V. Ocean Monitoring Data Summary

A. Ocean Sediment Chemistry Data Tables.
B. Fish Tissue Chemistry Data Tables.

Maps, with sampling sites labeled, are included in this section.

Summary of Sampling Technique[8]:

Sediments

Benthic samples are obtained with a chain-rigged van Veen grab from the City's ocean monitoring program vessels. The grab takes $0.1m^2$ of sediment surface. Only grab samples with an undisturbed sediment surface are used. Only the top 2 cm of sediment material in the van Veen grab is taken for chemical analyses. Samples are placed directly into the appropriate labeled container and placed on ice for shipment to the laboratory for analysis. Preservatives are used in accordance with the requirements of 40 CFR and our Quality Assurance Plan. Sediment concentrations are on a based on dry weight of sample.

Fish Tissue

Several species of flat fish and rock fish are taken by Otter trawls and/or rig fishing. The dissected muscle and liver tissues are frozen and delivered to the laboratory for analysis. Tissue samples are kept frozen until prepared for analyses.

8 For complete description of the sampling protocols, dissections, 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 2007

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.

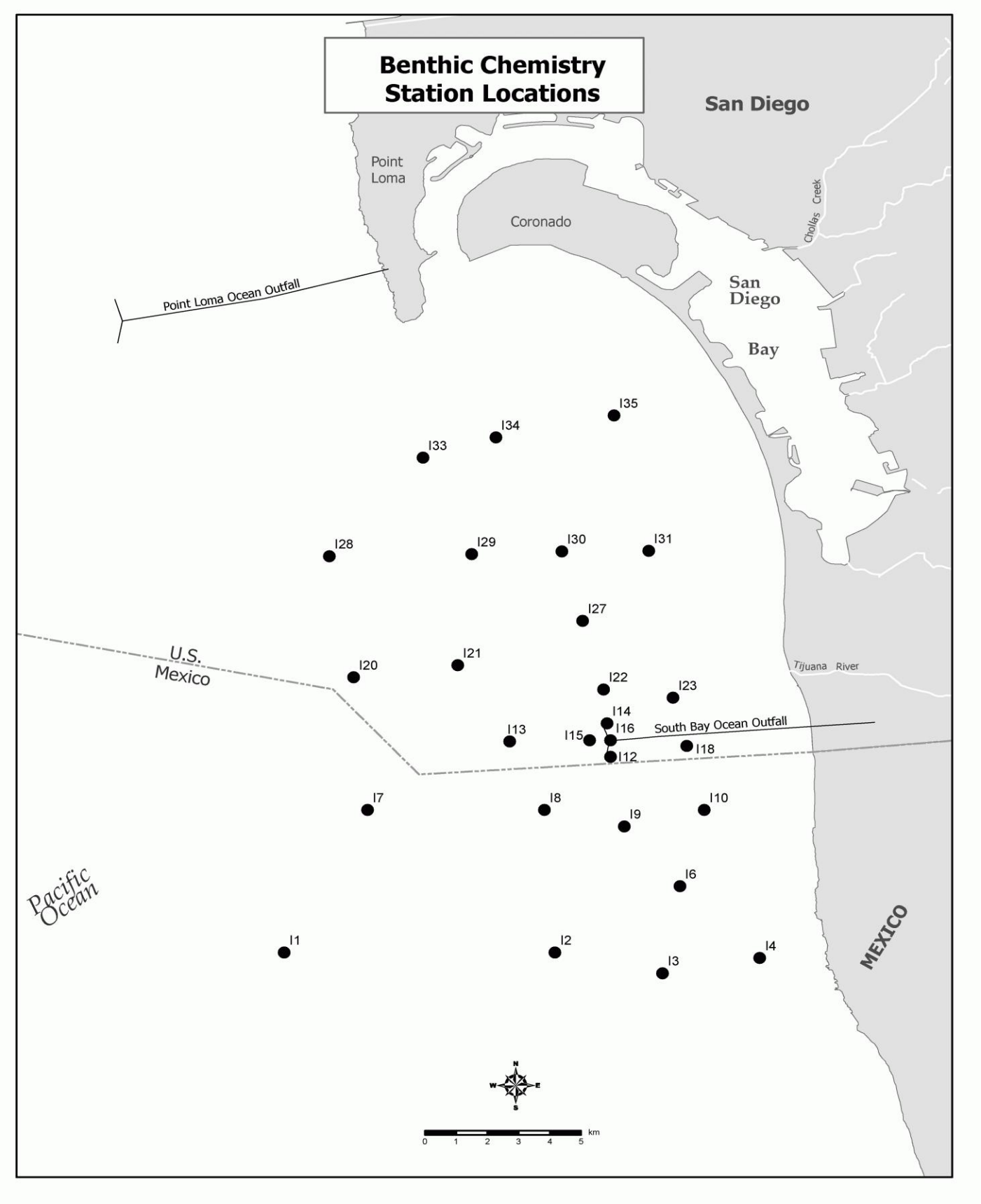
Station

I-1	I-12	I-23
I-2	I-13	I-27
I-3	I-14	I-28
I-4	I-15	I-29
I-6	I-16	I-30
I-7	I-18	I-31
I-8	I-20	I-33
I-9	I-21	I-34
I-10	I-22	I-35

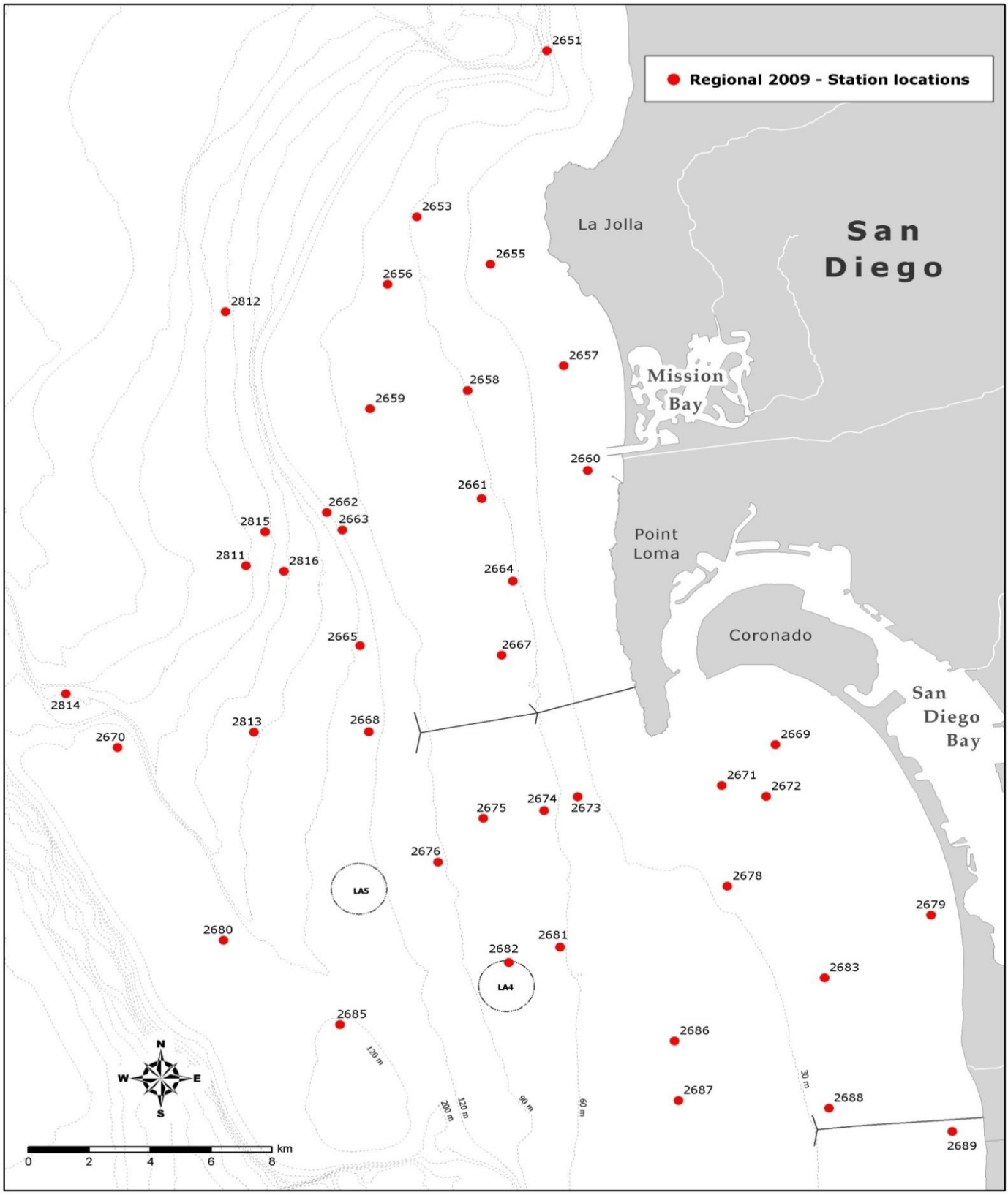
2009 Random Stations

Source	Sample Date	Source	Sample Date	Source	Sample Date
2651	21-Jul-09	2668	20-Jul-09	2682	14-Jul-09
2653	21-Jul-09	2669	14-Jul-09	2683	13-Jul-09
2656	21-Jul-09	2670	15-Jul-09	2685	15-Jul-09
2657	21-Jul-09	2671	14-Jul-09	2686	13-Jul-09
2658	21-Jul-09	2672	14-Jul-09	2688	10-Jul-09
2659	27-Jul-09	2673	14-Jul-09	2689	10-Jul-09
2660	21-Jul-09	2674	15-Jul-09	2811	28-Jul-09
2661	21-Jul-09	2675	15-Jul-09	2812	28-Jul-09
2662	27-Jul-09	2676	15-Jul-09	2813	28-Jul-09
2663	27-Jul-09	2678	14-Jul-09	2814	28-Jul-09
2664	28-Jul-09	2679	13-Jul-09	2815	28-Jul-09
2665	27-Jul-09	2680	15-Jul-09	2816	28-Jul-09
2667	28-Jul-09	2681	14-Jul-09		

SBWRP Benthic (ocean sediment) stations.



SOUTH BAY WASTEWATER TREATMENT PLANT random stations map



SOUTH BAY OCEAN OUTFALL MONITORING
International Stations
Sulfide and Total Volatile Solids Analysis

Annual 2009

	MDL	Units	I-1 Avg	I-2 Avg	I-3 Avg	I-4 Avg	I-6 Avg	I-7 Avg	I-8 Avg	I-9 Avg	I-10 Avg
Sulfides-Total	.14	MG/KG	0.93	0.32	0.86	<0.14	0.15	0.26	0.28	1.17	0.55
Total Volatile Solids	.11	WT%	1.06	0.55	0.43	0.43	0.49	0.62	0.59	1.19	0.87

	MDL	Units	I-12 Avg	I-13 Avg	I-14 Avg	I-15 Avg	I-16 Avg	I-18 Avg	I-20 Avg	I-21 Avg	I-22 Avg
Sulfides-Total	.14	MG/KG	4.90	0.25	1.19	0.61	12.70	1.41	0.18	0.57	1.24
Total Volatile Solids	.11	WT%	0.99	0.46	1.19	0.54	4.27	1.14	0.48	0.57	0.91

	MDL	Units	I-23 Avg	I-27 Avg	I-28 Avg	I-29 Avg	I-30 Avg	I-31 Avg	I-33 Avg	I-34 Avg	I-35 Avg
Sulfides-Total	.14	MG/KG	0.73	2.43	0.59	3.84	1.25	0.36	1.53	0.90	13.1
Total Volatile Solids	.11	WT%	1.62	1.08	1.65	2.15	1.11	0.71	1.48	0.53	1.51

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-1 P456949 05-JAN-2009	I-1 P479296 09-JUL-2009	I-2 P456961 05-JAN-2009	I-2 P479313 09-JUL-2009	I-3 P456966 05-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.000	0.004	0.000	0.000	0.000
>2.0 to 2.4 microns			0.047	0.097	0.000	0.000	0.000
>2.4 to 2.9 microns, Phi 8.5			0.181	0.190	0.000	0.000	0.000
>2.9 to 3.4 microns			0.195	0.208	0.000	0.000	0.000
>3.4 to 3.9 microns, Phi 8			0.217	0.233	0.000	0.000	0.000
>3.9 to 4 microns			0.047	0.051	0.000	0.000	0.000
>4.0 to 4.3 microns			0.135	0.147	0.000	0.000	0.000
>4.3 to 4.5 microns			0.087	0.095	0.000	0.000	0.000
>4.5 to 5 microns			0.239	0.262	0.000	0.000	0.000
>5 to 5.5 microns			0.241	0.266	0.000	0.000	0.000
>5.5 to 5.7 microns			0.093	0.103	0.000	0.000	0.000
>5.7 to 5.9 microns, Phi 7.5			0.093	0.103	0.000	0.000	0.000
>5.9 to 7.8 microns, Phi 7			0.898	1.010	0.000	0.121	0.000
>7.8 to 8 microns			0.091	0.104	0.000	0.023	0.000
>8 to 8.5 microns			0.218	0.249	0.000	0.054	0.000
>8.5 to 8.9 microns			0.168	0.191	0.000	0.042	0.000
>8.9 to 9.1 microns			0.084	0.097	0.000	0.021	0.000
>9.1 to 9.5 microns			0.163	0.187	0.000	0.042	0.000
>9.5 to 9.8 microns			0.118	0.135	0.000	0.030	0.000
>9.8 to 10.1 microns			0.115	0.131	0.000	0.029	0.000
>10.1 to 10.6 microns			0.194	0.223	0.039	0.051	0.000
>10.6 to 11.1 microns			0.185	0.213	0.037	0.049	0.000
>11.1 to 11.3 microns			0.072	0.083	0.014	0.019	0.000
>11.3 to 11.7 microns, Phi 6.5			0.139	0.160	0.028	0.037	0.000
>11.7 to 14 microns			0.708	0.812	0.148	0.196	0.000
>14 to 14.8 microns			0.218	0.250	0.046	0.062	0.000
>14.8 to 15.6 microns			0.203	0.232	0.043	0.058	0.000
>15.6 to 16 microns			0.096	0.109	0.021	0.027	0.000
>16 to 20 microns			0.823	0.930	0.173	0.237	0.000
>20 to 23 microns, Phi 5.5			0.473	0.526	0.000	0.137	0.000
>23 to 27 microns			0.506	0.551	0.000	0.139	0.000
>27 to 31 microns, Phi 5			0.426	0.454	0.000	0.081	0.000
>31 to 32 microns			0.100	0.105	0.000	0.000	0.000
>32 to 35.6 microns			0.351	0.366	0.000	0.000	0.000
>35.6 to 37 microns, Phi 4.75			0.137	0.142	0.000	0.000	0.000
>37 to 39.6 microns			0.252	0.259	0.000	0.000	0.000
>39.6 to 43.6 microns			0.445	0.451	0.000	0.000	0.000
>43.6 to 44 microns, Phi 4.5			0.042	0.043	0.000	0.000	0.000
>44 to 45 microns			0.107	0.108	0.000	0.000	0.000
>45 to 46.4 microns			0.201	0.202	0.000	0.000	0.000
>46.4 to 53 microns, Phi 4.25			0.975	0.974	0.000	0.025	0.000
>53 to 62.5 microns, Phi 4			1.990	1.970	0.057	0.159	0.000
>62.5 to 64 microns			0.376	0.372	0.023	0.027	0.000
>64 to 71.7 microns			2.360	2.340	0.138	0.158	0.000

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-1 P456949 05-JAN-2009	I-1 P479296 09-JUL-2009	I-2 P456961 05-JAN-2009	I-2 P479313 09-JUL-2009	I-3 P456966 05-JAN-2009
>71.7 to 74 microns			0.797	0.788	0.045	0.051	0.000
>74 to 79.6 microns			2.240	2.210	0.127	0.145	0.026
>79.6 to 87.6 microns			3.750	3.700	0.214	0.243	0.086
>87.6 to 88 microns, Phi 3.5			0.178	0.176	0.010	0.012	0.004
>88 to 90 microns			1.160	1.150	0.075	0.085	0.028
>90 to 105 microns, Phi 3.25			9.430	9.300	0.679	0.772	0.243
>105 to 125 microns, Phi 3			14.200	14.000	1.530	1.740	0.534
>125 to 149 microns, Phi 2.75			16.200	15.800	3.000	3.410	1.120
>149 to 160 microns			6.220	6.000	2.030	2.270	0.849
>160 to 177 microns, Phi 2.5			8.280	7.960	3.490	3.870	1.550
>177 to 197 microns			7.090	6.800	5.190	5.600	2.580
>197 to 210 microns, Phi 2.25			3.220	3.120	3.930	4.080	2.220
>210 to 217 microns			1.490	1.450	2.150	2.210	1.250
>217 to 245 microns			4.340	4.310	8.800	8.740	5.630
>245 to 250 microns, Phi 2			0.564	0.574	1.580	1.530	1.070
>250 to 300 microns, Phi 1.75			3.470	3.690	14.600	13.700	11.200
>300 to 320 microns			0.573	0.683	4.740	4.240	4.430
>320 to 350 microns, Phi 1.5			0.715	0.865	6.350	5.670	6.150
>350 to 360 microns			0.137	0.181	1.710	1.520	1.910
>360 to 400 microns			0.486	0.647	6.240	5.560	7.110
>400 to 420 microns, Phi 1.25			0.145	0.209	2.410	2.190	3.170
>420 to 440 microns			0.138	0.199	2.300	2.090	3.030
>440 to 500 microns, Phi 1			0.280	0.422	5.470	5.110	8.040
>500 to 590 microns, Phi 0.75			0.068	0.103	6.020	5.860	9.910
>590 to 630 microns			0.000	0.000	2.020	2.060	3.590
>630 to 696 microns			0.000	0.000	2.940	3.030	5.260
>696 to 710 microns, Phi 0.5			0.000	0.000	0.529	0.559	0.952
>710 to 773 microns			0.000	0.000	2.260	2.390	4.060
>773 to 840 microns, Phi 0.25			0.000	0.000	1.910	2.060	3.350
>840 to 850 microns			0.000	0.000	0.269	0.291	0.471
>850 to 930 microns			0.000	0.000	1.840	2.000	3.140
>930 to 1000 microns, Phi 0			0.000	0.000	1.310	1.430	2.160
1000 to 1100 microns			0.000	0.000	1.280	1.410	1.980
>1100 to 1190 microns, Phi -0.25			0.000	0.000	0.856	0.950	1.280
>1190 to 1300 microns			0.000	0.000	0.601	0.671	0.834
>1300 to 1410 microns, Phi -0.5			0.000	0.000	0.392	0.402	0.477
>1410 to 1680 microns, Phi -0.75			0.000	0.000	0.313	0.292	0.329
>1680 to 2000 microns, Phi -1			0.000	0.000	0.000	0.000	0.000
>2000 microns*			ND	ND	ND	ND	ND
Totals:			99.980	100.075	99.977	100.067	100.023

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-3 P479316 09-JUL-2009	I-4 P456970 05-JAN-2009	I-4 P479323 09-JUL-2009	I-6 P456975 05-JAN-2009	I-6 P479328 09-JUL-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.000	0.000	0.000	0.000	0.000
>2.0 to 2.4 microns			0.000	0.000	0.000	0.000	0.000
>2.4 to 2.9 microns, Phi 8.5			0.000	0.000	0.000	0.000	0.000
>2.9 to 3.4 microns			0.000	0.000	0.000	0.000	0.000
>3.4 to 3.9 microns, Phi 8			0.000	0.000	0.000	0.000	0.000
>3.9 to 4 microns			0.000	0.000	0.000	0.000	0.000
>4.0 to 4.3 microns			0.000	0.000	0.000	0.000	0.000
>4.3 to 4.5 microns			0.000	0.000	0.000	0.000	0.000
>4.5 to 5 microns			0.000	0.000	0.000	0.000	0.000
>5 to 5.5 microns			0.000	0.000	0.000	0.000	0.000
>5.5 to 5.7 microns			0.000	0.000	0.000	0.000	0.000
>5.7 to 5.9 microns, Phi 7.5			0.004	0.000	0.000	0.000	0.000
>5.9 to 7.8 microns, Phi 7			0.228	0.000	0.000	0.000	0.000
>7.8 to 8 microns			0.023	0.000	0.000	0.000	0.000
>8 to 8.5 microns			0.055	0.000	0.000	0.000	0.000
>8.5 to 8.9 microns			0.042	0.000	0.000	0.000	0.000
>8.9 to 9.1 microns			0.021	0.000	0.000	0.000	0.000
>9.1 to 9.5 microns			0.041	0.000	0.000	0.000	0.000
>9.5 to 9.8 microns			0.030	0.000	0.000	0.000	0.000
>9.8 to 10.1 microns			0.029	0.000	0.000	0.000	0.000
>10.1 to 10.6 microns			0.049	0.000	0.000	0.000	0.000
>10.6 to 11.1 microns			0.047	0.000	0.000	0.000	0.000
>11.1 to 11.3 microns			0.018	0.000	0.000	0.000	0.000
>11.3 to 11.7 microns, Phi 6.5			0.035	0.000	0.000	0.000	0.000
>11.7 to 14 microns			0.180	0.000	0.000	0.000	0.000
>14 to 14.8 microns			0.055	0.000	0.000	0.000	0.000
>14.8 to 15.6 microns			0.051	0.000	0.000	0.000	0.000
>15.6 to 16 microns			0.024	0.000	0.000	0.000	0.000
>16 to 20 microns			0.202	0.000	0.000	0.000	0.000
>20 to 23 microns, Phi 5.5			0.106	0.000	0.000	0.000	0.000
>23 to 27 microns			0.000	0.000	0.000	0.000	0.000
>27 to 31 microns, Phi 5			0.000	0.000	0.000	0.000	0.000
>31 to 32 microns			0.000	0.000	0.000	0.000	0.000
>32 to 35.6 microns			0.000	0.000	0.030	0.000	0.000
>35.6 to 37 microns, Phi 4.75			0.000	0.000	0.030	0.000	0.000
>37 to 39.6 microns			0.000	0.008	0.054	0.000	0.008
>39.6 to 43.6 microns			0.000	0.080	0.093	0.000	0.084
>43.6 to 44 microns, Phi 4.5			0.000	0.008	0.009	0.000	0.008
>44 to 45 microns			0.000	0.019	0.022	0.000	0.020
>45 to 46.4 microns			0.000	0.037	0.040	0.000	0.033
>46.4 to 53 microns, Phi 4.25			0.000	0.176	0.188	0.000	0.150
>53 to 62.5 microns, Phi 4			0.000	0.336	0.337	0.000	0.235
>62.5 to 64 microns			0.000	0.060	0.059	0.000	0.038
>64 to 71.7 microns			0.000	0.346	0.326	0.047	0.200

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-3 P479316 09-JUL-2009	I-4 P456970 05-JAN-2009	I-4 P479323 09-JUL-2009	I-6 P456975 05-JAN-2009	I-6 P479328 09-JUL-2009
>71.7 to 74 microns			0.000	0.110	0.102	0.025	0.060
>74 to 79.6 microns			0.000	0.285	0.255	0.062	0.148
>79.6 to 87.6 microns			0.000	0.433	0.373	0.091	0.212
>87.6 to 88 microns, Phi 3.5			0.000	0.021	0.018	0.004	0.010
>88 to 90 microns			0.000	0.118	0.094	0.025	0.057
>90 to 105 microns, Phi 3.25			0.040	0.887	0.669	0.200	0.432
>105 to 125 microns, Phi 3			0.267	1.250	0.772	0.340	0.667
>125 to 149 microns, Phi 2.75			0.551	1.650	0.781	0.578	1.020
>149 to 160 microns			0.430	0.916	0.333	0.391	0.630
>160 to 177 microns, Phi 2.5			0.800	1.520	0.493	0.696	1.080
>177 to 197 microns			1.410	2.240	0.598	1.150	1.640
>197 to 210 microns, Phi 2.25			1.300	1.870	0.436	1.050	1.380
>210 to 217 microns			0.741	1.050	0.236	0.594	0.770
>217 to 245 microns			3.560	4.890	1.070	2.950	3.600
>245 to 250 microns, Phi 2			0.703	0.949	0.204	0.592	0.698
>250 to 300 microns, Phi 1.75			7.990	10.700	2.510	7.280	8.040
>300 to 320 microns			3.630	4.740	1.470	3.760	3.840
>320 to 350 microns, Phi 1.5			5.170	6.640	2.260	5.460	5.510
>350 to 360 microns			1.760	2.140	0.983	1.990	1.940
>360 to 400 microns			6.660	7.930	3.920	7.530	7.310
>400 to 420 microns, Phi 1.25			3.270	3.500	2.530	3.780	3.580
>420 to 440 microns			3.120	3.330	2.410	3.600	3.410
>440 to 500 microns, Phi 1			8.980	8.450	8.800	10.100	9.430
>500 to 590 microns, Phi 0.75			12.100	9.690	14.800	12.800	11.800
>590 to 630 microns			4.690	3.230	6.740	4.630	4.260
>630 to 696 microns			6.920	4.650	10.200	6.740	6.200
>696 to 710 microns, Phi 0.5			1.280	0.806	1.950	1.200	1.110
>710 to 773 microns			5.460	3.440	8.330	5.120	4.730
>773 to 840 microns, Phi 0.25			4.460	2.740	6.740	4.130	3.790
>840 to 850 microns			0.626	0.384	0.945	0.579	0.531
>850 to 930 microns			4.120	2.550	6.100	3.820	3.490
>930 to 1000 microns, Phi 0			2.780	1.740	3.990	2.590	2.350
1000 to 1100 microns			2.490	1.620	3.400	2.340	2.120
>1100 to 1190 microns, Phi -0.25			1.580	1.060	2.090	1.500	1.360
>1190 to 1300 microns			0.988	0.710	1.210	0.953	0.865
>1300 to 1410 microns, Phi -0.5			0.555	0.413	0.657	0.538	0.493
>1410 to 1680 microns, Phi -0.75			0.373	0.290	0.420	0.588	0.546
>1680 to 2000 microns, Phi -1			0.000	0.000	0.000	0.106	0.098
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.044	100.012	100.077	99.929	99.983

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-7 P456982 05-JAN-2009	I-7 P479333 09-JUL-2009	I-8 P457172 07-JAN-2009	I-8 P479338 09-JUL-2009	I-9 P456987 05-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.000	0.000	0.000	0.000	0.000
>2.0 to 2.4 microns			0.000	0.000	0.000	0.000	0.047
>2.4 to 2.9 microns, Phi 8.5			0.000	0.000	0.000	0.000	0.173
>2.9 to 3.4 microns			0.000	0.117	0.000	0.000	0.174
>3.4 to 3.9 microns, Phi 8			0.000	0.161	0.000	0.109	0.179
>3.9 to 4 microns			0.000	0.035	0.000	0.024	0.037
>4.0 to 4.3 microns			0.000	0.100	0.000	0.068	0.108
>4.3 to 4.5 microns			0.000	0.065	0.000	0.044	0.069
>4.5 to 5 microns			0.000	0.180	0.000	0.121	0.182
>5 to 5.5 microns			0.056	0.178	0.059	0.120	0.179
>5.5 to 5.7 microns			0.028	0.069	0.030	0.047	0.069
>5.7 to 5.9 microns, Phi 7.5			0.028	0.068	0.029	0.046	0.068
>5.9 to 7.8 microns, Phi 7			0.259	0.646	0.274	0.446	0.639
>7.8 to 8 microns			0.025	0.063	0.027	0.045	0.065
>8 to 8.5 microns			0.060	0.150	0.065	0.108	0.155
>8.5 to 8.9 microns			0.046	0.114	0.050	0.083	0.119
>8.9 to 9.1 microns			0.023	0.056	0.025	0.042	0.061
>9.1 to 9.5 microns			0.044	0.108	0.048	0.081	0.118
>9.5 to 9.8 microns			0.032	0.078	0.035	0.059	0.085
>9.8 to 10.1 microns			0.031	0.076	0.034	0.057	0.082
>10.1 to 10.6 microns			0.050	0.124	0.056	0.096	0.141
>10.6 to 11.1 microns			0.048	0.118	0.054	0.091	0.134
>11.1 to 11.3 microns			0.019	0.046	0.021	0.036	0.052
>11.3 to 11.7 microns, Phi 6.5			0.036	0.088	0.040	0.069	0.103
>11.7 to 14 microns			0.178	0.431	0.207	0.352	0.551
>14 to 14.8 microns			0.054	0.129	0.064	0.109	0.176
>14.8 to 15.6 microns			0.049	0.117	0.059	0.101	0.174
>15.6 to 16 microns			0.023	0.054	0.028	0.048	0.087
>16 to 20 microns			0.191	0.449	0.242	0.409	0.793
>20 to 23 microns, Phi 5.5			0.099	0.240	0.140	0.234	0.549
>23 to 27 microns			0.000	0.238	0.149	0.242	0.734
>27 to 31 microns, Phi 5			0.000	0.182	0.121	0.191	0.801
>31 to 32 microns			0.000	0.039	0.027	0.042	0.227
>32 to 35.6 microns			0.000	0.129	0.091	0.138	0.900
>35.6 to 37 microns, Phi 4.75			0.000	0.045	0.033	0.050	0.413
>37 to 39.6 microns			0.000	0.080	0.058	0.087	0.791
>39.6 to 43.6 microns			0.000	0.117	0.087	0.128	1.690
>43.6 to 44 microns, Phi 4.5			0.000	0.011	0.008	0.012	0.160
>44 to 45 microns			0.000	0.028	0.021	0.030	0.411
>45 to 46.4 microns			0.000	0.041	0.031	0.045	0.898
>46.4 to 53 microns, Phi 4.25			0.000	0.182	0.138	0.204	4.420
>53 to 62.5 microns, Phi 4			0.051	0.263	0.201	0.310	9.060
>62.5 to 64 microns			0.021	0.042	0.032	0.051	1.640
>64 to 71.7 microns			0.112	0.220	0.171	0.283	9.000

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-7 P456982 05-JAN-2009	I-7 P479333 09-JUL-2009	I-8 P457172 07-JAN-2009	I-8 P479338 09-JUL-2009	I-9 P456987 05-JAN-2009
>71.7 to 74 microns			0.034	0.066	0.052	0.089	2.790
>74 to 79.6 microns			0.088	0.165	0.131	0.234	6.670
>79.6 to 87.6 microns			0.132	0.241	0.197	0.366	9.220
>87.6 to 88 microns, Phi 3.5			0.006	0.011	0.009	0.018	0.438
>88 to 90 microns			0.037	0.065	0.057	0.112	2.060
>90 to 105 microns, Phi 3.25			0.295	0.495	0.452	0.924	13.300
>105 to 125 microns, Phi 3			0.476	0.717	0.769	1.660	11.500
>125 to 149 microns, Phi 2.75			0.717	0.943	1.230	2.680	7.660
>149 to 160 microns			0.423	0.490	0.764	1.590	2.030
>160 to 177 microns, Phi 2.5			0.708	0.778	1.310	2.640	2.330
>177 to 197 microns			1.040	1.040	1.980	3.730	1.630
>197 to 210 microns, Phi 2.25			0.859	0.789	1.660	2.830	0.694
>210 to 217 microns			0.478	0.431	0.926	1.550	0.312
>217 to 245 microns			2.230	1.920	4.280	6.530	0.919
>245 to 250 microns, Phi 2			0.433	0.363	0.826	1.200	0.121
>250 to 300 microns, Phi 1.75			5.070	4.130	9.220	11.800	0.816
>300 to 320 microns			2.530	2.050	4.080	4.330	0.175
>320 to 350 microns, Phi 1.5			3.690	3.010	5.760	5.910	0.228
>350 to 360 microns			1.370	1.150	1.900	1.730	0.055
>360 to 400 microns			5.250	4.430	7.110	6.370	0.199
>400 to 420 microns, Phi 1.25			2.820	2.480	3.300	2.650	0.075
>420 to 440 microns			2.690	2.360	3.150	2.520	0.071
>440 to 500 microns, Phi 1			8.370	7.650	8.480	6.300	0.170
>500 to 590 microns, Phi 0.75			12.300	11.800	10.500	7.260	0.043
>590 to 630 microns			5.340	5.300	3.810	2.510	0.000
>630 to 696 microns			8.110	8.120	5.570	3.670	0.000
>696 to 710 microns, Phi 0.5			1.610	1.640	1.000	0.662	0.000
>710 to 773 microns			6.860	6.990	4.280	2.820	0.000
>773 to 840 microns, Phi 0.25			5.980	6.150	3.490	2.370	0.000
>840 to 850 microns			0.845	0.869	0.490	0.334	0.000
>850 to 930 microns			5.620	5.780	3.250	2.260	0.000
>930 to 1000 microns, Phi 0			3.850	3.960	2.220	1.580	0.000
1000 to 1100 microns			3.360	3.460	2.030	1.510	0.000
>1100 to 1190 microns, Phi -0.25			2.100	2.160	1.310	1.000	0.000
>1190 to 1300 microns			1.230	1.260	0.847	0.690	0.000
>1300 to 1410 microns, Phi -0.5			0.668	0.681	0.484	0.406	0.000
>1410 to 1680 microns, Phi -0.75			0.689	0.435	0.332	0.290	0.000
>1680 to 2000 microns, Phi -1			0.124	0.000	0.000	0.000	0.000
>2000 microns*			ND	ND	ND	ND	ND
Totals:			99.995	100.056	100.011	99.983	100.020

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-9 P479343 09-JUL-2009	I-10 P456955 05-JAN-2009	I-10 P479302 09-JUL-2009	I-12 P457131 07-JAN-2009	I-12 P479950 10-JUL-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.007	0.000	0.000	0.000	0.000
>2.0 to 2.4 microns			0.147	0.000	0.000	0.043	0.043
>2.4 to 2.9 microns, Phi 8.5			0.186	0.094	0.000	0.158	0.159
>2.9 to 3.4 microns			0.188	0.156	0.109	0.164	0.165
>3.4 to 3.9 microns, Phi 8			0.197	0.163	0.133	0.175	0.176
>3.9 to 4 microns			0.041	0.035	0.028	0.037	0.037
>4.0 to 4.3 microns			0.118	0.099	0.082	0.106	0.107
>4.3 to 4.5 microns			0.076	0.064	0.053	0.068	0.069
>4.5 to 5 microns			0.200	0.170	0.141	0.183	0.184
>5 to 5.5 microns			0.198	0.169	0.142	0.182	0.183
>5.5 to 5.7 microns			0.076	0.065	0.055	0.070	0.071
>5.7 to 5.9 microns, Phi 7.5			0.075	0.064	0.054	0.069	0.070
>5.9 to 7.8 microns, Phi 7			0.704	0.612	0.524	0.658	0.667
>7.8 to 8 microns			0.071	0.062	0.054	0.067	0.068
>8 to 8.5 microns			0.170	0.147	0.129	0.159	0.162
>8.5 to 8.9 microns			0.131	0.113	0.099	0.122	0.124
>8.9 to 9.1 microns			0.066	0.057	0.050	0.062	0.063
>9.1 to 9.5 microns			0.128	0.110	0.097	0.120	0.122
>9.5 to 9.8 microns			0.093	0.080	0.070	0.087	0.088
>9.8 to 10.1 microns			0.090	0.077	0.068	0.084	0.086
>10.1 to 10.6 microns			0.153	0.130	0.117	0.143	0.145
>10.6 to 11.1 microns			0.146	0.124	0.111	0.136	0.139
>11.1 to 11.3 microns			0.057	0.048	0.043	0.053	0.054
>11.3 to 11.7 microns, Phi 6.5			0.111	0.094	0.085	0.103	0.105
>11.7 to 14 microns			0.592	0.484	0.444	0.542	0.551
>14 to 14.8 microns			0.188	0.150	0.139	0.170	0.173
>14.8 to 15.6 microns			0.184	0.143	0.133	0.164	0.166
>15.6 to 16 microns			0.091	0.069	0.065	0.080	0.081
>16 to 20 microns			0.829	0.599	0.572	0.711	0.718
>20 to 23 microns, Phi 5.5			0.563	0.365	0.358	0.455	0.456
>23 to 27 microns			0.736	0.423	0.423	0.554	0.549
>27 to 31 microns, Phi 5			0.785	0.396	0.404	0.546	0.530
>31 to 32 microns			0.219	0.101	0.105	0.144	0.138
>32 to 35.6 microns			0.860	0.379	0.396	0.548	0.517
>35.6 to 37 microns, Phi 4.75			0.391	0.163	0.172	0.239	0.222
>37 to 39.6 microns			0.745	0.307	0.325	0.452	0.417
>39.6 to 43.6 microns			1.570	0.624	0.666	0.922	0.825
>43.6 to 44 microns, Phi 4.5			0.149	0.059	0.063	0.088	0.078
>44 to 45 microns			0.382	0.152	0.162	0.224	0.199
>45 to 46.4 microns			0.831	0.335	0.358	0.483	0.415
>46.4 to 53 microns, Phi 4.25			4.100	1.710	1.820	2.410	2.040
>53 to 62.5 microns, Phi 4			8.460	4.100	4.320	5.270	4.300
>62.5 to 64 microns			1.540	0.823	0.859	1.000	0.803
>64 to 71.7 microns			8.540	5.320	5.500	5.960	4.740

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-9 P479343 09-JUL-2009	I-10 P456955 05-JAN-2009	I-10 P479302 09-JUL-2009	I-12 P457131 07-JAN-2009	I-12 P479950 10-JUL-2009
>71.7 to 74 microns			2.660	1.820	1.870	1.940	1.540
>74 to 79.6 microns			6.420	4.980	5.070	4.980	3.960
>79.6 to 87.6 microns			8.970	8.080	8.170	7.520	6.010
>87.6 to 88 microns, Phi 3.5			0.427	0.384	0.389	0.357	0.286
>88 to 90 microns			2.030	2.200	2.210	1.890	1.550
>90 to 105 microns, Phi 3.25			13.300	16.000	16.000	13.200	11.100
>105 to 125 microns, Phi 3			11.700	17.200	17.000	13.700	12.600
>125 to 149 microns, Phi 2.75			8.050	13.100	12.900	11.100	11.400
>149 to 160 microns			2.200	3.630	3.600	3.440	3.960
>160 to 177 microns, Phi 2.5			2.550	4.200	4.180	4.260	5.190
>177 to 197 microns			1.840	2.910	2.900	3.410	4.610
>197 to 210 microns, Phi 2.25			0.800	1.210	1.210	1.590	2.320
>210 to 217 microns			0.363	0.536	0.537	0.744	1.120
>217 to 245 microns			1.090	1.550	1.550	2.310	3.620
>245 to 250 microns, Phi 2			0.147	0.198	0.199	0.324	0.530
>250 to 300 microns, Phi 1.75			1.010	1.290	1.290	2.290	3.880
>300 to 320 microns			0.223	0.256	0.255	0.526	0.916
>320 to 350 microns, Phi 1.5			0.292	0.330	0.329	0.686	1.190
>350 to 360 microns			0.071	0.076	0.075	0.165	0.282
>360 to 400 microns			0.258	0.276	0.271	0.597	1.020
>400 to 420 microns, Phi 1.25			0.097	0.100	0.097	0.216	0.352
>420 to 440 microns			0.092	0.095	0.092	0.206	0.336
>440 to 500 microns, Phi 1			0.218	0.224	0.214	0.464	0.724
>500 to 590 microns, Phi 0.75			0.055	0.057	0.054	0.116	0.564
>590 to 630 microns			0.000	0.000	0.000	0.000	0.012
>630 to 696 microns			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
>710 to 773 microns			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
>840 to 850 microns			0.000	0.000	0.000	0.000	0.000
>850 to 930 microns			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
1000 to 1100 microns			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
>1190 to 1300 microns			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
>1410 to 1680 microns, Phi -0.75			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
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.047	100.137	99.990	100.042	100.077

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-13 P457136 07-JAN-2009	I-13 P479307 09-JUL-2009	I-14 P457140 07-JAN-2009	I-14 P479958 10-JUL-2009	I-15 P457147 07-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.000	0.000	0.264	0.007	0.000
>2.0 to 2.4 microns			0.000	0.000	0.225	0.145	0.000
>2.4 to 2.9 microns, Phi 8.5			0.000	0.000	0.287	0.187	0.000
>2.9 to 3.4 microns			0.000	0.000	0.293	0.193	0.000
>3.4 to 3.9 microns, Phi 8			0.000	0.000	0.309	0.206	0.000
>3.9 to 4 microns			0.000	0.021	0.065	0.043	0.018
>4.0 to 4.3 microns			0.000	0.062	0.186	0.124	0.054
>4.3 to 4.5 microns			0.000	0.040	0.120	0.080	0.035
>4.5 to 5 microns			0.000	0.109	0.319	0.213	0.091
>5 to 5.5 microns			0.000	0.108	0.317	0.210	0.089
>5.5 to 5.7 microns			0.000	0.042	0.122	0.081	0.034
>5.7 to 5.9 microns, Phi 7.5			0.000	0.041	0.121	0.080	0.033
>5.9 to 7.8 microns, Phi 7			0.000	0.394	1.150	0.753	0.304
>7.8 to 8 microns			0.000	0.040	0.117	0.076	0.029
>8 to 8.5 microns			0.000	0.095	0.280	0.181	0.070
>8.5 to 8.9 microns			0.000	0.073	0.215	0.139	0.054
>8.9 to 9.1 microns			0.000	0.036	0.109	0.070	0.027
>9.1 to 9.5 microns			0.000	0.071	0.212	0.136	0.051
>9.5 to 9.8 microns			0.000	0.051	0.153	0.098	0.037
>9.8 to 10.1 microns			0.000	0.049	0.149	0.095	0.036
>10.1 to 10.6 microns			0.000	0.083	0.254	0.161	0.059
>10.6 to 11.1 microns			0.000	0.079	0.243	0.153	0.057
>11.1 to 11.3 microns			0.000	0.031	0.094	0.059	0.022
>11.3 to 11.7 microns, Phi 6.5			0.000	0.060	0.184	0.116	0.042
>11.7 to 14 microns			0.000	0.307	0.963	0.609	0.217
>14 to 14.8 microns			0.000	0.095	0.303	0.192	0.067
>14.8 to 15.6 microns			0.000	0.088	0.291	0.186	0.063
>15.6 to 16 microns			0.000	0.042	0.141	0.091	0.030
>16 to 20 microns			0.000	0.358	1.250	0.813	0.263
>20 to 23 microns, Phi 5.5			0.000	0.207	0.787	0.532	0.159
>23 to 27 microns			0.000	0.217	0.929	0.667	0.182
>27 to 31 microns, Phi 5			0.000	0.173	0.877	0.681	0.163
>31 to 32 microns			0.000	0.038	0.224	0.184	0.040
>32 to 35.6 microns			0.000	0.127	0.829	0.710	0.141
>35.6 to 37 microns, Phi 4.75			0.000	0.045	0.350	0.316	0.056
>37 to 39.6 microns			0.000	0.079	0.653	0.599	0.102
>39.6 to 43.6 microns			0.000	0.115	1.270	1.240	0.174
>43.6 to 44 microns, Phi 4.5			0.000	0.011	0.120	0.118	0.016
>44 to 45 microns			0.000	0.027	0.306	0.301	0.041
>45 to 46.4 microns			0.000	0.039	0.624	0.653	0.069
>46.4 to 53 microns, Phi 4.25			0.000	0.170	3.050	3.240	0.317
>53 to 62.5 microns, Phi 4			0.000	0.230	6.250	6.910	0.494
>62.5 to 64 microns			0.000	0.035	1.150	1.290	0.079
>64 to 71.7 microns			0.000	0.179	6.650	7.430	0.407

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-13 P457136 07-JAN-2009	I-13 P479307 09-JUL-2009	I-14 P457140 07-JAN-2009	I-14 P479958 10-JUL-2009	I-15 P457147 07-JAN-2009
>71.7 to 74 microns			0.000	0.052	2.130	2.380	0.120
>74 to 79.6 microns			0.000	0.128	5.340	5.910	0.287
>79.6 to 87.6 microns			0.000	0.183	7.870	8.600	0.399
>87.6 to 88 microns, Phi 3.5			0.000	0.009	0.374	0.409	0.019
>88 to 90 microns			0.000	0.049	1.920	2.050	0.100
>90 to 105 microns, Phi 3.25			0.000	0.374	13.100	13.800	0.727
>105 to 125 microns, Phi 3			0.073	0.564	12.900	13.000	1.000
>125 to 149 microns, Phi 2.75			0.249	0.806	9.640	9.470	1.390
>149 to 160 microns			0.173	0.462	2.760	2.680	0.814
>160 to 177 microns, Phi 2.5			0.311	0.768	3.260	3.160	1.380
>177 to 197 microns			0.526	1.130	2.370	2.320	2.110
>197 to 210 microns, Phi 2.25			0.503	0.947	1.020	1.010	1.810
>210 to 217 microns			0.288	0.529	0.462	0.461	1.010
>217 to 245 microns			1.530	2.550	1.360	1.380	4.770
>245 to 250 microns, Phi 2			0.316	0.504	0.179	0.185	0.931
>250 to 300 microns, Phi 1.75			4.330	6.220	1.190	1.260	10.500
>300 to 320 microns			2.680	3.340	0.242	0.273	4.600
>320 to 350 microns, Phi 1.5			4.050	4.910	0.312	0.355	6.430
>350 to 360 microns			1.680	1.870	0.072	0.085	2.060
>360 to 400 microns			6.520	7.160	0.261	0.308	7.640
>400 to 420 microns, Phi 1.25			3.750	3.770	0.093	0.113	3.360
>420 to 440 microns			3.570	3.600	0.089	0.108	3.210
>440 to 500 microns, Phi 1			11.200	10.400	0.206	0.253	8.170
>500 to 590 microns, Phi 0.75			15.800	13.300	0.052	0.064	9.460
>590 to 630 microns			6.050	4.660	0.000	0.000	3.190
>630 to 696 microns			8.810	6.700	0.000	0.000	4.610
>696 to 710 microns, Phi 0.5			1.560	1.150	0.000	0.000	0.805
>710 to 773 microns			6.650	4.920	0.000	0.000	3.440
>773 to 840 microns, Phi 0.25			5.060	3.790	0.000	0.000	2.730
>840 to 850 microns			0.706	0.529	0.000	0.000	0.383
>850 to 930 microns			4.500	3.430	0.000	0.000	2.530
>930 to 1000 microns, Phi 0			2.900	2.270	0.000	0.000	1.720
1000 to 1100 microns			2.500	2.020	0.000	0.000	1.600
>1100 to 1190 microns, Phi -0.25			1.560	1.290	0.000	0.000	1.050
>1190 to 1300 microns			0.956	0.815	0.000	0.000	0.709
>1300 to 1410 microns, Phi -0.5			0.540	0.463	0.000	0.000	0.417
>1410 to 1680 microns, Phi -0.75			0.592	0.317	0.000	0.000	0.297
>1680 to 2000 microns, Phi -1			0.107	0.000	0.000	0.000	0.000
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.040	100.046	100.007	100.002	100.000

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-15 P479962 10-JUL-2009	I-16 P457150 07-JAN-2009	I-16 P479966 10-JUL-2009	I-18 P457157 07-JAN-2009	I-18 P479970 10-JUL-2009
<0.500 microns, Phi 11			0.000	0.220	0.000	0.100	0.000
>0.5 to 1 microns, Phi 10			0.000	1.330	0.000	0.958	0.000
>1 to 1.5 microns, Phi 9.5			0.000	1.830	0.000	1.110	0.000
>1.5 to 2 microns, Phi 9			0.000	2.120	0.000	1.280	0.000
>2.0 to 2.4 microns			0.000	1.720	0.000	1.080	0.000
>2.4 to 2.9 microns, Phi 8.5			0.000	2.050	0.000	1.350	0.085
>2.9 to 3.4 microns			0.000	1.960	0.117	1.350	0.140
>3.4 to 3.9 microns, Phi 8			0.111	1.970	0.148	1.420	0.145
>3.9 to 4 microns			0.024	0.403	0.032	0.291	0.031
>4.0 to 4.3 microns			0.069	1.160	0.091	0.835	0.088
>4.3 to 4.5 microns			0.045	0.741	0.058	0.537	0.057
>4.5 to 5 microns			0.121	1.930	0.158	1.420	0.150
>5 to 5.5 microns			0.120	1.930	0.157	1.390	0.149
>5.5 to 5.7 microns			0.046	0.747	0.061	0.534	0.057
>5.7 to 5.9 microns, Phi 7.5			0.046	0.734	0.060	0.525	0.057
>5.9 to 7.8 microns, Phi 7			0.439	6.940	0.568	4.790	0.538
>7.8 to 8 microns			0.044	0.725	0.057	0.460	0.055
>8 to 8.5 microns			0.106	1.740	0.137	1.100	0.131
>8.5 to 8.9 microns			0.081	1.340	0.105	0.837	0.101
>8.9 to 9.1 microns			0.041	0.683	0.053	0.405	0.051
>9.1 to 9.5 microns			0.079	1.320	0.102	0.785	0.099
>9.5 to 9.8 microns			0.057	0.955	0.074	0.567	0.072
>9.8 to 10.1 microns			0.056	0.927	0.071	0.550	0.070
>10.1 to 10.6 microns			0.094	1.620	0.120	0.894	0.119
>10.6 to 11.1 microns			0.090	1.550	0.114	0.853	0.113
>11.1 to 11.3 microns			0.035	0.599	0.044	0.330	0.044
>11.3 to 11.7 microns, Phi 6.5			0.068	1.160	0.086	0.625	0.086
>11.7 to 14 microns			0.352	6.000	0.445	2.960	0.458
>14 to 14.8 microns			0.110	1.880	0.138	0.873	0.145
>14.8 to 15.6 microns			0.104	1.750	0.131	0.782	0.141
>15.6 to 16 microns			0.050	0.830	0.063	0.357	0.069
>16 to 20 microns			0.442	7.140	0.553	2.900	0.623
>20 to 23 microns, Phi 5.5			0.273	4.100	0.339	1.480	0.411
>23 to 27 microns			0.318	4.200	0.394	1.420	0.516
>27 to 31 microns, Phi 5			0.294	3.220	0.367	1.090	0.523
>31 to 32 microns			0.074	0.677	0.093	0.239	0.141
>32 to 35.6 microns			0.269	2.190	0.342	0.819	0.539
>35.6 to 37 microns, Phi 4.75			0.111	0.740	0.143	0.306	0.237
>37 to 39.6 microns			0.204	1.290	0.267	0.556	0.450
>39.6 to 43.6 microns			0.368	1.730	0.505	0.938	0.924
>43.6 to 44 microns, Phi 4.5			0.035	0.164	0.048	0.089	0.088
>44 to 45 microns			0.088	0.403	0.122	0.224	0.224
>45 to 46.4 microns			0.160	0.528	0.239	0.405	0.488
>46.4 to 53 microns, Phi 4.25			0.750	2.280	1.150	1.940	2.440
>53 to 62.5 microns, Phi 4			1.290	2.730	2.230	3.720	5.490
>62.5 to 64 microns			0.219	0.387	0.400	0.679	1.060
>64 to 71.7 microns			1.190	1.830	2.280	4.020	6.480

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-15 P479962 10-JUL-2009	I-16 P457150 07-JAN-2009	I-16 P479966 10-JUL-2009	I-18 P457157 07-JAN-2009	I-18 P479970 10-JUL-2009
>71.7 to 74 microns			0.364	0.501	0.725	1.310	2.150
>74 to 79.6 microns			0.911	1.150	1.850	3.410	5.620
>79.6 to 87.6 microns			1.340	1.490	2.770	5.270	8.680
>87.6 to 88 microns, Phi 3.5			0.064	0.071	0.132	0.251	0.413
>88 to 90 microns			0.360	0.343	0.727	1.380	2.220
>90 to 105 microns, Phi 3.25			2.740	2.320	5.340	9.880	15.600
>105 to 125 microns, Phi 3			4.060	2.520	6.730	10.400	15.600
>125 to 149 microns, Phi 2.75			5.660	2.310	7.330	7.680	11.400
>149 to 160 microns			3.100	0.807	3.140	2.050	3.090
>160 to 177 microns, Phi 2.5			4.990	1.050	4.540	2.310	3.550
>177 to 197 microns			6.670	0.892	4.970	1.500	2.440
>197 to 210 microns, Phi 2.25			4.700	0.416	2.990	0.589	1.020
>210 to 217 microns			2.530	0.195	1.540	0.253	0.451
>217 to 245 microns			9.920	0.585	5.610	0.698	1.310
>245 to 250 microns, Phi 2			1.730	0.079	0.921	0.084	0.169
>250 to 300 microns, Phi 1.75			15.200	0.513	7.830	0.507	1.110
>300 to 320 microns			4.410	0.096	2.390	0.086	0.227
>320 to 350 microns, Phi 1.5			5.780	0.121	3.210	0.109	0.293
>350 to 360 microns			1.390	0.025	0.891	0.023	0.069
>360 to 400 microns			4.970	0.082	3.280	0.075	0.249
>400 to 420 microns, Phi 1.25			1.620	0.000	1.350	0.000	0.091
>420 to 440 microns			1.540	0.000	1.280	0.000	0.087
>440 to 500 microns, Phi 1			3.010	0.000	3.260	0.000	0.204
>500 to 590 microns, Phi 0.75			2.430	0.000	3.890	0.000	0.052
>590 to 630 microns			0.540	0.000	1.430	0.000	0.000
>630 to 696 microns			0.700	0.000	2.120	0.000	0.000
>696 to 710 microns, Phi 0.5			0.088	0.000	0.399	0.000	0.000
>710 to 773 microns			0.374	0.000	1.700	0.000	0.000
>773 to 840 microns, Phi 0.25			0.214	0.000	1.490	0.000	0.000
>840 to 850 microns			0.029	0.000	0.211	0.000	0.000
>850 to 930 microns			0.113	0.000	1.260	0.000	0.000
>930 to 1000 microns, Phi 0			0.000	0.000	0.718	0.000	0.000
1000 to 1100 microns			0.000	0.000	0.609	0.000	0.000
>1100 to 1190 microns, Phi -0.25			0.000	0.000	0.386	0.000	0.000
>1190 to 1300 microns			0.000	0.000	0.270	0.000	0.000
>1300 to 1410 microns, Phi -0.5			0.000	0.000	0.087	0.000	0.000
>1410 to 1680 microns, Phi -0.75			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
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.020	100.039	100.038	100.038	99.980

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-20 P457357 08-JAN-2009	I-20 P480001 13-JUL-2009	I-21 P457363 08-JAN-2009	I-21 P480007 13-JUL-2009	I-22 P457160 07-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.000	0.000	0.000	0.000	0.000
>2.0 to 2.4 microns			0.000	0.000	0.000	0.000	0.049
>2.4 to 2.9 microns, Phi 8.5			0.000	0.000	0.000	0.000	0.184
>2.9 to 3.4 microns			0.112	0.000	0.000	0.000	0.192
>3.4 to 3.9 microns, Phi 8			0.151	0.000	0.000	0.000	0.207
>3.9 to 4 microns			0.032	0.000	0.000	0.000	0.044
>4.0 to 4.3 microns			0.092	0.000	0.000	0.000	0.127
>4.3 to 4.5 microns			0.060	0.000	0.000	0.000	0.082
>4.5 to 5 microns			0.164	0.000	0.000	0.000	0.220
>5 to 5.5 microns			0.162	0.000	0.000	0.000	0.220
>5.5 to 5.7 microns			0.062	0.000	0.000	0.000	0.085
>5.7 to 5.9 microns, Phi 7.5			0.062	0.002	0.000	0.000	0.084
>5.9 to 7.8 microns, Phi 7			0.579	0.113	0.010	0.000	0.806
>7.8 to 8 microns			0.056	0.020	0.019	0.000	0.082
>8 to 8.5 microns			0.135	0.049	0.046	0.000	0.197
>8.5 to 8.9 microns			0.103	0.037	0.035	0.000	0.151
>8.9 to 9.1 microns			0.050	0.018	0.017	0.000	0.077
>9.1 to 9.5 microns			0.098	0.035	0.034	0.000	0.148
>9.5 to 9.8 microns			0.071	0.025	0.024	0.000	0.107
>9.8 to 10.1 microns			0.068	0.024	0.024	0.000	0.104
>10.1 to 10.6 microns			0.112	0.040	0.038	0.000	0.177
>10.6 to 11.1 microns			0.107	0.038	0.037	0.000	0.169
>11.1 to 11.3 microns			0.042	0.015	0.014	0.000	0.066
>11.3 to 11.7 microns, Phi 6.5			0.080	0.024	0.027	0.000	0.128
>11.7 to 14 microns			0.395	0.072	0.139	0.000	0.670
>14 to 14.8 microns			0.119	0.022	0.042	0.000	0.210
>14.8 to 15.6 microns			0.108	0.010	0.019	0.000	0.202
>15.6 to 16 microns			0.050	0.000	0.000	0.000	0.098
>16 to 20 microns			0.419	0.000	0.000	0.000	0.867
>20 to 23 microns, Phi 5.5			0.227	0.000	0.000	0.000	0.547
>23 to 27 microns			0.226	0.000	0.000	0.000	0.655
>27 to 31 microns, Phi 5			0.172	0.000	0.000	0.000	0.632
>31 to 32 microns			0.036	0.000	0.000	0.000	0.164
>32 to 35.6 microns			0.118	0.000	0.000	0.000	0.618
>35.6 to 37 microns, Phi 4.75			0.041	0.000	0.000	0.000	0.266
>37 to 39.6 microns			0.071	0.000	0.000	0.000	0.500
>39.6 to 43.6 microns			0.098	0.000	0.000	0.000	0.994
>43.6 to 44 microns, Phi 4.5			0.009	0.000	0.000	0.000	0.094
>44 to 45 microns			0.023	0.000	0.000	0.000	0.241
>45 to 46.4 microns			0.031	0.000	0.000	0.000	0.503
>46.4 to 53 microns, Phi 4.25			0.137	0.000	0.024	0.000	2.480
>53 to 62.5 microns, Phi 4			0.178	0.000	0.141	0.000	5.210
>62.5 to 64 microns			0.027	0.000	0.022	0.000	0.974
>64 to 71.7 microns			0.135	0.000	0.117	0.048	5.730

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-20 P457357 08-JAN-2009	I-20 P480001 13-JUL-2009	I-21 P457363 08-JAN-2009	I-21 P480007 13-JUL-2009	I-22 P457160 07-JAN-2009
>71.7 to 74 microns			0.039	0.000	0.035	0.025	1.860
>74 to 79.6 microns			0.096	0.011	0.088	0.063	4.750
>79.6 to 87.6 microns			0.137	0.037	0.130	0.093	7.170
>87.6 to 88 microns, Phi 3.5			0.007	0.002	0.006	0.004	0.341
>88 to 90 microns			0.037	0.019	0.036	0.026	1.820
>90 to 105 microns, Phi 3.25			0.285	0.174	0.285	0.203	12.900
>105 to 125 microns, Phi 3			0.451	0.335	0.463	0.337	13.800
>125 to 149 microns, Phi 2.75			0.684	0.623	0.723	0.544	11.400
>149 to 160 microns			0.404	0.435	0.451	0.349	3.570
>160 to 177 microns, Phi 2.5			0.672	0.771	0.779	0.607	4.410
>177 to 197 microns			0.961	1.230	1.220	0.965	3.460
>197 to 210 microns, Phi 2.25			0.734	1.030	1.070	0.854	1.570
>210 to 217 microns			0.402	0.577	0.601	0.482	0.727
>217 to 245 microns			1.720	2.600	2.910	2.360	2.200
>245 to 250 microns, Phi 2			0.319	0.494	0.577	0.470	0.300
>250 to 300 microns, Phi 1.75			3.330	5.340	6.930	5.790	2.040
>300 to 320 microns			1.450	2.370	3.510	3.080	0.435
>320 to 350 microns, Phi 1.5			2.090	3.410	5.110	4.540	0.562
>350 to 360 microns			0.763	1.210	1.880	1.740	0.131
>360 to 400 microns			2.970	4.660	7.180	6.670	0.471
>400 to 420 microns, Phi 1.25			1.700	2.520	3.740	3.610	0.167
>420 to 440 microns			1.620	2.410	3.570	3.450	0.159
>440 to 500 microns, Phi 1			5.830	7.850	10.500	10.400	0.361
>500 to 590 microns, Phi 0.75			10.600	12.400	13.800	14.200	0.090
>590 to 630 microns			5.800	5.690	4.990	5.320	0.000
>630 to 696 microns			9.280	8.700	7.180	7.760	0.000
>696 to 710 microns, Phi 0.5			2.050	1.740	1.230	1.380	0.000
>710 to 773 microns			8.770	7.420	5.250	5.900	0.000
>773 to 840 microns, Phi 0.25			8.120	6.400	3.920	4.670	0.000
>840 to 850 microns			1.150	0.903	0.546	0.654	0.000
>850 to 930 microns			7.610	5.930	3.480	4.260	0.000
>930 to 1000 microns, Phi 0			5.170	3.990	2.250	2.840	0.000
1000 to 1100 microns			4.340	3.410	1.960	2.510	0.000
>1100 to 1190 microns, Phi -0.25			2.640	2.110	1.240	1.590	0.000
>1190 to 1300 microns			1.460	1.220	0.778	0.988	0.000
>1300 to 1410 microns, Phi -0.5			0.777	0.659	0.448	0.553	0.000
>1410 to 1680 microns, Phi -0.75			0.484	0.679	0.311	0.599	0.000
>1680 to 2000 microns, Phi -1			0.000	0.122	0.000	0.108	0.000
>2000 microns*			ND	ND	ND	ND	ND
Totals:			99.970	100.025	100.006	100.042	100.055

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-22 P479976 10-JUL-2009	I-23 P479983 10-JUL-2009	I-27 P457367 08-JAN-2009	I-27 P480012 13-JUL-2009	I-28 P457372 08-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.089
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.622
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.548
>1.5 to 2 microns, Phi 9			0.000	0.000	0.000	0.008	0.633
>2.0 to 2.4 microns			0.047	0.043	0.000	0.167	0.570
>2.4 to 2.9 microns, Phi 8.5			0.176	0.164	0.094	0.216	0.755
>2.9 to 3.4 microns			0.185	0.177	0.154	0.224	0.791
>3.4 to 3.9 microns, Phi 8			0.199	0.196	0.162	0.239	0.865
>3.9 to 4 microns			0.043	0.043	0.034	0.050	0.181
>4.0 to 4.3 microns			0.122	0.123	0.097	0.144	0.518
>4.3 to 4.5 microns			0.079	0.080	0.063	0.093	0.334
>4.5 to 5 microns			0.213	0.219	0.166	0.247	0.895
>5 to 5.5 microns			0.212	0.221	0.164	0.244	0.887
>5.5 to 5.7 microns			0.082	0.086	0.063	0.094	0.342
>5.7 to 5.9 microns, Phi 7.5			0.081	0.085	0.062	0.093	0.337
>5.9 to 7.8 microns, Phi 7			0.775	0.834	0.588	0.869	3.160
>7.8 to 8 microns			0.079	0.085	0.059	0.087	0.317
>8 to 8.5 microns			0.188	0.204	0.142	0.208	0.760
>8.5 to 8.9 microns			0.144	0.156	0.109	0.160	0.583
>8.9 to 9.1 microns			0.073	0.079	0.055	0.080	0.293
>9.1 to 9.5 microns			0.141	0.153	0.107	0.156	0.568
>9.5 to 9.8 microns			0.102	0.111	0.077	0.112	0.411
>9.8 to 10.1 microns			0.099	0.107	0.075	0.109	0.398
>10.1 to 10.6 microns			0.168	0.182	0.127	0.184	0.676
>10.6 to 11.1 microns			0.160	0.174	0.121	0.175	0.645
>11.1 to 11.3 microns			0.062	0.067	0.047	0.068	0.250
>11.3 to 11.7 microns, Phi 6.5			0.121	0.131	0.092	0.133	0.486
>11.7 to 14 microns			0.632	0.669	0.489	0.694	2.520
>14 to 14.8 microns			0.198	0.207	0.155	0.218	0.788
>14.8 to 15.6 microns			0.190	0.194	0.151	0.210	0.752
>15.6 to 16 microns			0.092	0.092	0.074	0.103	0.364
>16 to 20 microns			0.816	0.796	0.669	0.917	3.210
>20 to 23 microns, Phi 5.5			0.517	0.468	0.445	0.594	2.020
>23 to 27 microns			0.624	0.519	0.569	0.736	2.380
>27 to 31 microns, Phi 5			0.612	0.464	0.595	0.740	2.190
>31 to 32 microns			0.162	0.115	0.164	0.198	0.539
>32 to 35.6 microns			0.614	0.423	0.639	0.756	1.910
>35.6 to 37 microns, Phi 4.75			0.268	0.176	0.288	0.332	0.757
>37 to 39.6 microns			0.506	0.331	0.551	0.630	1.370
>39.6 to 43.6 microns			1.030	0.653	1.170	1.290	2.310
>43.6 to 44 microns, Phi 4.5			0.097	0.062	0.111	0.123	0.219
>44 to 45 microns			0.249	0.159	0.286	0.314	0.548
>45 to 46.4 microns			0.531	0.342	0.644	0.676	0.919
>46.4 to 53 microns, Phi 4.25			2.630	1.730	3.250	3.360	4.200
>53 to 62.5 microns, Phi 4			5.620	4.100	7.340	7.210	6.540
>62.5 to 64 microns			1.050	0.819	1.410	1.350	1.050
>64 to 71.7 microns			6.170	5.310	8.330	7.860	5.360

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-22 P479976 10-JUL-2009	I-23 P479983 10-JUL-2009	I-27 P457367 08-JAN-2009	I-27 P480012 13-JUL-2009	I-28 P457372 08-JAN-2009
>71.7 to 74 microns			1.990	1.820	2.710	2.530	1.570
>74 to 79.6 microns			5.060	5.000	6.800	6.310	3.700
>79.6 to 87.6 microns			7.570	8.160	10.000	9.230	4.990
>87.6 to 88 microns, Phi 3.5			0.360	0.388	0.477	0.439	0.237
>88 to 90 microns			1.890	2.230	2.370	2.190	1.150
>90 to 105 microns, Phi 3.25			13.100	16.300	15.700	14.600	7.670
>105 to 125 microns, Phi 3			13.500	17.300	13.800	13.200	7.570
>125 to 149 microns, Phi 2.75			10.800	12.800	8.910	8.910	6.030
>149 to 160 microns			3.290	3.430	2.210	2.310	1.860
>160 to 177 microns, Phi 2.5			4.040	3.890	2.430	2.590	2.280
>177 to 197 microns			3.170	2.580	1.560	1.730	1.780
>197 to 210 microns, Phi 2.25			1.450	1.040	0.620	0.701	0.796
>210 to 217 microns			0.676	0.451	0.269	0.307	0.367
>217 to 245 microns			2.070	1.270	0.758	0.876	1.090
>245 to 250 microns, Phi 2			0.288	0.157	0.095	0.111	0.146
>250 to 300 microns, Phi 1.75			2.010	0.977	0.600	0.706	0.958
>300 to 320 microns			0.456	0.178	0.116	0.137	0.185
>320 to 350 microns, Phi 1.5			0.594	0.227	0.150	0.176	0.236
>350 to 360 microns			0.143	0.050	0.035	0.040	0.051
>360 to 400 microns			0.518	0.180	0.125	0.145	0.182
>400 to 420 microns, Phi 1.25			0.189	0.063	0.046	0.052	0.060
>420 to 440 microns			0.180	0.060	0.044	0.050	0.057
>440 to 500 microns, Phi 1			0.411	0.138	0.106	0.119	0.126
>500 to 590 microns, Phi 0.75			0.103	0.035	0.027	0.030	0.031
>590 to 630 microns			0.000	0.000	0.000	0.000	0.000
>630 to 696 microns			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
>710 to 773 microns			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
>840 to 850 microns			0.000	0.000	0.000	0.000	0.000
>850 to 930 microns			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
1000 to 1100 microns			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
>1190 to 1300 microns			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
>1410 to 1680 microns, Phi -0.75			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
>2000 microns*			ND	ND	ND	ND	4.32
Totals:			100.017	100.073	99.946	99.960	104.302

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-29 P457377 08-JAN-2009	I-29 P480015 13-JUL-2009	I-30 P457383 08-JAN-2009	I-30 P480023 13-JUL-2009	I-31 P457386 08-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.380	0.000	0.000	0.000
>1.5 to 2 microns, Phi 9			0.257	0.432	0.119	0.008	0.000
>2.0 to 2.4 microns			0.233	0.386	0.180	0.162	0.000
>2.4 to 2.9 microns, Phi 8.5			0.308	0.511	0.229	0.209	0.000
>2.9 to 3.4 microns			0.323	0.533	0.232	0.216	0.117
>3.4 to 3.9 microns, Phi 8			0.351	0.578	0.243	0.231	0.145
>3.9 to 4 microns			0.074	0.119	0.050	0.048	0.031
>4.0 to 4.3 microns			0.212	0.342	0.144	0.139	0.089
>4.3 to 4.5 microns			0.136	0.220	0.093	0.089	0.057
>4.5 to 5 microns			0.364	0.582	0.243	0.237	0.155
>5 to 5.5 microns			0.362	0.570	0.238	0.233	0.154
>5.5 to 5.7 microns			0.140	0.219	0.091	0.090	0.060
>5.7 to 5.9 microns, Phi 7.5			0.138	0.215	0.090	0.088	0.059
>5.9 to 7.8 microns, Phi 7			1.300	1.980	0.827	0.823	0.566
>7.8 to 8 microns			0.134	0.198	0.082	0.082	0.057
>8 to 8.5 microns			0.320	0.474	0.196	0.196	0.136
>8.5 to 8.9 microns			0.247	0.364	0.150	0.150	0.104
>8.9 to 9.1 microns			0.126	0.184	0.075	0.075	0.052
>9.1 to 9.5 microns			0.244	0.356	0.146	0.146	0.101
>9.5 to 9.8 microns			0.177	0.257	0.105	0.105	0.073
>9.8 to 10.1 microns			0.171	0.249	0.102	0.102	0.071
>10.1 to 10.6 microns			0.296	0.423	0.172	0.172	0.119
>10.6 to 11.1 microns			0.282	0.404	0.164	0.164	0.114
>11.1 to 11.3 microns			0.109	0.157	0.063	0.063	0.044
>11.3 to 11.7 microns, Phi 6.5			0.216	0.308	0.124	0.124	0.086
>11.7 to 14 microns			1.170	1.640	0.651	0.649	0.437
>14 to 14.8 microns			0.375	0.524	0.205	0.204	0.135
>14.8 to 15.6 microns			0.369	0.516	0.199	0.197	0.127
>15.6 to 16 microns			0.184	0.256	0.098	0.097	0.061
>16 to 20 microns			1.690	2.350	0.883	0.866	0.523
>20 to 23 microns, Phi 5.5			1.170	1.640	0.588	0.569	0.311
>23 to 27 microns			1.530	2.190	0.755	0.720	0.354
>27 to 31 microns, Phi 5			1.570	2.290	0.787	0.742	0.329
>31 to 32 microns			0.417	0.616	0.216	0.202	0.084
>32 to 35.6 microns			1.540	2.270	0.834	0.782	0.319
>35.6 to 37 microns, Phi 4.75			0.649	0.954	0.372	0.349	0.138
>37 to 39.6 microns			1.200	1.740	0.706	0.663	0.262
>39.6 to 43.6 microns			2.170	3.030	1.460	1.380	0.547
>43.6 to 44 microns, Phi 4.5			0.206	0.288	0.139	0.131	0.052
>44 to 45 microns			0.518	0.718	0.355	0.336	0.134
>45 to 46.4 microns			0.933	1.190	0.764	0.733	0.306
>46.4 to 53 microns, Phi 4.25			4.340	5.360	3.780	3.640	1.580
>53 to 62.5 microns, Phi 4			7.230	7.680	7.950	7.830	4.030
>62.5 to 64 microns			1.200	1.160	1.470	1.460	0.828
>64 to 71.7 microns			6.250	5.610	8.350	8.400	5.520

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-29 P457377 08-JAN-2009	I-29 P480015 13-JUL-2009	I-30 P457383 08-JAN-2009	I-30 P480023 13-JUL-2009	I-31 P457386 08-JAN-2009
>71.7 to 74 microns			1.870	1.570	2.640	2.680	1.920
>74 to 79.6 microns			4.460	3.580	6.460	6.600	5.320
>79.6 to 87.6 microns			6.140	4.590	9.200	9.490	8.760
>87.6 to 88 microns, Phi 3.5			0.292	0.218	0.438	0.451	0.417
>88 to 90 microns			1.450	1.030	2.110	2.190	2.390
>90 to 105 microns, Phi 3.25			9.850	6.820	13.800	14.400	17.300
>105 to 125 microns, Phi 3			10.200	7.010	12.100	12.600	18.000
>125 to 149 microns, Phi 2.75			8.550	6.230	8.100	8.290	12.900
>149 to 160 microns			2.750	2.190	2.140	2.130	3.380
>160 to 177 microns, Phi 2.5			3.440	2.870	2.440	2.380	3.790
>177 to 197 microns			2.760	2.550	1.700	1.590	2.490
>197 to 210 microns, Phi 2.25			1.260	1.270	0.722	0.651	0.999
>210 to 217 microns			0.584	0.613	0.324	0.286	0.435
>217 to 245 microns			1.760	1.960	0.956	0.820	1.240
>245 to 250 microns, Phi 2			0.238	0.285	0.127	0.104	0.155
>250 to 300 microns, Phi 1.75			1.590	2.060	0.856	0.670	0.991
>300 to 320 microns			0.319	0.483	0.186	0.132	0.195
>320 to 350 microns, Phi 1.5			0.408	0.629	0.243	0.170	0.252
>350 to 360 microns			0.090	0.150	0.059	0.039	0.059
>360 to 400 microns			0.322	0.543	0.215	0.142	0.213
>400 to 420 microns, Phi 1.25			0.108	0.193	0.082	0.052	0.079
>420 to 440 microns			0.103	0.184	0.078	0.050	0.075
>440 to 500 microns, Phi 1			0.225	0.408	0.189	0.118	0.181
>500 to 590 microns, Phi 0.75			0.056	0.101	0.048	0.030	0.046
>590 to 630 microns			0.000	0.000	0.000	0.000	0.000
>630 to 696 microns			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
>710 to 773 microns			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
>840 to 850 microns			0.000	0.000	0.000	0.000	0.000
>850 to 930 microns			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
1000 to 1100 microns			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
>1190 to 1300 microns			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
>1410 to 1680 microns, Phi -0.75			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
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.056	100.000	99.933	99.967	100.054

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-31 P480027 13-JUL-2009	I-33 P457392 08-JAN-2009	I-33 P480106 14-JUL-2009	I-34 P457397 08-JAN-2009	I-35 P457403 08-JAN-2009
<0.500 microns, Phi 11			0.000	0.000	0.000	0.000	0.000
>0.5 to 1 microns, Phi 10			0.000	0.000	0.000	0.000	0.000
>1 to 1.5 microns, Phi 9.5			0.000	0.000	0.000	0.000	0.101
>1.5 to 2 microns, Phi 9			0.000	0.008	0.008	0.000	0.284
>2.0 to 2.4 microns			0.000	0.163	0.160	0.000	0.232
>2.4 to 2.9 microns, Phi 8.5			0.000	0.222	0.216	0.000	0.287
>2.9 to 3.4 microns			0.112	0.241	0.235	0.000	0.284
>3.4 to 3.9 microns, Phi 8			0.139	0.269	0.263	0.000	0.290
>3.9 to 4 microns			0.030	0.058	0.057	0.000	0.060
>4.0 to 4.3 microns			0.087	0.167	0.164	0.000	0.172
>4.3 to 4.5 microns			0.056	0.108	0.106	0.000	0.110
>4.5 to 5 microns			0.152	0.297	0.291	0.000	0.286
>5 to 5.5 microns			0.154	0.300	0.293	0.000	0.285
>5.5 to 5.7 microns			0.060	0.116	0.114	0.000	0.110
>5.7 to 5.9 microns, Phi 7.5			0.059	0.116	0.113	0.000	0.108
>5.9 to 7.8 microns, Phi 7			0.576	1.130	1.100	0.000	1.040
>7.8 to 8 microns			0.059	0.116	0.112	0.000	0.112
>8 to 8.5 microns			0.141	0.277	0.268	0.000	0.268
>8.5 to 8.9 microns			0.108	0.213	0.206	0.000	0.209
>8.9 to 9.1 microns			0.055	0.108	0.104	0.000	0.111
>9.1 to 9.5 microns			0.106	0.209	0.201	0.000	0.215
>9.5 to 9.8 microns			0.077	0.151	0.145	0.000	0.156
>9.8 to 10.1 microns			0.074	0.147	0.141	0.000	0.151
>10.1 to 10.6 microns			0.126	0.252	0.239	0.000	0.275
>10.6 to 11.1 microns			0.120	0.240	0.228	0.000	0.263
>11.1 to 11.3 microns			0.047	0.093	0.088	0.000	0.102
>11.3 to 11.7 microns, Phi 6.5			0.091	0.181	0.171	0.000	0.206
>11.7 to 14 microns			0.468	0.932	0.875	0.000	1.200
>14 to 14.8 microns			0.145	0.290	0.271	0.000	0.408
>14.8 to 15.6 microns			0.137	0.272	0.253	0.000	0.421
>15.6 to 16 microns			0.066	0.130	0.120	0.000	0.217
>16 to 20 microns			0.571	1.120	1.030	0.000	2.120
>20 to 23 microns, Phi 5.5			0.342	0.663	0.602	0.000	1.680
>23 to 27 microns			0.391	0.724	0.654	0.000	2.400
>27 to 31 microns, Phi 5			0.364	0.618	0.562	0.000	2.550
>31 to 32 microns			0.094	0.145	0.133	0.000	0.676
>32 to 35.6 microns			0.353	0.510	0.472	0.032	2.440
>35.6 to 37 microns, Phi 4.75			0.153	0.199	0.187	0.032	0.989
>37 to 39.6 microns			0.291	0.363	0.342	0.058	1.790
>39.6 to 43.6 microns			0.603	0.631	0.609	0.100	3.000
>43.6 to 44 microns, Phi 4.5			0.057	0.060	0.058	0.009	0.285
>44 to 45 microns			0.147	0.151	0.146	0.024	0.710
>45 to 46.4 microns			0.335	0.280	0.277	0.042	1.160
>46.4 to 53 microns, Phi 4.25			1.720	1.350	1.350	0.197	5.260
>53 to 62.5 microns, Phi 4			4.300	2.740	2.770	0.352	7.920
>62.5 to 64 microns			0.874	0.517	0.526	0.062	1.250
>64 to 71.7 microns			5.730	3.270	3.340	0.366	6.350

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-31 P480027 13-JUL-2009	I-33 P457392 08-JAN-2009	I-33 P480106 14-JUL-2009	I-34 P457397 08-JAN-2009	I-35 P457403 08-JAN-2009
>71.7 to 74 microns			1.980	1.100	1.130	0.119	1.850
>74 to 79.6 microns			5.420	3.110	3.180	0.327	4.350
>79.6 to 87.6 microns			8.820	5.190	5.320	0.536	5.880
>87.6 to 88 microns, Phi 3.5			0.420	0.247	0.253	0.025	0.280
>88 to 90 microns			2.380	1.580	1.610	0.174	1.360
>90 to 105 microns, Phi 3.25			17.100	12.500	12.700	1.510	9.140
>105 to 125 microns, Phi 3			17.600	16.900	16.800	3.090	9.130
>125 to 149 microns, Phi 2.75			12.500	15.800	15.500	5.690	7.290
>149 to 160 microns			3.290	4.960	4.840	3.660	2.230
>160 to 177 microns, Phi 2.5			3.690	5.980	5.860	6.140	2.720
>177 to 197 microns			2.430	4.300	4.270	8.490	2.090
>197 to 210 microns, Phi 2.25			0.979	1.770	1.800	5.720	0.929
>210 to 217 microns			0.427	0.785	0.805	3.040	0.426
>217 to 245 microns			1.210	2.220	2.320	11.100	1.270
>245 to 250 microns, Phi 2			0.152	0.277	0.297	1.840	0.170
>250 to 300 microns, Phi 1.75			0.974	1.710	1.900	14.700	1.130
>300 to 320 microns			0.191	0.299	0.362	3.810	0.231
>320 to 350 microns, Phi 1.5			0.246	0.378	0.464	4.990	0.297
>350 to 360 microns			0.057	0.079	0.103	1.220	0.067
>360 to 400 microns			0.207	0.283	0.371	4.410	0.241
>400 to 420 microns, Phi 1.25			0.076	0.093	0.129	1.620	0.084
>420 to 440 microns			0.072	0.089	0.123	1.540	0.080
>440 to 500 microns, Phi 1			0.172	0.194	0.277	3.600	0.179
>500 to 590 microns, Phi 0.75			0.044	0.048	0.069	3.920	0.045
>590 to 630 microns			0.000	0.000	0.000	1.310	0.000
>630 to 696 microns			0.000	0.000	0.000	1.890	0.000
>696 to 710 microns, Phi 0.5			0.000	0.000	0.000	0.337	0.000
>710 to 773 microns			0.000	0.000	0.000	1.440	0.000
>773 to 840 microns, Phi 0.25			0.000	0.000	0.000	0.821	0.000
>840 to 850 microns			0.000	0.000	0.000	0.111	0.000
>850 to 930 microns			0.000	0.000	0.000	0.662	0.000
>930 to 1000 microns, Phi 0			0.000	0.000	0.000	0.379	0.000
1000 to 1100 microns			0.000	0.000	0.000	0.321	0.000
>1100 to 1190 microns, Phi -0.25			0.000	0.000	0.000	0.173	0.000
>1190 to 1300 microns			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
>1410 to 1680 microns, Phi -0.75			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
>2000 microns*			ND	ND	ND	ND	ND
Totals:			100.007	100.039	100.083	99.989	100.012

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-35 P480033 13-JUL-2009
<0.500 microns, Phi 11			0.000
>0.5 to 1 microns, Phi 10			0.000
>1 to 1.5 microns, Phi 9.5			0.099
>1.5 to 2 microns, Phi 9			0.278
>2.0 to 2.4 microns			0.230
>2.4 to 2.9 microns, Phi 8.5			0.290
>2.9 to 3.4 microns			0.293
>3.4 to 3.9 microns, Phi 8			0.305
>3.9 to 4 microns			0.064
>4.0 to 4.3 microns			0.182
>4.3 to 4.5 microns			0.117
>4.5 to 5 microns			0.308
>5 to 5.5 microns			0.308
>5.5 to 5.7 microns			0.119
>5.7 to 5.9 microns, Phi 7.5			0.117
>5.9 to 7.8 microns, Phi 7			1.130
>7.8 to 8 microns			0.122
>8 to 8.5 microns			0.291
>8.5 to 8.9 microns			0.227
>8.9 to 9.1 microns			0.120
>9.1 to 9.5 microns			0.233
>9.5 to 9.8 microns			0.168
>9.8 to 10.1 microns			0.163
>10.1 to 10.6 microns			0.296
>10.6 to 11.1 microns			0.282
>11.1 to 11.3 microns			0.109
>11.3 to 11.7 microns, Phi 6.5			0.221
>11.7 to 14 microns			1.270
>14 to 14.8 microns			0.428
>14.8 to 15.6 microns			0.438
>15.6 to 16 microns			0.224
>16 to 20 microns			2.170
>20 to 23 microns, Phi 5.5			1.670
>23 to 27 microns			2.350
>27 to 31 microns, Phi 5			2.470
>31 to 32 microns			0.650
>32 to 35.6 microns			2.350
>35.6 to 37 microns, Phi 4.75			0.952
>37 to 39.6 microns			1.730
>39.6 to 43.6 microns			2.900
>43.6 to 44 microns, Phi 4.5			0.275
>44 to 45 microns			0.687
>45 to 46.4 microns			1.130
>46.4 to 53 microns, Phi 4.25			5.130
>53 to 62.5 microns, Phi 4			7.780
>62.5 to 64 microns			1.240
>64 to 71.7 microns			6.300

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-35 P480033 13-JUL-2009
>71.7 to 74 microns			1.850
>74 to 79.6 microns			4.380
>79.6 to 87.6 microns			5.970
>87.6 to 88 microns, Phi 3.5			0.284
>88 to 90 microns			1.400
>90 to 105 microns, Phi 3.25			9.470
>105 to 125 microns, Phi 3			9.550
>125 to 149 microns, Phi 2.75			7.580
>149 to 160 microns			2.270
>160 to 177 microns, Phi 2.5			2.740
>177 to 197 microns			2.020
>197 to 210 microns, Phi 2.25			0.864
>210 to 217 microns			0.389
>217 to 245 microns			1.120
>245 to 250 microns, Phi 2			0.144
>250 to 300 microns, Phi 1.75			0.916
>300 to 320 microns			0.169
>320 to 350 microns, Phi 1.5			0.215
>350 to 360 microns			0.046
>360 to 400 microns			0.166
>400 to 420 microns, Phi 1.25			0.056
>420 to 440 microns			0.053
>440 to 500 microns, Phi 1			0.121
>500 to 590 microns, Phi 0.75			0.030
>590 to 630 microns			0.000
>630 to 696 microns			0.000
>696 to 710 microns, Phi 0.5			0.000
>710 to 773 microns			0.000
>773 to 840 microns, Phi 0.25			0.000
>840 to 850 microns			0.000
>850 to 930 microns			0.000
>930 to 1000 microns, Phi 0			0.000
1000 to 1100 microns			0.000
>1100 to 1190 microns, Phi -0.25			0.000
>1190 to 1300 microns			0.000
>1300 to 1410 microns, Phi -0.5			0.000
>1410 to 1680 microns, Phi -0.75			0.000
>1680 to 2000 microns, Phi -1			0.000
>2000 microns*			ND
Totals:			100.019

*= 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.

SOUTH BAY OCEAN OUTFALL MONITORING
Grain Size (Sieve)
(all values are in percent distribution)

Annual 2009

Analyte	MDL	Units	I-23 P457164 07-JAN-2009	I-28 P480101 14-JUL-2009	I-34 P480112 14-JUL-2009
<63 microns, Phi<4			12.8	20.7	1.6
>63 to 125 microns, Phi>4			2.2	14.8	2.1
>125 to 250 microns, Phi>3			18.8	4.2	53.2
>250 to 500 microns, Phi>2			16.0	19.7	34.9
>500 to 1000 microns, Phi>1			23.2	25.3	4.4
>1000 to 2000 microns, Phi>0			15.4	11.0	2.6
>2000 microns, Phi>-1			11.7	4.4	1.4
Totals:			100.1	100.1	100.2

SOUTH BAY WATER RECLAMATION PLANT
Total Organic Carbon/Total Nitrogen

Annual 2009

Analyte	MDL	Units	I-1 Avg 2009	I-2 Avg 2009	I-3 Avg 2009	I-4 Avg 2009	I-6 Avg 2009	I-7 Avg 2009
Total Nitrogen	.005	WT%	0.023	0.014	0.013	0.013	0.013	0.014
Total Organic Carbon	.01	WT%	0.294	0.064	0.049	0.183	0.053	0.113

Analyte	MDL	Units	I-8 Avg 2009	I-9 Avg 2009	I-10 Avg 2009	I-12 Avg 2009	I-13 Avg 2009	I-14 Avg 2009
Total Nitrogen	.005	WT%	0.015	0.024	0.018	0.017	0.012	0.028
Total Organic Carbon	.01	WT%	0.070	0.220	0.138	0.153	0.083	0.246

Analyte	MDL	Units	I-15 Avg 2009	I-16 Avg 2009	I-18 Avg 2009	I-20 Avg 2009	I-21 Avg 2009	I-22 Avg 2009
Total Nitrogen	.005	WT%	0.016	0.091	0.022	0.012	0.012	0.025
Total Organic Carbon	.01	WT%	0.080	1.120	0.208	0.049	0.058	0.231

Analyte	MDL	Units	I-23 Avg 2009	I-27 Avg 2009	I-28 Avg 2009	I-29 Avg 2009	I-30 Avg 2009	I-31 Avg 2009
Total Nitrogen	.005	WT%	0.028	0.024	0.037	0.057	0.029	0.022
Total Organic Carbon	.01	WT%	2.820	0.201	0.645	0.828	0.249	0.111

Analyte	MDL	Units	I-33 Avg 2009	I-34 Avg 2009	I-35 Avg 2009
Total Nitrogen	.005	WT%	0.028	0.006	0.037
Total Organic Carbon	.01	WT%	0.507	0.222	0.345

ND=not detected

SOUTH BAY WASTEWATER RECLAMATION PLANT
OCEAN SEDIMENT - RANDOM
Trace Metals

ANNUAL 2009

Source:									
Date:			2651	2653	2656	2657	2658	2659	2660
Analyte:	MDL	Units	21-JUL-2009	21-JUL-2009	21-JUL-2009	21-JUL-2009	21-JUL-2009	27-JUL-2009	21-JUL-2009
Aluminum	2	MG/KG	11600	10800	11700	4210	10800	14300	4520
Antimony	.3	MG/KG	0.51	0.56	0.57	ND	0.52	0.61	ND
Arsenic	.33	MG/KG	4.44	4.12	3.68	1.05	3.89	4.71	0.74
Beryllium	.01	MG/KG	0.33	0.31	0.27	0.06	0.25	0.31	0.06
Cadmium	.06	MG/KG	0.51	0.19	0.15	ND	0.23	0.14	ND
Chromium	.1	MG/KG	21.5	23.3	21.0	7.0	20.7	23.3	7.8
Copper	.2	MG/KG	9.54	6.53	8.29	1.33	9.32	9.70	1.14
Iron	9	MG/KG	17400	20300	15300	4810	14600	17000	6130
Lead	.8	MG/KG	5.94	5.58	5.79	1.23	6.30	6.03	1.44
Manganese	.08	MG/KG	139	111	121	74.3	124	132	86.5
Mercury	.003	MG/KG	0.038	0.023	0.033	ND	0.034	0.028	ND
Nickel	.1	MG/KG	9.32	7.44	8.72	1.84	8.79	10.3	2.03
Selenium	.24	MG/KG	ND	ND	ND	ND	ND	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	1.1	1.5	1.6	0.6	1.4	1.4	0.6
Zinc	.2	MG/KG	48.5	46.1	40.0	13.7	43.0	45.1	17.8

Source:									
Date:			2661	2662	2663	2664	2665	2667	2668
Analyte:	MDL	Units	21-JUL-2009	27-JUL-2009	27-JUL-2009	28-JUL-2009	27-JUL-2009	28-JUL-2009	20-JUL-2009
Aluminum	2	MG/KG	12100	9210	7340	10900	9380	12100	11600
Antimony	.3	MG/KG	0.42	0.51	0.42	0.46	0.52	0.56	ND
Arsenic	.33	MG/KG	2.09	2.07	2.75	3.65	2.69	3.78	2.44
Beryllium	.01	MG/KG	0.25	0.21	0.22	0.24	0.26	0.26	0.26
Cadmium	.06	MG/KG	0.20	0.18	0.26	0.24	0.23	0.24	0.14
Chromium	.1	MG/KG	19.7	16.3	15.6	18.5	20.8	21.1	20.1
Copper	.2	MG/KG	7.85	6.24	6.30	8.08	10.40	10.30	9.68
Iron	9	MG/KG	13900	10800	11500	12800	13800	15600	14200
Lead	.8	MG/KG	5.69	3.81	3.79	5.31	4.87	6.20	4.29
Manganese	.08	MG/KG	121	87.5	72.8	116	103	129	101
Mercury	.003	MG/KG	0.031	0.016	0.015	0.043	0.040	0.043	0.045
Nickel	.1	MG/KG	8.17	7.54	6.60	7.74	11.20	9.47	9.53
Selenium	.24	MG/KG	ND	ND	0.240	0.270	0.370	ND	0.250
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	1.4	0.9	0.9	1.4	1.1	1.4	1.1
Zinc	.2	MG/KG	38.9	29.8	29.9	37.1	38.6	43.0	37.2

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

SOUTH BAY WASTEWATER RECLAMATION PLANT
OCEAN SEDIMENT - RANDOM
Trace Metals

ANNUAL 2009

Source:									
Date:			2669	2670	2671	2672	2673	2674	2675
Analyte:	MDL	Units	14-JUL-2009	15-JUL-2009	14-JUL-2009	14-JUL-2009	14-JUL-2009	15-JUL-2009	15-JUL-2009
Aluminum	2	MG/KG	2520	5660	3160	2970	9810	10400	10400
Antimony	.3	MG/KG	ND	0.51	ND	0.33	0.56	0.52	0.52
Arsenic	.33	MG/KG	1.55	9.02	1.36	2.36	3.12	4.38	4.31
Beryllium	.01	MG/KG	0.03	0.49	0.04	0.04	0.20	0.20	0.20
Cadmium	.06	MG/KG	ND	0.20	ND	ND	0.19	0.19	0.12
Chromium	.1	MG/KG	4.8	35.0	6.5	6.3	16.2	19.1	18.7
Copper	.2	MG/KG	0.75	1.95	0.99	0.96	8.80	10.40	8.20
Iron	9	MG/KG	3910	15900	5110	4970	12700	15000	14000
Lead	.8	MG/KG	1.45	2.21	1.52	2.14	4.73	6.75	5.56
Manganese	.08	MG/KG	37.7	26.2	53.0	51.2	114	124	111
Mercury	.003	MG/KG	ND	0.014	0.003	0.008	0.035	0.080	0.052
Nickel	.1	MG/KG	1.17	4.23	1.31	1.33	6.89	9.02	8.92
Selenium	.24	MG/KG	ND	0.362	ND	ND	ND	ND	0.261
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.5	0.6	0.5	0.7	1.2	1.2	1.1
Zinc	.2	MG/KG	8.1	23.2	9.5	9.6	35.2	44.1	35.9

Source:									
Date:			2676	2678	2679	2680	2681	2682	2683
Analyte:	MDL	Units	15-JUL-2009	14-JUL-2009	13-JUL-2009	15-JUL-2009	14-JUL-2009	14-JUL-2009	13-JUL-2009
Aluminum	2	MG/KG	8110	8980	6630	5140	4570	9690	5020
Antimony	.3	MG/KG	0.55	0.47	ND	ND	0.63	0.64	ND
Arsenic	.33	MG/KG	3.79	2.16	2.16	4.50	2.37	3.48	1.14
Beryllium	.01	MG/KG	0.17	0.18	0.10	0.07	0.28	0.17	0.06
Cadmium	.06	MG/KG	0.09	0.09	0.10	0.06	0.26	0.10	ND
Chromium	.1	MG/KG	15.7	16.5	10.9	9.3	24.5	18.1	8.4
Copper	.2	MG/KG	10.4	8.57	3.95	2.69	3.48	25.8	6.64
Iron	9	MG/KG	13400	14000	7630	6280	19200	12500	5010
Lead	.8	MG/KG	5.29	4.88	2.68	1.79	4.08	12.10	1.21
Manganese	.08	MG/KG	95.5	99.1	72.9	59.2	29.8	108	60.1
Mercury	.003	MG/KG	0.047	0.014	0.004	0.014	0.032	0.026	ND
Nickel	.1	MG/KG	6.70	6.95	3.96	3.00	6.13	8.95	2.20
Selenium	.24	MG/KG	ND	ND	ND	0.406	ND	ND	ND
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.9	1.3	0.7	0.4	1.7	1.7	0.4
Zinc	.2	MG/KG	38.2	33.1	20.6	16.8	34.6	81.8	12.0

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

SOUTH BAY WASTEWATER RECLAMATION PLANT
OCEAN SEDIMENT - RANDOM
Trace Metals

ANNUAL 2009

Source:									
Date:			2685	2686	2688	2689	2811	2812	2813
Analyte:	MDL	Units	15-JUL-2009	13-JUL-2009	10-JUL-2009	10-JUL-2009	28-JUL-2009	28-JUL-2009	28-JUL-2009
Aluminum	2	MG/KG	8320	1450	6530	8040	17700	10400	10800
Antimony	.3	MG/KG	0.54	<0.30	ND	0.38	ND	ND	ND
Arsenic	.33	MG/KG	3.39	3.81	1.44	2.94	3.19	2.81	2.74
Beryllium	.01	MG/KG	0.28	0.03	0.09	0.11	0.45	0.34	0.34
Cadmium	.06	MG/KG	0.20	ND	0.06	ND	0.49	0.40	0.30
Chromium	.1	MG/KG	24.7	8.0	10.7	14.0	36.8	27.3	27.0
Copper	.2	MG/KG	5.54	ND	5.25	3.05	21.30	14.50	14.30
Iron	9	MG/KG	19600	6050	7210	10600	19600	14900	14700
Lead	.8	MG/KG	4.63	1.85	1.59	2.27	8.03	6.27	6.17
Manganese	.08	MG/KG	55.3	19.8	76.1	97.3	168	123	111
Mercury	.003	MG/KG	0.029	ND	ND	0.005	0.062	0.041	0.038
Nickel	.1	MG/KG	8.65	1.07	3.53	4.57	22.5	14.9	15.1
Selenium	.24	MG/KG	0.322	ND	ND	ND	1.37	0.810	1.05
Silver	.04	MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	.3	MG/KG	0.8	<0.3	0.5	0.5	1.4	1.1	1.1
Zinc	.2	MG/KG	38.1	7.3	18.3	23.2	66.0	48.6	45.9

Source:					
Date:			2814	2815	2816
Analyte:	MDL	Units	28-JUL-2009	28-JUL-2009	28-JUL-2009
Aluminum	2	MG/KG	13400	13800	18900
Antimony	.3	MG/KG	ND	ND	ND
Arsenic	.33	MG/KG	7.76	3.12	3.95
Beryllium	.01	MG/KG	0.42	0.40	0.48
Cadmium	.06	MG/KG	0.41	0.43	0.43
Chromium	.1	MG/KG	68.2	32.0	36.9
Copper	.2	MG/KG	13.2	17.3	21.7
Iron	9	MG/KG	27400	17300	20300
Lead	.8	MG/KG	5.12	6.98	8.23
Manganese	.08	MG/KG	77.6	143	171
Mercury	.003	MG/KG	0.024	0.049	0.064
Nickel	.1	MG/KG	15.5	18.2	21.9
Selenium	.24	MG/KG	1.24	0.550	1.25
Silver	.04	MG/KG	ND	ND	ND
Thallium	.5	MG/KG	ND	ND	ND
Tin	.3	MG/KG	0.9	1.1	1.5
Zinc	.2	MG/KG	52.2	55.6	65.5

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

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT Chlorinated Pesticide Analysis - International Stations

Annual 2009

	MDL	Units	I-1 2009 Avg	I-2 2009 Avg	I-3 2009 Avg	I-4 2009 Avg	I-6 2009 Avg	I-7 2009 Avg	I-8 2009 Avg	I-9 2009 Avg
Aldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDT	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	700	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	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	700	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	400	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	700	NG/KG	0	0	0	0	0	0	0	0
Chlordane + related cmpds.	700	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	700	NG/KG	0	0	0	0	0	0	0	0

ND=not detected
NA=not analyzed
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT Chlorinated Pesticide Analysis - International Stations

Annual 2009

	MDL	Units	I-10 2009 Avg	I-12 2009 Avg	I-13 2009 Avg	I-14 2009 Avg	I-15 2009 Avg	I-16 2009 Avg	I-18 2009 Avg	I-20 2009 Avg
Aldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	400	NG/KG	<400	ND	ND	<400	ND	3650	<400	ND
p,p-DDT	700	NG/KG	ND	ND	ND	ND	ND	900	ND	ND
o,p-DDD	400	NG/KG	ND	ND	ND	ND	ND	<400	ND	ND
o,p-DDE	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	700	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	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	700	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	400	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	700	NG/KG	0	0	0	0	0	4550	0	0
Chlordane + related cmpds.	700	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	700	NG/KG	0	0	0	0	0	4550	0	0

ND=not detected
NA=not analyzed
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT Chlorinated Pesticide Analysis - International Stations

Annual 2009

	MDL	Units	I-21 2009 Avg	I-22 2009 Avg	I-23 2009 Avg	I-27 2009 Avg	I-28 2009 Avg	I-29 2009 Avg	I-30 2009 Avg	I-31 2009 Avg
Aldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	700	NG/KG	ND	ND	ND	ND	<700	ND	ND	ND
p,p-DDE	400	NG/KG	ND	<400	<400	ND	<400	2350	ND	<400
p,p-DDT	700	NG/KG	ND	ND	ND	ND	<700	1100	ND	ND
o,p-DDD	400	NG/KG	ND	ND	ND	ND	<400	<400	ND	ND
o,p-DDE	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	700	NG/KG	ND	ND	ND	ND	ND	<700	ND	ND
Heptachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	700	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	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Aldrin + Dieldrin	700	NG/KG	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	400	NG/KG	0	0	0	0	0	0	0	0
DDT and derivatives	700	NG/KG	0	0	0	0	0	3450	0	0
Chlordane + related cmpds.	700	NG/KG	0	0	0	0	0	0	0	0
Chlorinated Hydrocarbons	700	NG/KG	0	0	0	0	0	3450	0	0

ND=not detected
NA=not analyzed
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT Chlorinated Pesticide Analysis - International Stations

Annual 2009

	MDL	Units	I-33 2009 Avg	I-34 2009 Avg	I-35 2009 Avg
Aldrin	700	NG/KG	ND	ND	ND
Dieldrin	700	NG/KG	ND	ND	ND
BHC, Alpha isomer	400	NG/KG	ND	ND	ND
BHC, Beta isomer	400	NG/KG	ND	ND	ND
BHC, Gamma isomer	400	NG/KG	ND	ND	ND
BHC, Delta isomer	400	NG/KG	ND	ND	ND
p,p-DDD	700	NG/KG	ND	ND	ND
p,p-DDE	400	NG/KG	ND	ND	<400
p,p-DDT	700	NG/KG	ND	ND	ND
o,p-DDD	400	NG/KG	ND	ND	ND
o,p-DDE	700	NG/KG	ND	ND	ND
o,p-DDT	700	NG/KG	ND	ND	ND
Heptachlor	700	NG/KG	ND	ND	ND
Heptachlor epoxide	700	NG/KG	ND	ND	ND
Alpha (cis) Chlordane	700	NG/KG	ND	ND	ND
Gamma (trans) Chlordane	700	NG/KG	ND	ND	ND
Alpha Chlordene		NG/KG	NA	NA	NA
Gamma Chlordene		NG/KG	NA	NA	NA
Oxychlordane	700	NG/KG	ND	ND	ND
Trans Nonachlor	700	NG/KG	ND	ND	ND
Cis Nonachlor	700	NG/KG	ND	ND	ND
Alpha Endosulfan	700	NG/KG	ND	ND	ND
Beta Endosulfan	700	NG/KG	ND	ND	ND
Endosulfan Sulfate	700	NG/KG	ND	ND	ND
Endrin	700	NG/KG	ND	ND	ND
Endrin aldehyde	700	NG/KG	ND	ND	ND
Mirex	700	NG/KG	ND	ND	ND
Methoxychlor	700	NG/KG	ND	ND	ND
Aldrin + Dieldrin	700	NG/KG	0	0	0
Hexachlorocyclohexanes	400	NG/KG	0	0	0
DDT and derivatives	700	NG/KG	0	0	0
Chlordane + related cmpds.	700	NG/KG	0	0	0
Chlorinated Hydrocarbons	700	NG/KG	0	0	0

ND=not detected
NA=not analyzed
Standards for alpha and gamma chlordene are no longer available in the U.S. for the analysis of these compounds.

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - PCB Congeners I Stations

Annual 2009

Analyte	MDL	Units	I-1 2009 Avg	I-2 2009 Avg	I-3 2009 Avg	I-4 2009 Avg	I-6 2009 Avg	I-7 2009 Avg
PCB 18	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	1500	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	400	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	700	NG/KG	ND	ND	ND	ND	ND	ND
Total PCB's	1500	NG/KG	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - PCB Congeners I Stations

Annual 2009

Analyte	MDL	Units	I-8 2009 Avg	I-9 2009 Avg	I-10 2009 Avg	I-12 2009 Avg	I-13 2009 Avg	I-14 2009 Avg
PCB 18	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	1500	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	400	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	700	NG/KG	ND	ND	ND	ND	ND	ND
Total PCB's	1500	NG/KG	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - PCB Congeners I Stations

Annual 2009

Analyte	MDL	Units	I-15 2009 Avg	I-16 2009 Avg	I-18 2009 Avg	I-20 2009 Avg	I-21 2009 Avg	I-22 2009 Avg
PCB 18	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	700	NG/KG	ND	<700	ND	ND	ND	ND
PCB 44	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	1500	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	400	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	700	NG/KG	ND	ND	ND	ND	ND	ND
Total PCB's	1500	NG/KG	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - PCB Congeners I Stations

Annual 2009

Analyte	MDL	Units	I-23 2009 Avg	I-27 2009 Avg	I-28 2009 Avg	I-29 2009 Avg	I-30 2009 Avg	I-31 2009 Avg
PCB 18	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 28	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 52	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 49	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 44	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 37	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 74	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 70	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 66	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 101	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 99	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 119	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 87	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 110	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 81	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 151	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 77	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 149	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 123	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 118	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 105	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 138	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 158	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 187	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 183	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 126	1500	NG/KG	ND	ND	ND	ND	ND	ND
PCB 128	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 167	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 177	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 201	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 156	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND	ND	ND	ND
PCB 180	400	NG/KG	ND	ND	ND	ND	ND	ND
PCB 170	700	NG/KG	ND	ND	ND	ND	ND	ND
Total PCB's	1500	NG/KG	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - PCB Congeners I Stations

Annual 2009

Analyte	MDL	Units	I-33 2009 Avg	I-34 2009 Avg	I-35 2009 Avg
PCB 18	700	NG/KG	ND	ND	ND
PCB 28	700	NG/KG	ND	ND	ND
PCB 52	700	NG/KG	ND	ND	ND
PCB 49	700	NG/KG	ND	ND	ND
PCB 44	700	NG/KG	ND	ND	ND
PCB 37	700	NG/KG	ND	ND	ND
PCB 74	700	NG/KG	ND	ND	ND
PCB 70	700	NG/KG	ND	ND	ND
PCB 66	700	NG/KG	ND	ND	ND
PCB 101	700	NG/KG	ND	ND	ND
PCB 99	700	NG/KG	ND	ND	ND
PCB 119	700	NG/KG	ND	ND	ND
PCB 87	700	NG/KG	ND	ND	ND
PCB 110	700	NG/KG	ND	ND	ND
PCB 81	700	NG/KG	ND	ND	ND
PCB 151	700	NG/KG	ND	ND	ND
PCB 77	700	NG/KG	ND	ND	ND
PCB 149	700	NG/KG	ND	ND	ND
PCB 123	700	NG/KG	ND	ND	ND
PCB 118	700	NG/KG	ND	ND	ND
PCB 114	700	NG/KG	ND	ND	ND
PCB 105	700	NG/KG	ND	ND	ND
PCB 138	700	NG/KG	ND	ND	ND
PCB 158	700	NG/KG	ND	ND	ND
PCB 187	700	NG/KG	ND	ND	ND
PCB 183	700	NG/KG	ND	ND	ND
PCB 126	1500	NG/KG	ND	ND	ND
PCB 128	700	NG/KG	ND	ND	ND
PCB 167	700	NG/KG	ND	ND	ND
PCB 177	700	NG/KG	ND	ND	ND
PCB 201	700	NG/KG	ND	ND	ND
PCB 156	700	NG/KG	ND	ND	ND
PCB 157	700	NG/KG	ND	ND	ND
PCB 180	400	NG/KG	ND	ND	ND
PCB 170	700	NG/KG	ND	ND	ND
Total PCB's	1500	NG/KG	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - Base/Neutrals - International Stations

Annual 2009

	MDL	Units	I-1 2009 Avg	I-2 2009 Avg	I-3 2009 Avg	I-4 2009 Avg	I-6 2009 Avg	I-7 2009 Avg	I-8 2009 Avg
Acenaphthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	51	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	73	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	66	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	70	UG/KG	ND	ND	ND	ND	ND	ND	ND
Biphenyl	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	50	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	67	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds			0	0	0	0	0	0	0

	MDL	Units	I-9 2009 Avg	I-10 2009 Avg	I-12 2009 Avg	I-13 2009 Avg	I-14 2009 Avg	I-15 2009 Avg	I-16 2009 Avg
Acenaphthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	51	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	73	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	66	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	70	UG/KG	ND	ND	ND	ND	ND	ND	ND
Biphenyl	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	50	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	67	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds			0	0	0	0	0	0	0

ND=not detected

SOUTH BAY OCEAN OUTFALL MONITORING
SEDIMENT - Base/Neutrals - International Stations

Annual 2009

	MDL	Units	I-18 2009 Avg	I-20 2009 Avg	I-21 2009 Avg	I-22 2009 Avg	I-23 2009 Avg	I-27 2009 Avg	I-28 2009 Avg
Acenaphthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	51	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	73	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	66	UG/KG	ND	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	70	UG/KG	ND	ND	ND	ND	ND	ND	ND
Biphenyl	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	50	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Fluorene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	67	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Naphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Perylene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Phenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds			0	0	0	0	0	0	0

	MDL	Units	I-29 2009 Avg	I-30 2009 Avg	I-31 2009 Avg	I-33 2009 Avg	I-34 2009 Avg	I-35 2009 Avg
Acenaphthene	40	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	40	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	40	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	51	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	73	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	66	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	70	UG/KG	ND	ND	ND	ND	ND	ND
Biphenyl	40	UG/KG	ND	ND	ND	ND	ND	ND
Chrysene	40	UG/KG	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	50	UG/KG	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND
Fluoranthene	40	UG/KG	ND	ND	ND	ND	ND	ND
Fluorene	40	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	67	UG/KG	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	40	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	40	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	40	UG/KG	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	40	UG/KG	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds			0	0	0	0	0	0

ND=not detected

B. Fish Tissue Data.

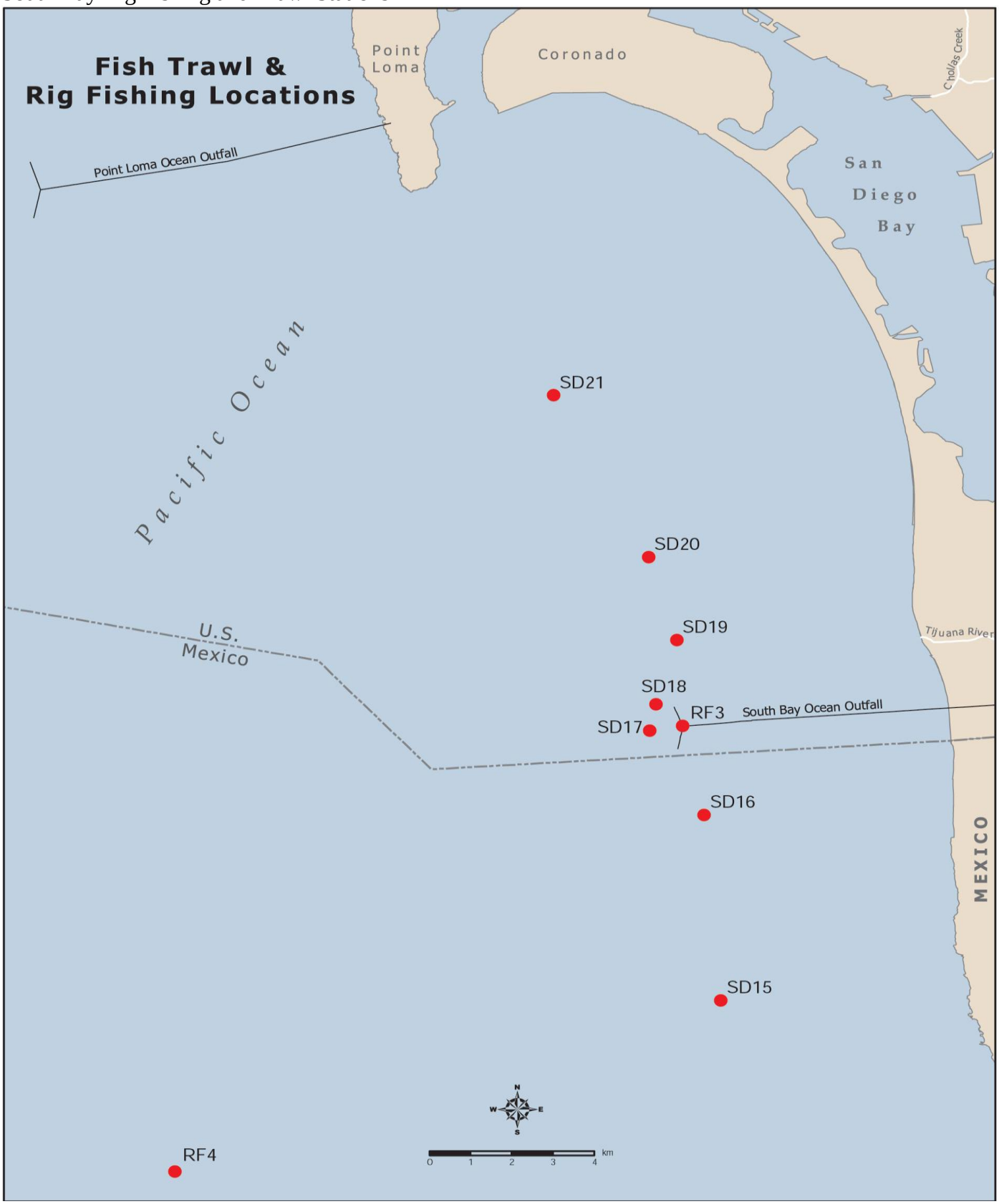
Fish were taken from the following stations during 2009. The fish were dissected, preserved by freezing, and each sample analyzed for PAHs, trace metals, chlorinated pesticides and PCBs. Lipids and total solids were also determined for each sample.

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

Station
RF-3
RF-4

Station
SD-15
SD-16
SD-17
SD-18
SD-19
SD-20
SD-21

South Bay Rig Fishing and Trawl Stations



SOUTH BAY WATER RECLAMATION PLANT
FISH - Lipids & Total Solids

Annual 2009

Tissue	Analyte	MDL	Units	SD-15 2009 Avg	SD-16 2009 Avg	SD-17 2009 Avg	SD-18 2009 Avg	SD-19 2009 Avg	SD-20 2009 Avg
Liver	Lipids	.005	WT%	4.8	14.9	14.7	12.3	20.4	22.6
Liver	Total Solids	.4	WT%	23.2	35.3	33.7	31.5	50.5	36.7
Muscle	Lipids	.005	WT%						
Muscle	Total Solids	.4	WT%						

Tissue	Analyte	MDL	Units	SD-21 2009 Avg	RF-3 2009 Avg	RF-4 2009 Avg
Liver	Lipids	.005	WT%	12.4		
Liver	Total Solids	.4	WT%	33.8		
Muscle	Lipids	.005	WT%		0.2	0.4
Muscle	Total Solids	.4	WT%		20.5	22.6

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

SOUTH BAY WATER RECLAMATION PLANT
FISH TISSUE - MUSCLE
Trace Metals

ANNUAL 2009

Source:			RF-3	RF-4
Date:			2009	2009
Analyte:	MDL	Units	Average	Average
Aluminum	3	MG/KG	9.93	9.63
Antimony	.2	MG/KG	<0.20	<0.20
Arsenic	.24	MG/KG	1.05	2.42
Beryllium	.006	MG/KG	ND	0.007
Cadmium	.06	MG/KG	ND	<0.06
Chromium	.1	MG/KG	0.16	0.24
Copper	.1	MG/KG	0.73	0.82
Iron	2	MG/KG	2.96	2.85
Lead	.2	MG/KG	ND	ND
Manganese	.1	MG/KG	<0.10	<0.10
Mercury	.03	MG/KG	0.129	0.191
Nickel	.2	MG/KG	ND	<0.20
Selenium	.06	MG/KG	0.217	0.294
Silver	.05	MG/KG	<0.05	<0.05
Thallium	.4	MG/KG	ND	<0.40
Tin	.2	MG/KG	0.70	0.75
Zinc	.15	MG/KG	4.17	4.41
Total Solids	.4	WT%	20.5	22.6

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

SOUTH BAY WATER RECLAMATION PLANT
FISH TISSUE - LIVER
Trace Metals

ANNUAL 2009

Source:			SD-15	SD-16	SD-17	SD-18
Date:			2009	2009	2009	2009
Analyte:	MDL	Units	Average	Average	Average	Average
Aluminum	3	MG/KG	15.7	13.1	12.1	16.9
Antimony	.2	MG/KG	ND	ND	<0.20	<0.20
Arsenic	.24	MG/KG	18.10	5.59	6.46	7.90
Beryllium	.006	MG/KG	ND	ND	ND	ND
Cadmium	.06	MG/KG	5.11	3.25	3.27	4.02
Chromium	.1	MG/KG	0.23	0.20	0.17	0.18
Copper	.1	MG/KG	8.15	5.99	9.70	9.50
Iron	2	MG/KG	151	97	119	115
Lead	.2	MG/KG	<0.20	<0.20	0.36	<0.20
Manganese	.1	MG/KG	1.81	1.39	1.38	1.43
Mercury	.03	MG/KG	0.103	0.086	0.163	0.134
Nickel	.2	MG/KG	ND	ND	ND	ND
Selenium	.06	MG/KG	1.08	1.25	1.26	1.19
Thallium	.4	MG/KG	ND	ND	ND	ND
Tin	.2	MG/KG	2.18	1.36	1.70	1.33
Zinc	.15	MG/KG	38.6	28.3	59.4	44.9
Total Solids	.4	WT%	23.2	35.3	33.7	31.5

Source:			SD-19	SD-20	SD-21
Date:			2009	2009	2009
Analyte:	MDL	Units	Average	Average	Average
Aluminum	3	MG/KG	11.1	13.0	17.1
Antimony	.2	MG/KG	ND	ND	<0.20
Arsenic	.24	MG/KG	6.33	4.86	3.88
Beryllium	.006	MG/KG	<0.006	ND	<0.006
Cadmium	.06	MG/KG	1.91	3.57	3.71
Chromium	.1	MG/KG	<0.10	<0.10	0.24
Copper	.1	MG/KG	6.60	6.56	8.29
Iron	2	MG/KG	73	63	95
Lead	.2	MG/KG	<0.20	ND	<0.20
Manganese	.1	MG/KG	1.02	0.90	1.44
Mercury	.03	MG/KG	0.067	0.102	0.164
Nickel	.2	MG/KG	ND	ND	ND
Selenium	.06	MG/KG	1.44	1.25	0.88
Thallium	.4	MG/KG	ND	ND	<0.40
Tin	.2	MG/KG	0.30	<0.20	1.31
Zinc	.15	MG/KG	22.1	26.8	59.0
Total Solids	.4	WT%	50.5	36.7	33.8

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

SOUTH BAY WATER RECLAMATION PLANT
FISH LIVER - Chlorinated Pesticides

ANNUAL 2009

Analyte	MDL	Units	SD-15 2009 Average Value	SD-16 2009 Average Value	SD-17 2009 Average Value	SD-18 2009 Average Value	SD-19 2009 Average Value
Hexachlorobenzene	1.63	UG/KG	ND	<1.6	3.1	1.9	2.3
BHC, Gamma isomer	63.4	UG/KG	ND	ND	ND	ND	ND
Heptachlor	3.82	UG/KG	ND	ND	ND	ND	ND
Aldrin	88.1	UG/KG	ND	ND	ND	ND	ND
Heptachlor epoxide	3.89	UG/KG	ND	ND	ND	ND	ND
o,p-DDE	2.79	UG/KG	ND	5.8	6.8	7.2	6.8
Alpha Endosulfan	118	UG/KG	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	4.56	UG/KG	ND	ND	<4.6	ND	ND
Trans Nonachlor	2.58	UG/KG	ND	ND	<2.6	ND	ND
p,p-DDE	2.08	UG/KG	54.5	332	498	555	512
Dieldrin	17.1	UG/KG	ND	ND	ND	ND	ND
o,p-DDD	2.02	UG/KG	ND	ND	ND	ND	ND
Endrin	14.2	UG/KG	ND	ND	ND	ND	24.5
o,p-DDT	1.62	UG/KG	ND	ND	ND	ND	ND
p,p-DDD	3.36	UG/KG	ND	3.5	8.1	3.8	5.9
p,p-DDT	2.69	UG/KG	ND	5.0	4.7	ND	6.6
Mirex	1.49	UG/KG	ND	ND	ND	ND	ND

Analyte	MDL	Units	SD-20 2009 Average Value	SD-21 2009 Average Value
Hexachlorobenzene	1.63	UG/KG	2.6	<1.6
BHC, Gamma isomer	63.4	UG/KG	ND	ND
Heptachlor	3.82	UG/KG	ND	ND
Aldrin	88.1	UG/KG	ND	ND
Heptachlor epoxide	3.89	UG/KG	ND	ND
o,p-DDE	2.79	UG/KG	14.3	5.2
Alpha Endosulfan	118	UG/KG	ND	ND
Alpha (cis) Chlordane	4.56	UG/KG	ND	ND
Trans Nonachlor	2.58	UG/KG	ND	<2.6
p,p-DDE	2.08	UG/KG	1130	432
Dieldrin	17.1	UG/KG	ND	ND
o,p-DDD	2.02	UG/KG	ND	ND
Endrin	14.2	UG/KG	ND	35.0
o,p-DDT	1.62	UG/KG	ND	ND
p,p-DDD	3.36	UG/KG	6.2	6.7
p,p-DDT	2.69	UG/KG	6.0	4.8
Mirex	1.49	UG/KG	ND	ND

ND= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

SOUTH BAY WATER RECLAMATION PLANT
FISH MUSCLE - Chlorinated Pesticides

ANNUAL 2009

Analyte	MDL	Units	RF-3 2009 Avg	RF-4 2009 Avg
Hexachlorobenzene	.13	UG/KG	<0.1	ND
BHC, Gamma isomer	6.34	UG/KG	ND	ND
Heptachlor	.38	UG/KG	ND	ND
Aldrin	8.81	UG/KG	ND	ND
Heptachlor epoxide	.39	UG/KG	ND	ND
o,p-DDE	.28	UG/KG	ND	ND
Alpha Endosulfan	11.8	UG/KG	ND	ND
Alpha (cis) Chlordane	.46	UG/KG	ND	ND
Trans Nonachlor	.26	UG/KG	ND	ND
p,p-DDE	.21	UG/KG	3.0	3.9
Dieldrin	1.71	UG/KG	ND	ND
o,p-DDD	.2	UG/KG	ND	ND
Endrin	1.42	UG/KG	ND	ND
o,p-DDT	.16	UG/KG	ND	ND
p,p-DDD	.34	UG/KG	ND	ND
p,p-DDT	.27	UG/KG	ND	ND
Mirex	.15	UG/KG	ND	ND

ND= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

SOUTH BAY WATER RECLAMATION PLANT
FISH LIVER - Poly Aromatic Hydrocarbon (PAH)

Annual 2009

Analyte	MDL	Units	SD-15 2009 Avg	SD-16 2009 Avg	SD-17 2009 Avg	SD-18 2009 Avg
Acenaphthene	28.9	UG/KG	ND	ND	ND	ND
Acenaphthylene	24.7	UG/KG	ND	ND	ND	ND
Anthracene	25.3	UG/KG	ND	ND	ND	ND
Benzo[A]anthracene	47.3	UG/KG	ND	ND	ND	ND
Benzo[A]pyrene	42.9	UG/KG	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	30.2	UG/KG	ND	ND	ND	ND
Benzo[e]pyrene	41.8	UG/KG	ND	ND	ND	ND
Benzo[G,H,I]perylene	27.2	UG/KG	ND	ND	ND	ND
Benzo[K]fluoranthene	32	UG/KG	ND	ND	ND	ND
Biphenyl	38	UG/KG	ND	ND	ND	ND
Chrysene	18.1	UG/KG	ND	ND	ND	ND
Dibenzo(A,H)anthracene	37.6	UG/KG	ND	ND	ND	ND
2,6-dimethylnaphthalene	21.7	UG/KG	ND	ND	ND	ND
Fluoranthene	19.9	UG/KG	ND	ND	ND	ND
Fluorene	27.3	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	25.6	UG/KG	ND	ND	ND	ND
1-methylnaphthalene	27.9	UG/KG	ND	ND	ND	ND
2-methylnaphthalene	35.8	UG/KG	ND	ND	ND	ND
1-methylphenanthrene	17.4	UG/KG	ND	ND	ND	ND
Naphthalene	34.2	UG/KG	ND	ND	ND	ND
Perylene	18.5	UG/KG	ND	ND	ND	ND
Phenanthrene	11.6	UG/KG	ND	ND	ND	ND
Pyrene	9.1	UG/KG	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	21.7	UG/KG	ND	ND	ND	ND

Analyte	MDL	Units	SD-19 2009 Avg	SD-20 2009 Avg	SD-21 2009 Avg
Acenaphthene	28.9	UG/KG	ND	ND	ND
Acenaphthylene	24.7	UG/KG	ND	ND	ND
Anthracene	25.3	UG/KG	ND	ND	ND
Benzo[A]anthracene	47.3	UG/KG	ND	ND	ND
Benzo[A]pyrene	42.9	UG/KG	ND	ND	ND
3,4-benzo(B)fluoranthene	30.2	UG/KG	ND	ND	ND
Benzo[e]pyrene	41.8	UG/KG	ND	ND	ND
Benzo[G,H,I]perylene	27.2	UG/KG	ND	ND	ND
Benzo[K]fluoranthene	32	UG/KG	ND	ND	ND
Biphenyl	38	UG/KG	ND	ND	ND
Chrysene	18.1	UG/KG	ND	ND	ND
Dibenzo(A,H)anthracene	37.6	UG/KG	ND	ND	ND
2,6-dimethylnaphthalene	21.7	UG/KG	ND	ND	ND
Fluoranthene	19.9	UG/KG	ND	ND	ND
Fluorene	27.3	UG/KG	ND	ND	ND
Indeno(1,2,3-CD)pyrene	25.6	UG/KG	ND	ND	ND
1-methylnaphthalene	27.9	UG/KG	ND	ND	ND
2-methylnaphthalene	35.8	UG/KG	ND	ND	ND
1-methylphenanthrene	17.4	UG/KG	ND	ND	ND
Naphthalene	34.2	UG/KG	ND	ND	ND
Perylene	18.5	UG/KG	ND	ND	ND
Phenanthrene	11.6	UG/KG	ND	ND	ND
Pyrene	9.1	UG/KG	ND	ND	ND
2,3,5-trimethylnaphthalene	21.7	UG/KG	ND	ND	ND

ND= not detected

SOUTH BAY WATER RECLAMATION PLANT
FISH MUSCLE - Poly Aromatic Hydrocarbon (PAH)

Annual 2009

Analyte	MDL	Units	RF-3 2009 Avg	RF-4 2009 Avg
Acenaphthene	11.3	UG/KG	ND	ND
Acenaphthylene	9.1	UG/KG	ND	ND
Anthracene	8.4	UG/KG	ND	ND
Benzo[A]anthracene	15.9	UG/KG	ND	ND
Benzo[A]pyrene	18.3	UG/KG	ND	ND
3,4-benzo(B)fluoranthene	26.8	UG/KG	ND	ND
Benzo[e]pyrene	40.6	UG/KG	ND	ND
Benzo[G,H,I]perylene	59.5	UG/KG	ND	ND
Benzo[K]fluoranthene	37.3	UG/KG	ND	ND
Biphenyl	19.9	UG/KG	ND	ND
Chrysene	23	UG/KG	ND	ND
Dibenzo(A,H)anthracene	40.3	UG/KG	ND	ND
2,6-dimethylnaphthalene	19.5	UG/KG	ND	ND
Fluoranthene	12.9	UG/KG	ND	ND
Fluorene	11.4	UG/KG	ND	ND
Indeno(1,2,3-CD)pyrene	46.5	UG/KG	ND	ND
1-methylnaphthalene	26.4	UG/KG	ND	ND
2-methylnaphthalene	13.2	UG/KG	ND	ND
1-methylphenanthrene	23.3	UG/KG	ND	ND
Naphthalene	17.4	UG/KG	ND	ND
Perylene	50.9	UG/KG	ND	ND
Phenanthrene	12.9	UG/KG	ND	ND
Pyrene	16.6	UG/KG	ND	ND
2,3,5-trimethylnaphthalene	21.6	UG/KG	ND	ND

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

SOUTH BAY WATER RECLAMATION PLANT
FISH LIVER - Poly Chlorinated Biphenyls

ANNUAL 2009

Analyte	MDL	Units	SD-15 2009 Avg Value	SD-16 2009 Avg Value	SD-17 2009 Avg Value	SD-18 2009 Avg Value	SD-19 2009 Avg Value	SD-20 2009 Avg Value	SD-21 2009 Avg Value
PCB 18	2.86	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 28	2.47	UG/KG	ND	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
PCB 49	5.02	UG/KG	ND	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
PCB 37	2.77	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 70	2.49	UG/KG	ND	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
PCB 101	4.34	UG/KG	<4.3	E7.6	E16.8	E11.6	E7.4	9.3	E14.5
PCB 119	2.39	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 87	3.01	UG/KG	ND	ND	<3.0	<3.0	ND	ND	<3.0
PCB 110	2.5	UG/KG	ND	3.9	8.9	5.6	2.9	5.1	6.6
PCB 151	1.86	UG/KG	ND	3.9	E7.2	3.2	E5.5	10.3	6.1
PCB 77	2.01	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 149	2.34	UG/KG	ND	6.1	9.0	5.6	E5.8	8.3	9.6
PCB 123	2.64	UG/KG	ND	<2.6	<2.6	ND	<2.6	<2.6	<2.6
PCB 118	2.06	UG/KG	<2.1	21.1	27.1	23.7	24.4	33.0	27.2
PCB 114	3.15	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 153/168	2.54	UG/KG	7.4	57.1	72.7	61.2	68.8	E91.7	76.2
PCB 105	2.29	UG/KG	ND	4.6	6.2	4.3	4.8	7.6	6.7
PCB 138	1.73	UG/KG	2.7	31.9	44.5	36.1	40.1	59.0	48.5
PCB 158	2.72	UG/KG	ND	<2.7	<2.7	<2.7	<2.7	3.2	3.7
PCB 187	2.5	UG/KG	4.1	25.5	28.2	24.1	29.1	36.3	31.5
PCB 183	1.55	UG/KG	ND	6.9	8.3	7.0	8.5	11.3	8.6
PCB 126	1.52	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 128	1.23	UG/KG	ND	5.2	8.5	6.7	6.1	8.8	8.3
PCB 167	1.63	UG/KG	ND	<1.6	2.3	<1.6	2.1	3.1	2.7
PCB 177	1.91	UG/KG	ND	3.6	5.5	<1.9	4.1	6.9	5.8
PCB 156	.64	UG/KG	ND	3.5	4.3	3.7	3.5	4.9	4.6
PCB 157	2.88	UG/KG	ND	<2.9	ND	ND	<2.9	<2.9	<2.9
PCB 180	2.58	UG/KG	<2.6	22.0	29.4	25.0	25.4	36.3	28.6
PCB 170	1.23	UG/KG	ND	8.6	12.0	9.3	11.0	14.0	11.3
PCB 169	2.76	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 189	1.78	UG/KG	ND	ND	ND	ND	ND	ND	ND
PCB 194	1.14	UG/KG	ND	7.1	8.5	6.6	8.1	9.4	7.9
PCB 206	1.28	UG/KG	ND	6.8	5.9	<1.3	4.2	5.5	5.6

ND= not detected
NA= not analyzed
NS= not sampled
E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS

SOUTH BAY WATER RECLAMATION PLANT
FISH MUSCLE - Poly Chlorinated Biphenyls

ANNUAL 2009

Analyte	MDL	Units	RF-3 2009 Avg	RF-4 2009 Avg
PCB 18	.29	UG/KG	ND	ND
PCB 28	.28	UG/KG	ND	ND
PCB 49	.5	UG/KG	ND	ND
PCB 37	.25	UG/KG	ND	ND
PCB 70	.25	UG/KG	ND	ND
PCB 101	.43	UG/KG	<0.4	<0.4
PCB 119	.24	UG/KG	ND	ND
PCB 87	.3	UG/KG	ND	ND
PCB 110	.25	UG/KG	ND	ND
PCB 151	.19	UG/KG	ND	ND
PCB 77	.2	UG/KG	ND	ND
PCB 149	.23	UG/KG	ND	ND
PCB 123	.26	UG/KG	ND	ND
PCB 118	.21	UG/KG	ND	<0.2
PCB 114	.31	UG/KG	ND	ND
PCB 153/168	.25	UG/KG	E0.5	0.4
PCB 105	.23	UG/KG	ND	ND
PCB 138	.17	UG/KG	<0.2	0.2
PCB 158	.27	UG/KG	ND	ND
PCB 187	.25	UG/KG	ND	<0.3
PCB 183	.15	UG/KG	ND	ND
PCB 126	.15	UG/KG	ND	ND
PCB 128	.12	UG/KG	ND	ND
PCB 167	.16	UG/KG	ND	ND
PCB 177	.19	UG/KG	ND	ND
PCB 156	.06	UG/KG	ND	ND
PCB 157	.29	UG/KG	ND	ND
PCB 180	.26	UG/KG	ND	ND
PCB 170	.12	UG/KG	ND	ND
PCB 169	.28	UG/KG	ND	ND
PCB 189	.18	UG/KG	ND	ND
PCB 194	.11	UG/KG	ND	ND
PCB 206	.13	UG/KG	ND	ND

ND= not detected
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