105 to 125 microns, Phi 3	10.500	10.400	6.380	8.700	10.600	7.930
>125 to 149 microns, Phi 2.75	7.800	7.670	4.410	6.210	7.590	5.560
>149 to 160 microns	2.140	2.080	1.200	1.680	2.000	1.490
>160 to 177 microns, Phi 2.5	2.460	2.370	1.400	1.920	2.250	1.700
>177 to 197 microns	1.660	1.570	0.982	1.300	1.460	1.150
>197 to 210 microns, Phi 2.25	0.666	0.622	0.414	0.527	0.572	0.466
>210 to 217 microns	0.290	0.269	0.185	0.231	0.246	0.204
>217 to 245 microns	0.814	0.747	0.539	0.652	0.680	0.579
>245 to 250 microns, Phi 2	0.101	0.091	0.070	0.081	0.082	0.073
>250 to 300 microns, Phi 1.75	0.622	0.556	0.457	0.508	0.502	0.461
>300 to 320 microns	0.112	0.098	0.092	0.094	0.088	0.088
>320 to 350 microns, Phi 1.5	0.142	0.125	0.119	0.120	0.113	0.113
>350 to 360 microns	0.031	0.027	0.028	0.027	0.025	0.026
>360 to 400 microns	0.112	0.089	0.100	0.087	0.080	0.083
>400 to 420 microns, Phi 1.25	0.039	0.000	0.037	0.000	0.000	0.000
>420 to 440 microns	0.037	0.000	0.035	0.000	0.000	0.000
>440 to 500 microns, Phi 1	0.021	0.000	0.020	0.000	0.000	0.000
>500 to 590 microns, Phi 0.75	0.000	0.000	0.000	0.000	0.000	0.000
>590 to 630 microns	0.000	0.000	0.000	0.000	0.000	0.000
>630 to 696 microns	0.000	0.000	0.000	0.000	0.000	0.000
>696 to 710 microns, Phi 0.5	0.000	0.000	0.000	0.000	0.000	0.000
>710 to 773 microns	0.000	0.000	0.000	0.000	0.000	0.000
>773 to 840 microns, Phi 0.25	0.000	0.000	0.000	0.000	0.000	0.000
>840 to 850 microns	0.000	0.000	0.000	0.000	0.000	0.000
>850 to 930 microns	0.000	0.000	0.000	0.000	0.000	0.000
>930 to 1000 microns, Phi 0	0.000	0.000	0.000	0.000	0.000	0.000
1000 to 1100 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1100 to 1190 microns, Phi -0.25	0.000	0.000	0.000	0.000	0.000	0.000
>1190 to 1300 microns	0.000	0.000	0.000	0.000	0.000	0.000
>1300 to 1410 microns, Phi -0.5	0.000	0.000	0.000	0.000	0.000	0.000
>1410 to 1680 microns, Phi -0.75	0.000	0.000	0.000	0.000	0.000	0.000
>1680 to 2000 microns, Phi -1	0.000	0.000	0.000	0.000	0.000	0.000
>2000*	ND	ND	ND	ND	ND	ND
Totals:	100.044	99.984	100.014	100.013	100.083	100.009

\*=A value in this field reflects a percentage of the 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.

POINT LOMA WASTEWATER TREATMENT PLANT  
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Annual 2012

Analyte	E-25		E-26	
	P602547	P602551	P602547	P602551
	06-JAN-2012	06-JAN-2012	06-JAN-2012	06-JAN-2012
<0.500 microns, Phi 11	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10	0.099	0.211	0.099	0.211
>1 to 1.5 microns, Phi 9.5	0.418	0.469	0.418	0.469
>1.5 to 2 microns, Phi 9	0.487	0.555	0.487	0.555
>2.0 to 2.4 microns	0.435	0.498	0.435	0.498
>2.4 to 2.9 microns, Phi 8.5	0.568	0.651	0.568	0.651
>2.9 to 3.4 microns	0.583	0.670	0.583	0.670
>3.4 to 3.9 microns, Phi 8	0.626	0.722	0.626	0.722
>3.9 to 4 microns	0.128	0.148	0.128	0.148
>4.0 to 4.3 microns	0.367	0.425	0.367	0.425
>4.3 to 4.5 microns	0.236	0.273	0.236	0.273
>4.5 to 5 microns	0.621	0.722	0.621	0.722
>5 to 5.5 microns	0.608	0.710	0.608	0.710
>5.5 to 5.7 microns	0.234	0.273	0.234	0.273
>5.7 to 5.9 microns, Phi 7.5	0.229	0.268	0.229	0.268
>5.9 to 7.8 microns, Phi 7	2.110	2.480	2.110	2.480
>7.8 to 8 microns	0.211	0.251	0.211	0.251
>8 to 8.5 microns	0.506	0.601	0.506	0.601
>8.5 to 8.9 microns	0.389	0.462	0.389	0.462
>8.9 to 9.1 microns	0.197	0.235	0.197	0.235
>9.1 to 9.5 microns	0.381	0.454	0.381	0.454
>9.5 to 9.8 microns	0.275	0.328	0.275	0.328
>9.8 to 10.1 microns	0.267	0.319	0.267	0.319
>10.1 to 10.6 microns	0.456	0.547	0.456	0.547
>10.6 to 11.1 microns	0.435	0.521	0.435	0.521
>11.1 to 11.3 microns	0.168	0.202	0.168	0.202
>11.3 to 11.7 microns, Phi 6.5	0.331	0.397	0.331	0.397
>11.7 to 14 microns	1.760	2.110	1.760	2.110
>14 to 14.8 microns	0.561	0.676	0.561	0.676
>14.8 to 15.6 microns	0.549	0.661	0.549	0.661
>15.6 to 16 microns	0.271	0.326	0.271	0.326
>16 to 20 microns	2.470	2.980	2.470	2.980
>20 to 23 microns, Phi 5.5	1.690	2.020	1.690	2.020
>23 to 27 microns	2.170	2.580	2.170	2.580
>27 to 31 microns, Phi 5	2.170	2.550	2.170	2.550
>31 to 32 microns	0.563	0.655	0.563	0.655
>32 to 35.6 microns	2.050	2.360	2.050	2.360
>35.6 to 37 microns, Phi 4.75	0.840	0.959	0.840	0.959
>37 to 39.6 microns	1.540	1.750	1.540	1.750
>39.6 to 43.6 microns	2.670	2.980	2.670	2.980
>43.6 to 44 microns, Phi 4.5	0.253	0.282	0.253	0.282
>44 to 45 microns	0.634	0.705	0.634	0.705
>45 to 46.4 microns	1.080	1.180	1.080	1.180
>46.4 to 53 microns, Phi 4.25	4.960	5.350	4.960	5.350
>53 to 62.5 microns, Phi 4	7.750	8.130	7.750	8.130
>62.5 to 64 microns	1.240	1.280	1.240	1.280
>64 to 71.7 microns	6.330	6.430	6.330	6.430
>71.7 to 74 microns	1.850	1.860	1.850	1.860
>74 to 79.6 microns	4.370	4.320	4.370	4.320
>79.6 to 87.6 microns	5.900	5.710	5.900	5.710

POINT LOMA WASTEWATER TREATMENT PLANT  
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 (all values are in percent distribution)

Annual 2012

Analyte	E-25		E-26	
	P602547		P602551	
	06-JAN-2012	06-JAN-2012		
>87.6 to 88 microns, Phi 3.5	0.280	0.271		
>88 to 90 microns	1.360	1.280		
>90 to 105 microns, Phi 3.25	9.100	8.300		
>105 to 125 microns, Phi 3	8.880	7.550		
>125 to 149 microns, Phi 2.75	6.730	5.300		
>149 to 160 microns	1.910	1.420		
>160 to 177 microns, Phi 2.5	2.240	1.620		
>177 to 197 microns	1.560	1.090		
>197 to 210 microns, Phi 2.25	0.640	0.438		
>210 to 217 microns	0.282	0.191		
>217 to 245 microns	0.796	0.539		
>245 to 250 microns, Phi 2	0.099	0.067		
>250 to 300 microns, Phi 1.75	0.616	0.419		
>300 to 320 microns	0.110	0.078		
>320 to 350 microns, Phi 1.5	0.140	0.100		
>350 to 360 microns	0.030	0.022		
>360 to 400 microns	0.110	0.072		
>400 to 420 microns, Phi 1.25	0.038	0.000		
>420 to 440 microns	0.037	0.000		
>440 to 500 microns, Phi 1	0.020	0.000		
>500 to 590 microns, Phi 0.75	0.000	0.000		
>590 to 630 microns	0.000	0.000		
>630 to 696 microns	0.000	0.000		
>696 to 710 microns, Phi 0.5	0.000	0.000		
>710 to 773 microns	0.000	0.000		
>773 to 840 microns, Phi 0.25	0.000	0.000		
>840 to 850 microns	0.000	0.000		
>850 to 930 microns	0.000	0.000		
>930 to 1000 microns, Phi 0	0.000	0.000		
1000 to 1100 microns	0.000	0.000		
>1100 to 1190 microns, Phi -0.25	0.000	0.000		
>1190 to 1300 microns	0.000	0.000		
>1300 to 1410 microns, Phi -0.5	0.000	0.000		
>1410 to 1680 microns, Phi -0.75	0.000	0.000		
>1680 to 2000 microns, Phi -1	0.000	0.000		
>2000*	ND	ND		
Totals:	100.014	100.003		

\*=A value in this field reflects a percentage of the 30 grams remaining on a 2000 micron sieve. This value must be subtracted from the total percentage.



POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT SEMI-ANNUAL - Grain Size (Sieve)  
 (all values are in percent distribution)

Annual 2012

Source	E-9	E-2
	P603394	P602380
Analyte	10-JAN-2012	05-JAN-2012
=====	=====	=====
<63 microns, Phi<4	33.800	36.900
>63 to 125 microns, Phi>4	27.200	24.900
>125 to 250 microns, Phi>3	5.870	13.700
>250 to 500 microns, Phi>2	4.160	8.470
>500 to 1000 microns, Phi>1	16.800	6.630
>1000 to 2000 microns, Phi>0	11.500	3.440
>2000 microns, Phi>-1	0.800	6.000
=====	=====	=====
Totals:	100.130	100.040

ND=not detected

POINT LOMA WASTEWATER TREATMENT PLANT  
OCEAN SEDIMENT ANNUAL SUMMARY  
Total Organic Carbon/Total Nitrogen

ANNUAL 2012

Source		A-2	A-5	A-8	A-9	A-15	A-16	B-3
Year		Avg	Avg	Avg	Avg	Avg	Avg	Avg
Analyte	MDL Units	2012	2012	2012	2012	2012	2012	2012
Total Nitrogen	.005 WT%	0.067	0.076	0.075	0.078	0.067	0.071	0.067
Total Organic Carbon	.01 WT%	0.590	0.701	0.675	0.719	0.616	0.632	0.598

Source		B-5	B-8	B-9	B-10	B-11	B-12	E-1
Year		Avg	Avg	Avg	Avg	Avg	Avg	Avg
Analyte	MDL Units	2012	2012	2012	2012	2012	2012	2012
Total Nitrogen	.005 WT%	0.081	0.083	0.076	0.062	0.078	0.062	0.057
Total Organic Carbon	.01 WT%	0.853	0.823	0.966	1.060	3.250	4.380	0.540

Source		E-2	E-3	E-5	E-7	E-8	E-9	E-11
Year		Avg	Avg	Avg	Avg	Avg	Avg	Avg
Analyte	MDL Units	2012	2012	2012	2012	2012	2012	2012
Total Nitrogen	.005 WT%	0.055	0.035	0.041	0.057	0.046	0.053	0.050
Total Organic Carbon	.01 WT%	0.636	0.339	0.474	0.548	0.540	1.260	0.739

Source		E-14	E-15	E-17	E-19	E-20	E-21	E-23
Year		Avg	Avg	Avg	Avg	Avg	Avg	Avg
Analyte	MDL Units	2012	2012	2012	2012	2012	2012	2012
Total Nitrogen	.005 WT%	0.049	0.052	0.051	0.069	0.057	0.059	0.059
Total Organic Carbon	.01 WT%	0.503	0.645	0.471	0.657	0.546	0.610	0.560

Source		E-25	E-26
Year		Avg	Avg
Analyte	MDL Units	2012	2012
Total Nitrogen	.005 WT%	0.056	0.061
Total Organic Carbon	.01 WT%	0.551	0.672

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

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL OCEAN SEDIMENT - STANDARD  
Trace Metals

From: 01-JAN-2012 to: 31-DEC-2012

Source:		A-2	A-5	A-8	A-9	A-15	A-16
Date:		2012	2012	2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average
Aluminum	2 MG/KG	8610	12600	9700	11200	12300	9690
Antimony	.3 MG/KG	0.30	0.39	ND	0.39	0.35	0.36
Arsenic	.33 MG/KG	3.21	3.66	3.48	3.31	3.26	3.54
Barium	.02 MG/KG	52.9	64.8	53.1	61.5	62.0	55.7
Beryllium	.01 MG/KG	0.487	ND	ND	0.523	0.532	0.468
Cadmium	.06 MG/KG	ND	0.07	ND	ND	ND	ND
Chromium	.1 MG/KG	16.1	20.7	16.9	18.6	19.7	18.5
Copper	.2 MG/KG	8.81	12.10	9.71	10.80	10.20	10.80
Iron	9 MG/KG	11600	14300	11900	13300	13700	12500
Lead	.8 MG/KG	7.94	9.96	8.26	9.03	9.07	8.70
Manganese	.08 MG/KG	115.0	139.0	119.0	128.0	142.0	122.0
Mercury	.004 MG/KG	0.072	0.049	0.048	0.085	0.038	0.048
Nickel	.1 MG/KG	7.51	8.87	7.70	8.63	8.98	8.82
Selenium	.24 MG/KG	ND	ND	ND	ND	ND	ND
Silver	.04 MG/KG	ND	ND	ND	ND	ND	ND
Thallium, Total Recoverable	.5 MG/KG	ND	ND	ND	ND	ND	ND
Tin	.3 MG/KG	1.36	1.68	1.34	1.62	1.42	1.39
Zinc	.25 MG/KG	33.6	41.2	34.2	38.2	39.4	35.7

Source:		B-3	B-5	B-8	B-9	B-10	B-11
Date:		2012	2012	2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average
Aluminum	2 MG/KG	9730	9740	6370	8150	4320	8040
Antimony	.3 MG/KG	0.38	0.30	0.36	<0.30	ND	ND
Arsenic	.33 MG/KG	3.32	3.72	3.07	3.50	1.97	4.09
Barium	.02 MG/KG	45.5	59.3	54.8	58.9	27.1	44.8
Beryllium	.01 MG/KG	0.461	0.515	0.189	0.425	0.163	0.236
Cadmium	.06 MG/KG	ND	ND	0.14	0.07	0.16	0.18
Chromium	.1 MG/KG	16.4	20.3	17.6	21.9	15.4	22.2
Copper	.2 MG/KG	7.89	7.04	9.47	7.57	5.80	9.58
Iron	9 MG/KG	11300	17100	11100	15800	9260	16900
Lead	.8 MG/KG	8.34	8.72	7.92	7.82	5.63	8.20
Manganese	.08 MG/KG	102.0	114.0	103.0	98.4	59.6	129.0
Mercury	.004 MG/KG	0.092	0.037	0.038	0.029	0.022	0.029
Nickel	.1 MG/KG	7.29	7.39	8.76	8.33	5.80	9.01
Selenium	.24 MG/KG	ND	ND	0.48	ND	ND	ND
Silver	.04 MG/KG	ND	ND	0.19	0.08	ND	ND
Thallium, Total Recoverable	.5 MG/KG	ND	ND	ND	ND	ND	ND
Tin	.3 MG/KG	1.30	1.37	1.15	1.21	0.73	1.24
Zinc	.25 MG/KG	30.5	37.0	34.0	37.1	26.3	38.2

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

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL OCEAN SEDIMENT - STANDARD  
Trace Metals

From: 01-JAN-2012 to: 31-DEC-2012

Source:		B-12	E-1	E-2	E-3	E-5	E-7
Date:		2012	2012	2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average
Aluminum	2 MG/KG	4830	6780	8730	7440	6670	8050
Antimony	.3 MG/KG	ND	ND	<0.30	0.31	<0.30	0.43
Arsenic	.33 MG/KG	5.60	2.81	3.13	2.11	2.53	2.69
Barium	.02 MG/KG	22.0	43.3	53.5	61.7	31.3	40.0
Beryllium	.01 MG/KG	0.418	0.155	0.319	0.130	0.289	0.158
Cadmium	.06 MG/KG	0.13	0.10	0.06	0.11	<0.06	0.10
Chromium	.1 MG/KG	19.8	15.7	16.7	13.7	13.4	15.5
Copper	.2 MG/KG	3.66	9.24	12.80	11.70	6.24	7.61
Iron	9 MG/KG	15700	10800	13700	11500	9400	10500
Lead	.8 MG/KG	5.30	8.28	8.67	9.65	5.79	7.02
Manganese	.08 MG/KG	47.8	85.8	103.0	97.9	73.7	96.9
Mercury	.004 MG/KG	0.019	0.049	0.054	0.049	0.025	0.029
Nickel	.1 MG/KG	4.83	6.91	7.35	5.38	6.13	7.70
Selenium	.24 MG/KG	0.26	ND	<0.24	ND	ND	ND
Silver	.04 MG/KG	ND	ND	ND	ND	ND	ND
Thallium, Total Recoverable	.5 MG/KG	ND	ND	ND	ND	ND	ND
Tin	.3 MG/KG	0.99	2.17	1.27	1.18	1.09	1.52
Zinc	.25 MG/KG	27.8	29.8	34.7	32.8	24.1	27.2

Source:		E-8	E-9	E-11	E-14	E-15	E-17
Date:		2012	2012	2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average
Aluminum	2 MG/KG	6140	6560	6130	5540	7070	6620
Antimony	.3 MG/KG	<0.30	0.92	<0.30	<0.30	0.38	<0.30
Arsenic	.33 MG/KG	2.58	3.29	3.05	2.77	2.11	2.30
Barium	.02 MG/KG	29.4	36.0	27.5	25.9	28.7	29.5
Beryllium	.01 MG/KG	0.255	0.176	0.247	0.270	0.146	0.247
Cadmium	.06 MG/KG	<0.06	0.12	0.07	<0.06	0.11	0.06
Chromium	.1 MG/KG	12.5	18.3	12.3	12.1	14.0	13.1
Copper	.2 MG/KG	6.11	15.10	6.02	5.89	6.47	6.21
Iron	9 MG/KG	8820	12300	8570	7900	9670	8700
Lead	.8 MG/KG	5.44	8.34	4.79	4.66	5.70	5.31
Manganese	.08 MG/KG	69.4	80.3	66.1	62.9	78.8	73.6
Mercury	.004 MG/KG	0.022	0.052	0.021	0.020	0.027	0.022
Nickel	.1 MG/KG	6.13	8.06	6.06	6.05	6.86	6.44
Selenium	.24 MG/KG	ND	ND	ND	ND	ND	<0.24
Silver	.04 MG/KG	ND	ND	ND	ND	ND	ND
Thallium, Total Recoverable	.5 MG/KG	ND	ND	ND	ND	ND	ND
Tin	.3 MG/KG	1.22	1.34	0.86	0.89	1.24	1.04
Zinc	.25 MG/KG	22.9	51.1	22.3	21.7	24.0	23.4

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

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL OCEAN SEDIMENT - STANDARD  
Trace Metals

From: 01-JAN-2012 to: 31-DEC-2012

Source:		E-19	E-20	E-21	E-23	E-25	E-26
Date:		2012	2012	2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average
Aluminum	2 MG/KG	10200	7570	7850	7800	8470	9220
Antimony	.3 MG/KG	0.57	0.38	ND	<0.30	<0.30	<0.30
Arsenic	.33 MG/KG	3.18	2.67	2.27	2.61	2.45	2.72
Barium	.02 MG/KG	51.4	38.0	37.1	34.6	36.4	40.7
Beryllium	.01 MG/KG	0.194	0.283	0.164	0.302	0.303	0.323
Cadmium	.06 MG/KG	0.15	0.09	0.15	0.06	<0.06	0.06
Chromium	.1 MG/KG	19.3	15.3	16.9	15.3	15.8	16.6
Copper	.2 MG/KG	10.00	7.11	7.77	6.92	6.77	7.68
Iron	9 MG/KG	12800	10100	10900	10200	10700	11400
Lead	.8 MG/KG	8.57	6.28	7.06	6.31	6.64	6.97
Manganese	.08 MG/KG	119.0	85.7	86.9	83.4	90.3	96.2
Mercury	.004 MG/KG	0.036	0.026	0.025	0.030	0.026	0.028
Nickel	.1 MG/KG	10.00	7.32	7.70	7.16	7.18	8.09
Selenium	.24 MG/KG	ND	ND	ND	ND	ND	ND
Silver	.04 MG/KG	ND	ND	ND	ND	ND	ND
Thallium, Total Recoverable	.5 MG/KG	ND	ND	ND	ND	ND	ND
Tin	.3 MG/KG	1.78	0.99	1.15	1.03	0.98	1.07
Zinc	.25 MG/KG	38.2	27.1	29.3	26.5	29.2	28.9

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

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2012

Source:			A-2	A-5	A-8	A-9	A-15	A-16	B-3	B-5
			2012	2012	2012	2012	2012	2012	2012	2012
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
Aldrin	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	310	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	150	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	310	NG/KG	ND	E210	ND	ND	ND	ND	ND	810
BHC, Gamma isomer	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	350
BHC, Delta isomer	700	NG/KG	ND	ND	ND	750	ND	ND	ND	920
p,p-DDD	470	NG/KG	ND	ND	ND	ND	ND	E320	ND	ND
p,p-DDE	260	NG/KG	420	740	430	540	570	460	E230	450
p,p-DDMU		NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	800	NG/KG	ND	ND	ND	ND	1700	ND	ND	ND
o,p-DDD	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	E340
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	250	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	830	NG/KG	ND	ND	ND	ND	ND	E360	ND	ND
Mirex	500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
=====										
Aldrin + Dieldrin	430	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	700	NG/KG	0	0	0	750	0	0	0	2080
DDT and derivatives	830	NG/KG	420	740	430	540	2270	460	0	450
Chlordane + related cmpds.	350	NG/KG	0	0	0	0	0	0	0	0
=====										
Chlorinated Hydrocarbons	1200	NG/KG	420	740	430	1290	2270	460	0	2530

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2012

Source:			B-8	B-9	B-10	B-11	B-12	E-1	E-2	E-3
			2012	2012	2012	2012	2012	2012	2012	2012
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
Aldrin	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	310	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	150	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	310	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	470	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	330	310	E220	260	E105	360	350	E210
p,p-DDMU		NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	250	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
=====										
Aldrin + Dieldrin	430	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	700	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	830	NG/KG	330	310	0	260	0	360	350	0
Chlordane + related cmpds.	350	NG/KG	0	0	0	0	0	0	0	0
=====										
Chlorinated Hydrocarbons	1200	NG/KG	330	310	0	260	0	360	350	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2012

Source:			E-5	E-7	E-8	E-9	E-11	E-14	E-15	E-17
			2012	2012	2012	2012	2012	2012	2012	2012
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average	Average	Average
Aldrin	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	310	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	150	NG/KG	ND	ND	ND	ND	ND	185	ND	ND
BHC, Beta isomer	310	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	470	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	E143	340	E120	370	E120	E525	E210	E90
p,p-DDMU		NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	900	ND	ND
o,p-DDD	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	E165	ND	ND
Heptachlor	1200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	120	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	240	NG/KG	ND	ND	ND	ND	ND	135	ND	ND
Trans Nonachlor	250	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	240	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	350	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	260	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	1100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
=====										
Aldrin + Dieldrin	430	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	700	NG/KG	0	0	0	0	0	185	0	0
DDT and derivatives	830	NG/KG	0	340	0	370	0	900	0	0
Chlordane + related cmpds.	350	NG/KG	0	0	0	0	0	135	0	0
=====										
Chlorinated Hydrocarbons	1200	NG/KG	0	340	0	370	0	1220	0	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.



POINT LOMA WASTEWATER TREATMENT PLANT  
 SEDIMENT ANNUAL Chlorinated Pesticide Analysis - STANDARD STATIONS

Annual 2012

Source:			E-19	E-20	E-21	E-23	E-25	E-26
			2012	2012	2012	2012	2012	2012
Analyte	MDL	Units	Average	Average	Average	Average	Average	Average
Aldrin	430	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	310	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	150	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	310	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	260	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	700	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	470	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDE	260	NG/KG	500	130	290	310	E285	E288
p,p-DDMU		NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDT	800	NG/KG	ND	480	ND	3100	ND	ND
o,p-DDD	830	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	720	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	800	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	1200	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	120	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	240	NG/KG	ND	ND	ND	ND	ND	E16
Gamma (trans) Chlordane	350	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	240	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	250	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	240	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	240	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	350	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	260	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	830	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	830	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	500	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	1100	NG/KG	ND	ND	ND	ND	ND	ND
=====								
Aldrin + Dieldrin	430	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	700	NG/KG	0	0	0	0	0	0
DDT and derivatives	830	NG/KG	500	610	290	3410	0	0
Chlordane + related cmpds.	350	NG/KG	0	0	0	0	0	0
=====								
Chlorinated Hydrocarbons	1200	NG/KG	500	610	290	3410	0	0

ND=not detected; NS=not sampled;

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2012

Source:			A-2	A-5	A-8	A-9	A-15	A-16	B-3	B-5
Analyte	MDL	Units	2012	2012	2012	2012	2012	2012	2012	2012
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	540	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	1000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 49	850	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 44	890	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 70	1100	NG/KG	ND	E88	E51	E63	ND	E110	ND	ND
PCB 66	920	NG/KG	E58	E95	E68	E67	ND	E80	ND	ND
PCB 101	430	NG/KG	ND	E320	ND	ND	ND	E300	ND	ND
PCB 99	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 119	560	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 81	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 77	790	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	500	NG/KG	ND	E250	ND	ND	ND	E230	ND	ND
PCB 123	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	830	NG/KG	ND	ND	ND	ND	ND	E260	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 138	590	NG/KG	ND	E240	ND	ND	ND	E170	ND	ND
PCB 158	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	470	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	620	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	650	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	620	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	530	NG/KG	ND	ND	ND	E210	ND	E120	ND	ND
PCB 170	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	1100	NG/KG	0	0	0	0	0	0	0	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2012

Source:			B-8	B-9	B-10	B-11	B-12	E-1	E-2	E-3
Analyte	MDL	Units	2012	2012	2012	2012	2012	2012	2012	2012
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	540	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	1000	NG/KG	ND	ND	ND	ND	ND	ND	E340	E110
PCB 49	850	NG/KG	ND	ND	ND	ND	ND	ND	<850	ND
PCB 44	890	NG/KG	ND	ND	ND	ND	ND	ND	<890	ND
PCB 37	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	900	NG/KG	ND	ND	ND	ND	ND	ND	<900	ND
PCB 70	1100	NG/KG	ND	ND	ND	ND	ND	ND	E210	E120
PCB 66	920	NG/KG	ND	ND	ND	ND	ND	ND	<920	E94
PCB 101	430	NG/KG	ND	ND	ND	ND	ND	ND	E600	E260
PCB 99	660	NG/KG	ND	ND	ND	ND	ND	ND	<660	E170
PCB 119	560	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	600	NG/KG	ND	ND	ND	ND	ND	ND	<600	ND
PCB 110	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 81	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	E180
PCB 77	790	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	500	NG/KG	ND	ND	ND	ND	ND	ND	<500	E430
PCB 123	660	NG/KG	ND	ND	ND	ND	ND	ND	<660	ND
PCB 118	830	NG/KG	ND	ND	ND	ND	ND	E130	<830	E320
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	720	NG/KG	ND	ND	ND	ND	ND	ND	<720	ND
PCB 138	590	NG/KG	ND	ND	ND	ND	ND	E150	<590	E300
PCB 158	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	470	NG/KG	ND	ND	ND	ND	ND	ND	ND	1400
PCB 183	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	E310
PCB 126	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	570	NG/KG	ND	ND	ND	ND	ND	ND	<570	ND
PCB 167	620	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	650	NG/KG	ND	ND	ND	ND	ND	ND	ND	E290
PCB 201	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	1600
PCB 156	620	NG/KG	ND	ND	ND	ND	ND	ND	<620	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	530	NG/KG	ND	ND	ND	ND	ND	E160	<530	1300
PCB 170	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	1100	NG/KG	0	0	0	0	0	0	0	4300

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2012

Source:			E-5	E-7	E-8	E-9	E-11	E-14	E-15	E-17
Analyte	MDL	Units	2012	2012	2012	2012	2012	2012	2012	2012
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	540	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	1000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 49	850	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 44	890	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	340	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 70	1100	NG/KG	ND	ND	ND	E88	ND	ND	ND	ND
PCB 66	920	NG/KG	ND	ND	ND	E80	ND	ND	ND	ND
PCB 101	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 99	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 119	560	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 81	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	640	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 77	790	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 123	660	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	830	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 138	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 158	510	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	470	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	620	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	650	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	620	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	530	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 170	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	1100	NG/KG	0	0	0	0	0	0	0	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
SEDIMENT ANNUAL - PCB Congeners (STANDARD STATIONS)

Annual 2012

Source:			E-19	E-20	E-21	E-23	E-25	E-26
Analyte	MDL	Units	2012	2012	2012	2012	2012	2012
			Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	540	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	660	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	1000	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	850	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	890	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	340	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	900	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	1100	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	920	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	430	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	660	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	560	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	600	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	640	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	590	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	640	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	790	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	500	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	660	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	830	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	720	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	590	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	510	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	470	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	530	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	720	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	570	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	620	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	650	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	530	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	620	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	530	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	570	NG/KG	ND	ND	ND	ND	ND	ND
Total PCB's	1100	NG/KG	0	0	0	0	0	0

ND=not detected

NA=not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
SEDIMENT ANNUAL Base/Neutrals - Standard Stations

ANNUAL 2012

Source		B-8	B-9	B-10	B-11	B-12	E-1	E-2	E-3	E-5	E-7	E-8	E-9	E-11
Year		2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012	2012
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	<20	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	<20	23	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	<20	30	ND	ND	ND	ND	ND
Benzo[e]pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	40 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	<20	21	ND	ND	ND	ND	ND
Fluorene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	<20	24	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	40 UG/KG	0	0	0	0	0	0	0	98	0	0	0	0	0

Source		E-14	E-15	E-17	E-19	E-20	E-21	E-23	E-25	E-26
Year		2012	2012	2012	2012	2012	2012	2012	2012	2012
Analyte	MDL Units	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[a]pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
3,4-Benzo(b)fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[g,h,i]perylene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[k]fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	40 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dimethylnaphthalene	20 UG/KG	ND	ND	ND	23	ND	ND	ND	ND	ND
Fluoranthene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylphenanthrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	30 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,5-Trimethylnaphthalene	20 UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	40 UG/KG	0	0	0	23	0	0	0	0	0

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

**B. Fish Tissue Data.**

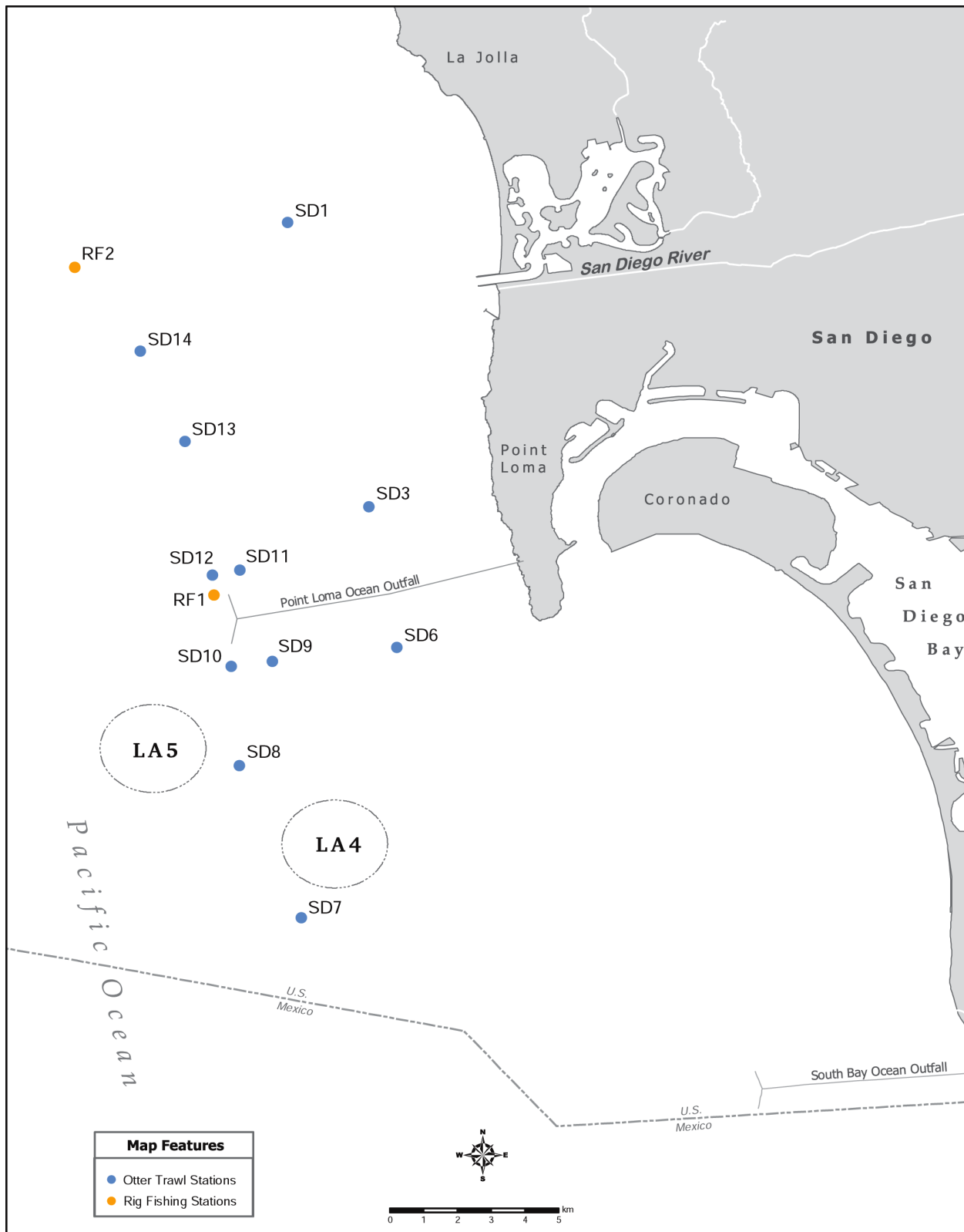
Fish were taken from the stations shown in the below tables during 2011. The fish were dissected, preserved by freezing, and each sample analyzed for trace metals, chlorinated pesticides, PCBs, Lipids, and total solids.

The reported values are annual averages. Results for individual sampling events are contained in the previously published quarterly reports.

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<u>Station</u>	<u>Matrix</u>	<u>Station</u>	<u>Matrix</u>
RF-1	FISH_MUSCLE	TFZONE1 (SD-10 & 12)	FISH_LIVER
RF-2	FISH_MUSCLE	TFZONE2 (SD-13 & 14)	FISH_LIVER
		TFZONE3 (SD-8)	FISH_LIVER
		TFZONE4 (SD-7)	FISH_LIVER

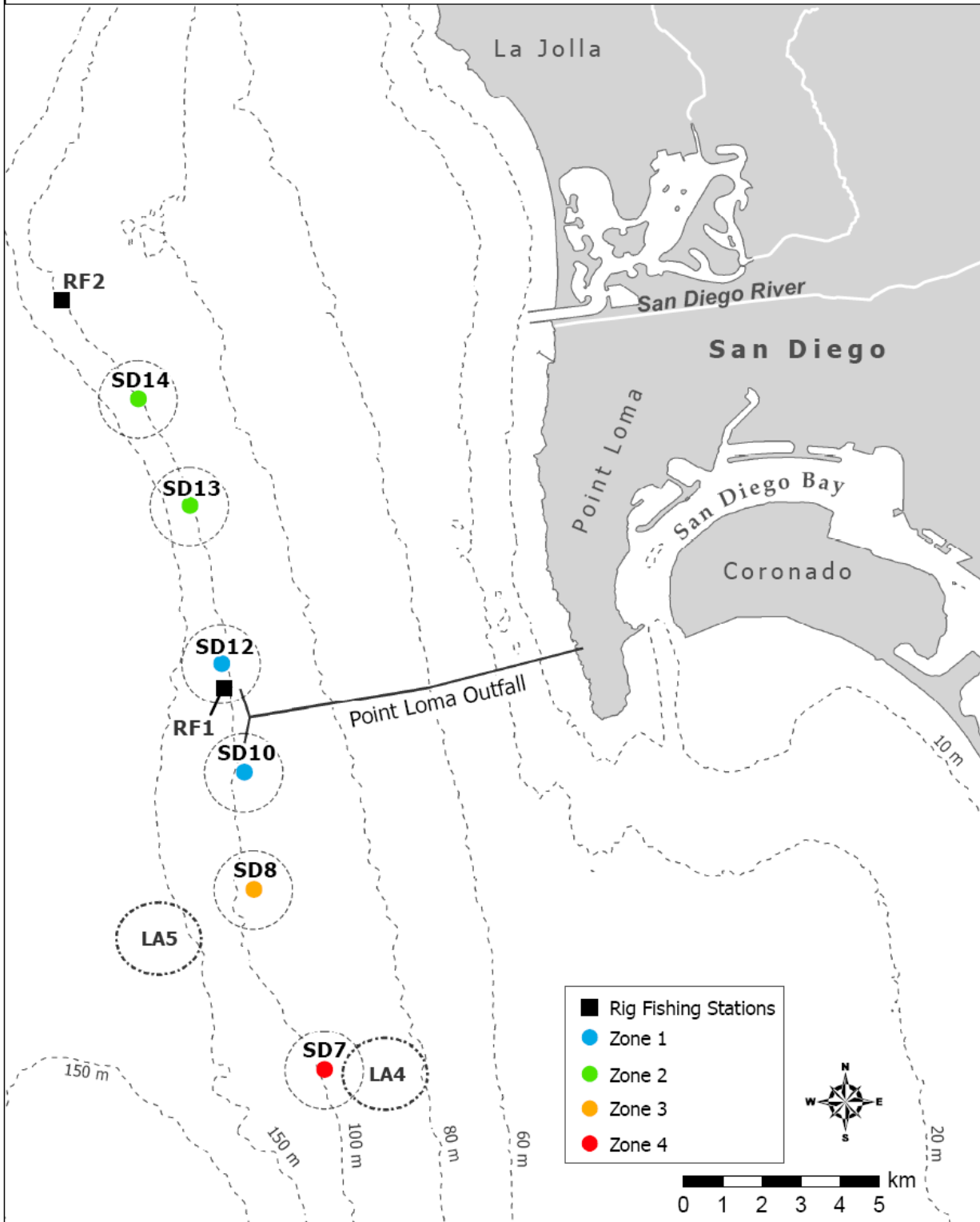
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San Diego Rig Fishing and Trawl Stations



# Point Loma Rig Fishing and Trawl Stations



New Trawl Stations representing zones (i.e. TFZONE1 through TFZONE4)

POINT LOMA WASTEWATER TREATMENT PLANT  
 Annual Fish Tissue - Muscle/Liver  
 FISH - Lipids & Total Solids

Annual 2012

Source:				RF-1	RF-2	TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:				2012	2012	2012	2012	2012	2012
Tissue	Analyte	MDL	Units	Avg	Avg	Avg	Avg	Avg	Avg
Liver	Lipids	.005	WT%			34.3	32.3	46.7	40.7
Liver	Total Solids	.4	WT%			48.0	47.3	55.8	48.3
Muscle	Lipids	.005	WT%	1.25	1.10				
Muscle	Total Solids	.4	WT%	22.3	22.6				

ND= not detected

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL FISH TISSUE - LIVER  
Trace Metals

From: 01-JAN-2012 To: 31-DEC-2012

Source:		TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:		2012	2012	2012	2012
Analyte:	MDL Units	Average	Average	Average	Average
=====	=====	=====	=====	=====	=====
Aluminum	3 MG/KG	28.30	25.70	28.70	21.00
Antimony	.2 MG/KG	ND	ND	ND	ND
Arsenic	.24 MG/KG	2.84	2.57	3.15	2.68
Beryllium	.006 MG/KG	ND	ND	ND	ND
Cadmium	.06 MG/KG	11.20	8.27	6.49	8.45
Chromium	.1 MG/KG	0.20	0.27	0.27	0.23
Copper	.3 MG/KG	4.57	4.63	3.93	5.77
Iron	2 MG/KG	78	76	71	91
Lead	.2 MG/KG	0.23	<0.20	0.23	<0.20
Manganese	.1 MG/KG	0.97	1.03	0.83	0.90
Mercury	.002 MG/KG	0.161	0.129	0.110	0.203
Nickel	.2 MG/KG	<0.20	ND	ND	ND
Selenium	.06 MG/KG	0.53	0.47	0.45	0.46
Silver	.05 MG/KG	<0.05	<0.05	<0.05	0.10
Thallium, Total Recoverable	.4 MG/KG	0.70	0.80	0.83	0.57
Tin	.2 MG/KG	0.83	0.90	0.93	0.77
Zinc	.15 MG/KG	29.5	29.7	25.1	33.9
Total Solids	.4 WT%	48.0	47.3	55.8	48.3

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

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL FISH TISSUE - MUSCLE  
Trace Metals

From: 01-JAN-2012 To: 31-DEC-2012

Source:			RF-1	RF-2
Date:			2012	2012
Analyte:	MDL Units		Average	Average
=====				
Aluminum	3	MG/KG	<3.00	<3.00
Antimony	.2	MG/KG	ND	ND
Arsenic	.24	MG/KG	1.19	1.77
Beryllium	.006	MG/KG	ND	ND
Cadmium	.06	MG/KG	ND	ND
Chromium	.1	MG/KG	0.23	0.20
Copper	.3	MG/KG	ND	ND
Iron	2	MG/KG	<2.00	2.33
Lead	.2	MG/KG	ND	ND
Manganese	.1	MG/KG	ND	ND
Mercury	.002	MG/KG	0.095	0.214
Nickel	.2	MG/KG	ND	ND
Selenium	.06	MG/KG	0.555	0.417
Silver	.05	MG/KG	ND	ND
Thallium, Total Recoverable	.4	MG/KG	0.43	0.50
Tin	.2	MG/KG	ND	ND
Zinc	.15	MG/KG	4.05	3.89
Total Solids	.4	WT%	22.3	22.6

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

POINT LOMA WASTEWATER TREATMENT PLANT  
FISH LIVER - Chlorinated Pesticides

Annual 2012

Source:			TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:			2012	2012	2012	2012
Analyte	MDL	Units	Avg	Avg	Avg	Avg
=====	====	=====	=====	=====	=====	=====
Hexachlorobenzene	1.32	UG/KG	5.1	5.5	6.8	5.4
BHC, Gamma isomer	63.4	UG/KG	ND	ND	ND	ND
Heptachlor	3.82	UG/KG	ND	ND	ND	ND
Aldrin	88.1	UG/KG	ND	ND	ND	ND
Heptachlor epoxide	3.89	UG/KG	ND	ND	ND	ND
o,p-DDE	2.79	UG/KG	E3.2	E2.9	4.1	<2.79
Alpha Endosulfan	118	UG/KG	ND	ND	ND	ND
Alpha (cis) Chlordane	4.56	UG/KG	ND	ND	ND	ND
Trans Nonachlor	2.58	UG/KG	5.0	ND	ND	ND
p,p-DDE	2.08	UG/KG	267	195	193	223
p,p-DDMU	3.29	UG/KG	10.8	10.9	11.0	12.0
Dieldrin	17.1	UG/KG	ND	ND	ND	ND
o,p-DDD	2.02	UG/KG	ND	ND	ND	ND
Endrin	14.2	UG/KG	ND	ND	ND	ND
o,p-DDT	1.62	UG/KG	ND	ND	ND	ND
p,p-DDD	3.36	UG/KG	5.7	3.8	5.6	3.4
p,p-DDT	2.69	UG/KG	3.5	3.1	4.8	<2.69
Mirex	1.49	UG/KG	ND	ND	ND	ND

ND= not detected

NA= not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

Note: Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

POINT LOMA WASTEWATER TREATMENT PLANT  
FISH MUSCLE - Chlorinated Pesticides

Annual 2012

Source:			RF-1	RF-2	RF-3	RF-4
Date:			2012	2012	2012	2012
Analyte	MDL	Units	Avg	Avg	Avg	Avg
=====	====	=====	=====	=====	=====	=====
Hexachlorobenzene	.13	UG/KG	0.57	E0.33	<0.13	<0.13
BHC, Gamma isomer	6.34	UG/KG	ND	ND	ND	ND
Heptachlor	.38	UG/KG	ND	ND	ND	ND
Aldrin	8.81	UG/KG	ND	ND	ND	ND
Heptachlor epoxide	.39	UG/KG	ND	ND	ND	ND
o,p-DDE	.28	UG/KG	ND	<0.28	ND	ND
Alpha Endosulfan	11.8	UG/KG	ND	ND	ND	ND
Alpha (cis) Chlordane	.46	UG/KG	ND	ND	ND	ND
Trans Nonachlor	.26	UG/KG	ND	ND	ND	ND
p,p-DDE	.21	UG/KG	8.57	8.30	1.69	2.76
p,p-DDMU	.33	UG/KG	0.43	<0.33	ND	<0.33
Dieldrin	1.71	UG/KG	ND	ND	ND	ND
o,p-DDD	.2	UG/KG	ND	ND	ND	ND
Endrin	1.42	UG/KG	ND	ND	ND	ND
o,p-DDT	.16	UG/KG	ND	ND	ND	ND
p,p-DDD	.34	UG/KG	ND	<0.34	ND	ND
p,p-DDT	.27	UG/KG	ND	<0.27	ND	ND
Mirex	.15	UG/KG	ND	ND	ND	ND

ND= not detected

NA= not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

Note: Standards for alpha and gamma chlordane are no longer available in the U.S. for the analysis of these compounds.

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL FISH LIVER - Poly Chlorinated Biphenyls (PCB's)

Annual 2012

Source:		TFZONE1	TFZONE2	TFZONE3	TFZONE4
Date:		2012	2012	2012	2012
Analyte	MDL Units	Avg	Avg	Avg	Avg
=====	====	=====	=====	=====	=====
PCB 18	2.86 UG/KG	ND	ND	ND	ND
PCB 28	2.47 UG/KG	<2.47	<2.47	E1.5	<2.47
PCB 49	5.02 UG/KG	E2.63	<5.02	E4.33	<5.02
PCB 37	2.77 UG/KG	ND	ND	ND	ND
PCB 70	2.49 UG/KG	E2.67	E3.43	4.10	4.12
PCB 101	4.34 UG/KG	9.0	13.0	14.3	17.4
PCB 119	2.39 UG/KG	ND	ND	ND	ND
PCB 87	3.01 UG/KG	ND	<3.01	<3.01	<3.01
PCB 110	2.5 UG/KG	8.3	12.8	15.3	15.6
PCB 151	1.86 UG/KG	5.10	5.05	5.27	6.52
PCB 77	2.01 UG/KG	ND	ND	ND	ND
PCB 149	2.34 UG/KG	7.83	10.3	10.6	14.8
PCB 123	2.64 UG/KG	ND	ND	ND	ND
PCB 118	2.06 UG/KG	20.0	24.4	30.0	27.0
PCB 114	3.15 UG/KG	ND	ND	ND	ND
PCB 153/168	2.54 UG/KG	61.3	60.2	74.0	68.8
PCB 105	2.29 UG/KG	5.10	5.20	7.60	6.67
PCB 138	1.73 UG/KG	34.3	33.5	43.0	32.3
PCB 158	2.72 UG/KG	<2.72	2.90	E3.93	E3.35
PCB 187	2.5 UG/KG	19.3	15.7	22.0	19.0
PCB 183	1.55 UG/KG	6.53	5.83	7.23	6.57
PCB 126	1.52 UG/KG	ND	ND	ND	ND
PCB 128	1.23 UG/KG	6.40	6.95	8.10	6.60
PCB 167	1.63 UG/KG	<1.63	1.73	2.50	<1.63
PCB 177	1.91 UG/KG	ND	ND	ND	ND
PCB 156	.64 UG/KG	ND	ND	ND	ND
PCB 157	2.88 UG/KG	ND	ND	ND	ND
PCB 180	2.58 UG/KG	25.3	21.8	28.7	24.2
PCB 170	1.23 UG/KG	8.00	6.73	8.60	7.12
PCB 169	2.76 UG/KG	ND	ND	ND	ND
PCB 189	1.78 UG/KG	ND	ND	ND	ND
PCB 194	1.14 UG/KG	4.93	5.02	6.20	4.68
PCB 206	1.28 UG/KG	5.30	4.47	6.33	3.12

ND= not detected

NA= not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.

POINT LOMA WASTEWATER TREATMENT PLANT  
ANNUAL FISH MUSCLE - Poly Chlorinated Biphenyls (PCB's)

Annual 2012

Source:		RF-1	RF-2	RF-3	RF-4
Date:		2012	2012	2012	2012
Analyte	MDL Units	Avg	Avg	Avg	Avg
=====	====	=====	=====	=====	=====
PCB 18	.29 UG/KG	ND	ND	ND	ND
PCB 28	.28 UG/KG	ND	ND	ND	ND
PCB 49	.5 UG/KG	ND	ND	ND	ND
PCB 37	.28 UG/KG	ND	ND	ND	ND
PCB 70	.25 UG/KG	ND	ND	ND	ND
PCB 101	.43 UG/KG	<0.43	<0.43	ND	ND
PCB 119	.24 UG/KG	ND	ND	ND	ND
PCB 87	.3 UG/KG	ND	ND	ND	ND
PCB 110	.25 UG/KG	ND	<0.25	ND	ND
PCB 151	.19 UG/KG	ND	ND	ND	ND
PCB 77	.2 UG/KG	ND	ND	ND	ND
PCB 149	.23 UG/KG	0.30	0.33	<0.23	<0.23
PCB 123	.26 UG/KG	ND	ND	ND	ND
PCB 118	.21 UG/KG	<0.21	0.43	<0.21	<0.21
PCB 114	.31 UG/KG	ND	ND	ND	ND
PCB 153/168	.25 UG/KG	1.0	1.13	<0.25	0.48
PCB 105	.23 UG/KG	ND	ND	ND	ND
PCB 138	.17 UG/KG	0.50	0.57	<0.17	0.18
PCB 158	.27 UG/KG	ND	ND	ND	ND
PCB 187	.25 UG/KG	<0.25	0.27	<0.25	<0.25
PCB 183	.15 UG/KG	ND	<0.15	ND	<0.15
PCB 126	.15 UG/KG	ND	ND	ND	ND
PCB 128	.12 UG/KG	ND	<0.12	ND	<0.12
PCB 167	.16 UG/KG	ND	ND	ND	ND
PCB 177	.19 UG/KG	ND	ND	ND	ND
PCB 156	.06 UG/KG	ND	ND	ND	ND
PCB 157	.29 UG/KG	ND	ND	ND	ND
PCB 180	.26 UG/KG	E0.43	<0.26	<0.26	<0.26
PCB 170	.12 UG/KG	ND	ND	ND	<0.12
PCB 169	.28 UG/KG	ND	ND	ND	ND
PCB 189	.18 UG/KG	ND	ND	ND	ND
PCB 194	.11 UG/KG	ND	ND	ND	ND
PCB 206	.13 UG/KG	ND	ND	ND	ND

ND= not detected

NA= not analyzed

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS.