

- 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 Technique⁶:

Sediments

Benthic samples are obtained with a chain-rigged van Veen grab from the City's ocean monitoring program vessels. The grab takes 0.1m² 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.

⁶ 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 2000

A. Ocean Sediment Chemistries.

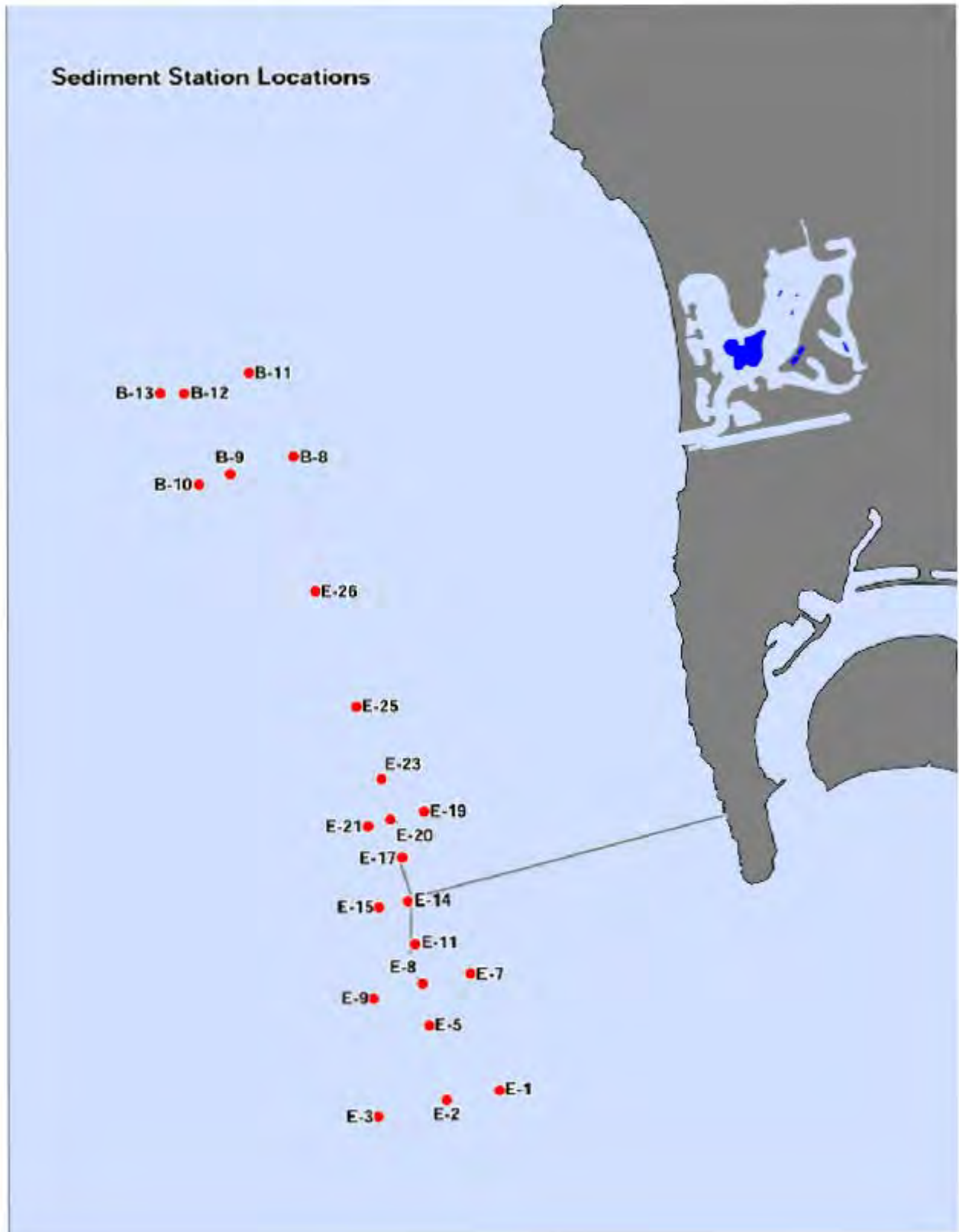
The data for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), and Total Volatile Solids (TVS), all measures of organic enrichment, as well as total sulfides and temperature, are all presented by quarter and averaged. The quarterly particle size analysis does not lend itself to summarization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

Benthic sampling stations are identified by either a 3-digit number and/or a letter-number identification code. All "A" stations are 100 series and "B" stations are 200 series designations. For example, the station A-15 is also called 115 and station B-7 would be 207. The 18 benthic stations sampled this year are identified on the preceding map and cross-referenced below. Stations identified with "DUP" were field replicates.

Station

A-15	B-13	E-14 DUP	E-25
A-16	B-3	E-15	E-26
A-2	B-5	E-17	E-3
A-5	B-8	E-19	E-5
A-8	B-9	E-2	E-7
A-9	B-9 DUP	E-20	E-8
B-10	E-1	E-21	E-9
B-11	E-11	E-23	
B-12	E-14	E-23 DUP	

San Diego Benthic (ocean sediment) stations.



POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY

From 01-JAN-2001 To 31-DEC-2001

Biochemical Oxygen Demand
(mg/Kg)

STATION	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Average of All Quarters
B-8	335	326	359	421	360
B-9	319	307	366	253	311
B-9 DUP	261	351	284	301	299
B-10	379	377	351	297	351
B-11	385	412	394	375	392
B-12	302	300	392	366	340
B-13	414	408	547	386	439
E-1	179*	231	290	280	267
E-2	241*	333	300	282	305
E-3	118*	204	273	201	226
E-5	185*	225	249	317	264
E-7	150*	301	322	330	318
E-8	252*	278	299	235	271
E-9	221*	255	333	267	285
E-11	267*	353	320	382	352
E-14	374*	319	568	404	430
E-14 DUP	353*	520	449	467	479
E-15	261*	287	270	264	274
E-17	154*	301	312	324	312
E-19	237*	322	310	288	307
E-20	256*	252	306	305	288
E-21	274*	318	295	280	298
E-23	159*	299	273	292	288
E-23 DUP	240*	343	332	240	305
E-25	233*	333	264	255	284
E-26	179*	401	341	245	329

*=Batches failed QC. Data is non-reportable for compliance purposes, is shown for review only, and is not included in averages.

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY

From 01-JAN-2001 To 31-DEC-2001

Sulfides, Total
(mg/Kg)

STATION	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Average of All Quarters
B-8	1.6	0.1	0.2	0.8	0.7
B-9	0.7	0.1	2.1	ND	0.7
B-9 DUP	0.9	0.1	0.7	0.5	0.6
B-10	0.5	0.1	3.1	0.6	1.1
B-11	1.5	ND	1.4	ND	0.7
B-12	0.4	ND	0.7	0.2	0.3
B-13	0.5	0.1	0.9	1.3	0.7
E-1	0.1	7.7	13.3	ND	5.3
E-2	0.7	17.1	1.3	1.9	5.3
E-3	ND	5.5	2.1	ND	1.9
E-5	0.2	33.5	1.9	ND	8.9
E-7	8.7	0.3	2.2	ND	2.8
E-8	4.9	0.4	2.0	0.2	1.9
E-9	0.2	0.6	1.4	ND	0.6
E-11	2.6	0.2	4.0	0.5	1.8
E-14	12.4	1.1	25.9	1.6	10.3
E-14 DUP	8.4	ND	12.2	17.7	9.6
E-15	0.2	0.1	1.4	1.4	0.8
E-17	4.3	0.3	1.5	3.0	2.3
E-19	1.2	0.1	4.2	2.5	2.0
E-20	5.6	ND	1.8	1.5	2.2
E-21	3.5	0.1	1.4	1.2	1.6
E-23	0.5	0.1	2.1	0.9	0.9
E-23 DUP	0.5	0.1	3.8	0.8	1.3
E-25	0.3	0.2	2.1	1.2	1.0
E-26	0.7	0.2	2.2	0.6	0.9

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY

From 01-JAN-2001 To 31-DEC-2001

Total Volatile Solids
(% Weight)

STATION	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Average of All Quarters
B-8	2.9	3.0	3.2	3.2	3.1
B-9	2.7	2.9	2.8	3.0	2.9
B-9 DUP	2.8	2.8	2.8	2.9	2.8
B-10	2.9	2.8	2.7	2.7	2.8
B-11	3.7	4.2	3.9	4.2	4.0
B-12	3.1	2.8	3.2	3.3	3.1
B-13	3.6	3.2	3.6	4.3	3.7
E-1	2.7	2.4	2.5	2.6	2.6
E-2	3.2	3.4	1.5	2.4	2.6
E-3	2.2	2.5	2.2	1.9	2.2
E-5	2.5	2.1	2.3	2.6	2.4
E-7	2.2	2.6	2.4	2.3	2.4
E-8	2.6	2.6	2.3	2.3	2.5
E-9	2.8	2.4	3.2	2.6	2.8
E-11	2.1	1.9	2.4	2.3	2.2
E-14	2.2	2.2	2.2	1.9	2.1
E-14 DUP	2.3	2.1	2.0	2.0	2.1
E-15	2.4	2.5	2.6	2.3	2.5
E-17	2.0	2.0	2.0	1.8	2.0
E-19	2.9	2.8	2.5	2.3	2.6
E-20	2.6	2.3	2.2	2.1	2.3
E-21	2.6	2.5	2.3	2.2	2.4
E-23	2.7	2.6	2.4	2.6	2.6
E-23 DUP	2.7	2.6	2.2	2.4	2.5
E-25	3.0	2.5	2.6	2.3	2.6
E-26	2.9	2.5	2.7	2.5	2.7

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY
Particle Size Analysis

From 01-JAN-2001 To 31-MAR-2001

Point Loma Ocean Outfall
Monitoring Stations

STATION	DATE	PHI >0	PHI >1	PHI >2	PHI >3	PHI >4	PHI <4	PHI <5	PHI <6	PHI <7	PHI <8	PHI <9	Total %
B-8	16-JAN-2001	ND	0.00	0.15	7.40	34.00	27.20	11.60	7.89	6.64	4.20	0.99	100.07
B-9	16-JAN-2001	ND	0.00	1.21	18.20	36.70	17.40	8.30	7.21	6.27	3.84	0.89	100.02
B-9 DUP	16-JAN-2001	ND	0.00	0.00	27.00	46.80	6.53	5.91	5.83	4.68	2.75	0.52	100.02
B-10	16-JAN-2001	2.04	0.00	0.13	30.50	39.50	7.47	5.59	5.99	5.70	3.99	1.10	102.01
B-11	19-JAN-2001	17.80	0.41	3.63	15.60	27.90	18.50	10.40	9.02	8.08	5.16	1.30	117.80
B-12	19-JAN-2001	2.99	7.25	19.10	28.30	18.20	7.86	5.00	5.09	4.90	3.40	0.92	103.01
B-13	16-JAN-2001	9.44	54.90	15.00	12.30	7.76	2.89	1.79	1.85	1.81	1.39	0.33	109.46
E-1	08-JAN-2001	1.74	0.17	1.46	26.80	33.90	12.50	8.13	6.69	5.76	3.71	0.87	101.73
E-2	08-JAN-2001	9.74	3.66	7.86	19.90	22.40	14.30	9.44	8.49	7.65	4.98	1.30	109.72
E-3	08-JAN-2001	15.30	5.53	16.20	27.80	19.10	8.86	6.49	6.23	5.56	3.51	0.73	115.31
E-5	08-JAN-2001	ND	0.00	0.24	24.10	43.30	12.70	6.09	5.19	4.65	3.07	0.66	100.00
E-7	09-JAN-2001	ND	0.00	0.73	17.80	41.70	19.50	7.15	5.27	4.49	2.75	0.56	99.95
E-8	08-JAN-2001	0.83	0.00	0.22	22.50	45.50	13.70	5.95	4.92	4.16	2.48	0.48	100.74
E-9	08-JAN-2001	20.50	0.15	1.63	16.50	36.00	17.50	8.26	7.62	7.04	4.33	0.95	120.48
E-11	09-JAN-2001	ND	0.00	0.42	21.20	46.20	14.40	5.47	4.97	4.42	2.57	0.48	100.13
E-14	09-JAN-2001	5.26	0.00	1.10	22.40	42.40	14.40	5.84	5.29	4.85	3.11	0.65	105.30
E-14 DUP	09-JAN-2001	0.73	0.00	0.72	22.70	44.40	13.40	5.37	5.22	4.79	2.92	0.59	100.84
E-15	09-JAN-2001	ND	0.00	0.00	23.00	47.50	9.98	5.49	5.64	4.95	2.89	0.54	99.99
E-17	09-JAN-2001	ND	0.00	0.67	19.80	43.40	15.50	6.17	5.63	5.07	3.15	0.65	100.04
E-19	10-JAN-2001	ND	0.00	0.17	9.27	39.40	24.70	9.26	7.04	6.01	3.54	0.68	100.07
E-20	10-JAN-2001	ND	0.00	0.42	15.70	42.30	17.90	7.54	6.68	5.68	3.18	0.59	99.99
E-21	10-JAN-2001	ND	0.00	0.55	18.80	42.50	15.40	6.82	6.47	5.63	3.28	0.63	100.08
E-23	10-JAN-2001	ND	0.00	0.82	13.90	37.20	20.20	8.70	7.04	6.48	4.40	1.26	100.00
E-23 DUP	10-JAN-2001	ND	0.00	1.01	16.30	39.20	18.50	7.69	6.49	5.93	3.83	1.01	99.96
E-25	10-JAN-2001	ND	0.00	0.86	16.50	39.50	18.80	7.45	6.02	5.81	4.02	1.07	100.03
E-26	10-JAN-2001	ND	0.00	0.00	17.50	49.50	12.40	6.96	5.67	4.65	2.79	0.54	100.01

Particle Size determinations of marine sediments have been performed using a laser light-scattering analyzer since the beginning of 1993 for the fine fraction (<1,000 microns). Coarse fraction (particle sizes >1,000 microns) is determined using 1,000 micron sieve and the coarse fraction (phi >0) is reported as a percent (by weight) of total sample. Fine fraction data is reported as percent distribution and is not normalized with the coarse fraction. Since the coarse fraction is not specifically used for benthic correlation determinations it is reported for anecdotal use. The data can be normalized by the user, by treating the fine fraction phi distributions as the indicated percent of the remaining percentage of sample remaining after sieving. However, the relationship between the coarse and fine distribution percentages are not strictly mass-based. Fine fractions' distribution percents are on population distribution and not mass per se.

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY
Particle Size Analysis

From 01-APR-2001 To 30-JUN-2001

Point Loma Ocean Outfall
Monitoring Stations

STATION	DATE	PHI >0	PHI >1	PHI >2	PHI >3	PHI >4	PHI <4	PHI <5	PHI <6	PHI <7	PHI <8	PHI <9	Total %
B-8	17-APR-2001	ND	0.00	0.00	6.17	34.30	28.50	11.90	8.09	6.63	3.77	0.66	100.02
B-9	17-APR-2001	ND	0.18	2.40	20.60	36.90	16.60	7.35	6.25	5.59	3.42	0.80	100.09
B-9 DUP	17-APR-2001	ND	0.11	0.73	15.30	39.10	18.80	8.30	6.83	6.10	3.84	0.87	99.98
B-10	17-APR-2001	1.77	0.14	0.98	24.00	41.40	12.00	5.86	5.83	5.48	3.56	0.84	101.86
B-11	17-APR-2001	7.63	0.55	5.66	18.20	26.70	17.20	10.20	8.92	7.59	4.24	0.73	107.62
B-12	17-APR-2001	1.53	5.64	15.60	28.10	21.20	9.56	5.52	5.24	4.96	3.31	0.84	101.50
B-13	17-APR-2001	5.25	11.60	27.20	26.30	14.00	5.74	3.83	4.03	3.93	2.74	0.71	105.33
E-1	03-APR-2001	1.30	5.87	15.60	28.00	21.30	9.47	5.44	5.18	4.92	3.30	0.85	101.23
E-2	03-APR-2001	17.40	0.18	2.76	17.20	27.90	19.00	11.50	8.91	7.30	4.32	0.92	117.39
E-3	03-APR-2001	5.69	5.13	22.30	32.70	15.10	8.10	5.48	4.34	3.78	2.55	0.55	105.72
E-5	03-APR-2001	ND	0.00	0.00	9.27	67.50	9.77	3.58	4.01	3.47	2.05	0.31	99.96
E-7	10-APR-2001	ND	0.00	0.09	11.00	44.30	22.00	7.90	6.05	5.14	2.97	0.53	99.98
E-8	10-APR-2001	ND	0.11	2.38	25.90	39.90	14.30	5.74	4.78	4.16	2.39	0.35	100.01
E-9	10-APR-2001	18.00	0.09	0.99	13.90	43.80	17.20	7.27	6.70	5.94	3.44	0.70	118.03
E-11	10-APR-2001	0.65	0.00	0.00	8.57	69.80	8.50	3.18	4.20	3.57	1.90	0.27	100.64
E-14	16-APR-2001	1.36	0.00	0.00	39.20	49.10	2.60	2.39	2.86	2.43	1.38	0.12	101.44
E-14 DUP	16-APR-2001	7.47	0.00	0.00	30.20	52.90	5.93	3.25	3.10	2.70	1.65	0.25	107.45
E-15	16-APR-2001	ND	0.00	0.00	26.40	48.90	6.97	5.09	5.39	4.42	2.42	0.34	99.93
E-17	16-APR-2001	ND	0.00	0.58	22.60	45.90	14.70	5.36	4.41	3.80	2.24	0.45	100.04
E-19	16-APR-2001	ND	0.00	0.12	9.30	43.10	25.10	8.12	5.79	5.03	2.92	0.56	100.04
E-20	16-APR-2001	ND	0.00	0.51	17.70	45.40	18.00	6.47	4.84	4.10	2.44	0.50	99.96
E-21	16-APR-2001	ND	0.00	0.41	11.70	48.90	19.80	5.15	5.56	5.19	2.82	0.49	100.02
E-23	16-APR-2001	ND	0.14	2.05	19.80	40.30	17.90	6.74	5.26	4.54	2.68	0.53	99.94
E-23 DUP	16-APR-2001	ND	0.00	1.47	23.50	37.60	17.20	7.06	5.46	4.61	2.60	0.49	99.99
E-25	17-APR-2001	ND	0.00	0.53	16.30	41.60	19.30	7.91	6.12	5.04	2.77	0.50	100.07
E-26	17-APR-2001	ND	0.00	0.24	13.30	41.40	20.40	8.36	6.92	5.80	3.11	0.54	100.07

Particle Size determinations of marine sediments have been performed using a laser light-scattering analyzer since the beginning of 1993 for the fine fraction (<1,000 microns). Coarse fraction (particle sizes >1,000 microns) is determined using 1,000 micron sieve and the coarse fraction (phi >0) is reported as a percent (by weight) of total sample. Fine fraction data is reported as percent distribution and is not normalized with the coarse fraction. Since the coarse fraction is not specifically used for benthic correlation determinations it is reported for anecdotal use. The data can be normalized by the user, by treating the fine fraction phi distributions as the indicated percent of the remaining percentage of sample remaining after sieving. However, the relationship between the coarse and fine distribution percentages are not strictly mass-based. Fine fractions' distribution percents are on population distribution and not mass per se.

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY
Particle Size Analysis

From 01-JUL-2001 To 30-SEP-2001

Point Loma Ocean Outfall
Monitoring Stations

STATION	DATE	PHI >0	PHI >1	PHI >2	PHI >3	PHI >4	PHI <4	PHI <5	PHI <6	PHI <7	PHI <8	PHI <9	Total %
B-8	18-JUL-2001	ND	0.00	0.13	6.54	32.30	27.60	11.90	8.33	7.33	4.65	1.16	99.94
B-9	18-JUL-2001	ND	0.14	1.53	17.20	34.30	18.70	9.16	7.88	6.70	3.75	0.70	100.06
B-9 DUP	18-JUL-2001	ND	0.12	1.29	16.50	37.10	18.20	8.13	7.00	6.46	4.16	1.07	100.03
B-10	18-JUL-2001	0.56	0.00	0.90	21.30	45.10	11.10	5.78	6.58	5.64	3.03	0.57	100.56
B-11	18-JUL-2001	8.23	0.28	1.99	12.90	29.60	20.30	10.70	9.23	8.80	5.14	1.08	108.25
B-12	18-JUL-2001	4.23	56.90	10.50	8.00	13.30	3.70	1.93	2.10	1.94	1.34	0.26	104.20
B-13	18-JUL-2001	4.00	22.40	59.20	13.50	1.92	0.65	0.37	0.75	0.77	0.45	0.04	104.05
E-1	10-JUL-2001	3.38	0.24	1.28	37.50	31.20	7.67	7.10	6.15	5.07	3.11	0.63	103.33
E-2	10-JUL-2001	3.20	0.00	0.00	36.10	35.90	7.19	6.47	5.66	4.82	3.17	0.68	103.19
E-3	10-JUL-2001	4.64	5.53	15.20	27.90	21.50	8.77	6.16	5.58	5.04	3.46	0.89	104.67
E-5	11-JUL-2001	ND	0.13	2.22	23.70	37.90	14.80	6.61	5.78	5.14	3.10	0.63	100.01
E-7	11-JUL-2001	ND	0.00	0.51	13.30	39.80	22.10	8.51	6.34	5.43	3.32	0.68	99.99
E-8	11-JUL-2001	ND	0.00	1.47	21.10	39.80	16.10	6.82	5.80	5.13	3.21	0.68	100.11
E-9	12-JUL-2001	9.55	0.48	4.05	19.00	32.30	16.20	7.83	7.19	7.00	4.69	1.19	109.48
E-11	12-JUL-2001	1.28	0.11	1.60	19.10	40.40	17.80	6.83	5.27	4.73	3.23	0.91	101.26
E-14	16-JUL-2001	7.28	0.00	0.97	28.10	44.00	10.40	4.71	4.95	4.33	2.33	0.33	107.40
E-14 DUP	16-JUL-2001	12.60	1.03	2.03	23.70	41.70	13.20	5.59	5.38	4.59	2.50	0.36	112.68
E-15	12-JUL-2001	ND	0.00	1.07	21.30	40.50	14.80	6.52	5.87	5.45	3.62	0.93	100.06
E-17	16-JUL-2001	1.98	0.00	0.68	18.60	44.00	17.50	6.30	5.18	4.90	2.63	0.31	102.08
E-19	16-JUL-2001	ND	0.00	0.16	9.15	39.30	24.90	9.41	7.21	6.02	3.21	0.58	99.94
E-20	16-JUL-2001	ND	0.00	0.49	15.70	42.30	18.80	7.41	6.31	5.43	3.03	0.59	100.06
E-21	16-JUL-2001	ND	0.00	0.07	19.80	45.70	12.80	6.52	6.12	4.68	3.15	1.16	100.00
E-23	16-JUL-2001	ND	0.00	0.42	14.10	41.50	20.60	8.02	6.27	5.40	3.14	0.63	100.08
E-23 DUP	16-JUL-2001	ND	0.00	0.48	15.10	42.30	19.60	7.56	6.20	5.25	2.92	0.57	99.98
E-25	23-JUL-2001	ND	0.00	1.22	18.40	38.30	17.90	7.72	6.47	5.70	3.50	0.82	100.03
E-26	18-JUL-2001	ND	0.00	0.64	14.20	37.30	19.80	8.77	7.40	6.94	4.16	0.87	100.08

Particle Size determinations of marine sediments have been performed using a laser light-scattering analyzer since the beginning of 1993 for the fine fraction (<1,000 microns). Coarse fraction (particle sizes >1,000 microns) is determined using 1,000 micron sieve and the coarse fraction (phi >0) is reported as a percent (by weight) of total sample. Fine fraction data is reported as percent distribution and is not normalized with the coarse fraction. Since the coarse fraction is not specifically used for benthic correlation determinations it is reported for anecdotal use. The data can be normalized by the user, by treating the fine fraction phi distributions as the indicated percent of the remaining percentage of sample remaining after sieving. However, the relationship between the coarse and fine distribution percentages are not strictly mass-based. Fine fractions' distribution percents are on population distribution and not mass per se.

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

POINT LOMA WASTEWATER TREATMENT PLANT

SEDIMENT QUARTERLY
Particle Size Analysis

From 01-OCT-2001 To 31-DEC-2001

Point Loma Ocean Outfall
Monitoring Stations

STATION	DATE	PHI >0	PHI >1	PHI >2	PHI >3	PHI >4	PHI <4	PHI <5	PHI <6	PHI <7	PHI <8	PHI <9	Total %
B-8	04-OCT-2001	ND	0.00	0.14	7.28	34.50	27.30	11.50	8.12	6.66	3.78	0.69	99.97
B-9	04-OCT-2001	ND	0.00	0.00	9.34	55.10	14.70	5.91	6.03	5.28	3.07	0.56	99.99
B-9 DUP	04-OCT-2001	ND	0.00	0.00	7.34	68.00	8.72	3.94	5.10	4.25	2.36	0.32	100.03
B-10	04-OCT-2001	ND	0.00	0.00	9.27	67.80	7.09	3.30	4.99	4.54	2.60	0.37	99.96
B-11	04-OCT-2001	9.41	0.13	0.71	10.60	30.30	21.30	11.80	10.30	8.89	5.06	1.01	109.51
B-12	04-OCT-2001	3.01	0.95	7.02	24.90	29.50	14.00	6.95	5.68	5.44	4.16	1.36	102.97
B-13	04-OCT-2001	7.47	6.08	23.00	29.60	16.20	7.41	4.94	4.73	4.44	2.98	0.70	107.55
E-1	03-OCT-2001	2.24	1.91	8.10	23.90	23.80	15.10	9.34	7.63	6.22	3.45	0.59	102.28
E-2	03-OCT-2001	2.79	0.24	3.90	24.00	31.80	15.70	8.21	6.70	5.64	3.24	0.55	102.77
E-3	03-OCT-2001	2.41	0.27	4.76	25.00	26.70	15.60	9.61	7.49	6.31	3.67	0.59	102.41
E-5	03-OCT-2001	5.96	0.00	0.00	4.44	67.60	10.60	4.84	5.42	4.24	2.45	0.34	105.89
E-7	03-OCT-2001	ND	0.00	0.00	6.13	69.60	11.10	3.65	4.17	3.46	1.81	0.14	100.06
E-8	03-OCT-2001	ND	0.00	1.12	24.60	43.50	14.00	5.60	4.84	3.96	2.11	0.28	100.01
E-9	03-OCT-2001	15.30	0.19	1.88	18.00	36.50	17.20	7.87	7.14	6.53	3.93	0.73	115.27
E-11	03-OCT-2001	1.19	0.00	0.00	30.30	51.90	5.81	3.83	3.46	2.88	1.69	0.14	101.20
E-14	03-OCT-2001	5.28	0.00	0.61	21.30	46.30	14.80	5.44	4.66	4.17	2.47	0.35	105.38
E-14 DUP	03-OCT-2001	1.12	0.00	0.81	22.10	44.20	14.90	5.75	4.98	4.34	2.54	0.48	101.22
E-15	08-OCT-2001	0.60	0.00	0.00	11.10	67.90	6.97	3.11	4.38	3.94	2.24	0.31	100.55
E-17	08-OCT-2001	ND	0.00	0.00	27.20	52.20	7.15	4.45	3.85	3.09	1.79	0.25	99.98
E-19	05-OCT-2001	ND	0.00	0.00	23.80	54.40	7.97	5.12	3.81	2.97	1.74	0.20	100.01
E-20	05-OCT-2001	ND	0.00	0.00	6.53	64.10	12.90	4.60	5.02	4.26	2.36	0.32	100.09
E-21	05-OCT-2001	ND	0.00	0.13	13.30	56.80	12.90	4.81	4.87	4.28	2.53	0.47	100.09
E-23	04-OCT-2001	0.62	0.00	0.43	14.30	41.80	20.10	7.95	6.36	5.45	3.12	0.55	100.68
E-23 DUP	04-OCT-2001	ND	0.00	0.53	15.90	43.10	18.90	7.31	6.04	5.11	2.78	0.37	100.04
E-25	05-OCT-2001	4.17	0.00	0.63	16.90	41.80	18.90	7.44	5.81	5.00	2.99	0.57	104.21
E-26	04-OCT-2001	ND	0.00	0.00	8.75	48.70	20.50	7.43	6.04	5.12	2.97	0.54	100.05

Particle Size determinations of marine sediments have been performed using a laser light-scattering analyzer since the beginning of 1993 for the fine fraction (<1,000 microns). Coarse fraction (particle sizes >1,000 microns) is determined using 1,000 micron sieve and the coarse fraction (phi >0) is reported as a percent (by weight) of total sample. Fine fraction data is reported as percent distribution and is not normalized with the coarse fraction. Since the coarse fraction is not specifically used for benthic correlation determinations it is reported for anecdotal use. The data can be normalized by the user, by treating the fine fraction phi distributions as the indicated percent of the remaining percentage of sample remaining after sieving. However, the relationship between the coarse and fine distribution percentages are not strictly mass-based. Fine fractions' distribution percents are on population distribution and not mass per se.

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

POINT LOMA WASTEWATER TREATMENT PLANT
 SEDIMENT ANNUAL Total Organic Carbon/Total Nitrogen - Standard Stations

From 01-JAN-2001 To 31-JAN-2001

Analyte	MDL	Units	B-8	B-9	B-9 DUP	B-10	B-11	B-12	B-13
			Avg	Avg	Avg	Avg	Avg	Avg	Avg
Total Nitrogen	.005	WT%	0.065	0.049	0.053	0.052	0.084	0.058	0.071
Total Organic Carbon	.01	WT%	0.700	0.542	0.591	0.563	0.705	0.496	0.451

Analyte	MDL	Units	E-1	E-2	E-3	E-5	E-7	E-8	E-9
			Avg	Avg	Avg	Avg	Avg	Avg	Avg
Total Nitrogen	.005	WT%	0.040	0.057	0.035	0.037	0.048	0.038	0.044
Total Organic Carbon	.01	WT%	0.458	0.674	0.389	0.454	0.486	0.469	0.543

Analyte	MDL	Units	E-11	E-14	E-14 DUP	E-15	E-17	E-19	E-20
			Avg	Avg	Avg	Avg	Avg	Avg	Avg
Total Nitrogen	.005	WT%	0.033	0.037	0.040	0.039	0.040	0.055	0.044
Total Organic Carbon	.01	WT%	0.367	0.427	0.448	0.456	0.419	0.614	0.521

Analyte	MDL	Units	E-21	E-23	E-23 DUP	E-25	E-26
			Avg	Avg	Avg	Avg	Avg
Total Nitrogen	.005	WT%	0.048	0.052	0.047	0.051	0.054
Total Organic Carbon	.01	WT%	0.541	0.595	0.524	0.571	0.606

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

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

From: 01-JAN-2001 To: 31-DEC-2001

Source:		B-8	B-9	B-9 DUP	B-10	B-11	B-12	B-13
Date:		2001	2001	2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	5 MG/KG	13700	10700	11300	8750	13000	7890	7240
Antimony	5 MG/KG	<5.00	<5.00	<5.00	<5.00	6.30	<5.00	6.13
Arsenic	.52 MG/KG	2.82	3.03	3.32	2.85	4.69	4.92	11.10
Beryllium	.2 MG/KG	0.37	ND	ND	ND	ND	ND	ND
Cadmium	.5 MG/KG	ND	ND	ND	<0.50	<0.50	<0.50	<0.50
Chromium	3 MG/KG	21.7	21.8	22.5	18.6	25.9	25.7	31.1
Copper	2 MG/KG	11.10	9.11	8.95	8.23	10.70	8.55	6.90
Iron	3 MG/KG	15900	16800	16500	13900	22200	21600	23200
Lead	5 MG/KG	<5.00	ND	<5.00	<5.00	<5.00	<5.00	<5.00
Manganese	.48 MG/KG	131.0	105.0	109.0	82.0	129.0	68.6	72.0
Mercury	.03 MG/KG	<0.030	<0.030	ND	ND	ND	<0.030	ND
Nickel	3 MG/KG	9.15	7.86	6.25	5.23	8.53	5.98	5.73
Selenium	.22 MG/KG	0.251	0.245	0.253	0.223	0.301	0.230	0.330
Silver	3 MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	10 MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	12 MG/KG	ND	ND	ND	ND	ND	ND	ND
Zinc	4 MG/KG	38.9	33.0	33.8	27.4	39.8	33.4	33.6

Source:		E-1	E-2	E-3	E-5	E-7	E-8	E-9
Date:		2001	2001	2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	5 MG/KG	11200	13900	11700	10200	11500	8960	8590
Antimony	5 MG/KG	ND	<5.00	<5.00	ND	<5.00	ND	<5.00
Arsenic	.52 MG/KG	3.27	3.58	2.81	2.55	3.06	2.53	3.11
Beryllium	.2 MG/KG	ND	0.43	ND	0.30	ND	ND	ND
Cadmium	.5 MG/KG	ND	ND	ND	ND	ND	ND	ND
Chromium	3 MG/KG	15.0	16.8	13.3	14.5	16.0	13.8	16.5
Copper	2 MG/KG	11.70	15.30	13.90	11.40	10.10	10.70	14.30
Iron	3 MG/KG	13700	16700	14200	12700	12900	10900	13000
Lead	5 MG/KG	<5.00	<5.00	<5.00	ND	<5.00	ND	<5.00
Manganese	.48 MG/KG	106.0	122.0	113.0	98.2	106.0	91.0	78.1
Mercury	.03 MG/KG	<0.030	<0.030	0.045	<0.030	<0.030	<0.030	<0.030
Nickel	3 MG/KG	7.68	8.10	4.35	7.23	8.00	6.38	6.73
Selenium	.22 MG/KG	0.202	0.232	<0.110	0.142	0.185	0.140	0.245
Silver	3 MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	10 MG/KG	ND	ND	ND	ND	<10.0	ND	ND
Tin	12 MG/KG	ND	ND	ND	ND	ND	ND	ND
Zinc	4 MG/KG	31.8	37.1	32.1	27.9	28.9	25.0	40.8

Source:		E-11	E-14	E-14 DUP	E-15	E-17	E-19	E-20
Date:		2001	2001	2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	5 MG/KG	8000	7500	7690	8370	8530	12300	9780
Antimony	5 MG/KG	<5.00	ND	ND	<5.00	ND	<5.00	<5.00
Arsenic	.52 MG/KG	2.65	3.43	3.72	2.55	2.54	3.40	2.93
Beryllium	.2 MG/KG	0.28	ND	0.30	0.36	ND	ND	0.36
Cadmium	.5 MG/KG	<0.50	ND	ND	ND	ND	ND	ND
Chromium	3 MG/KG	12.4	14.7	15.2	13.9	14.1	19.5	15.8
Copper	2 MG/KG	8.18	9.03	9.55	10.10	7.75	9.73	7.70
Iron	3 MG/KG	9870	10500	10300	10400	9930	13800	11300
Lead	5 MG/KG	ND	ND	<5.00	ND	<5.00	<5.00	<5.00
Manganese	.48 MG/KG	76.3	92.2	85.8	83.2	84.0	117.0	99.3
Mercury	.03 MG/KG	<0.030	ND	<0.030	<0.030	<0.030	<0.030	<0.030
Nickel	3 MG/KG	7.00	5.46	5.10	4.98	6.35	8.08	6.15
Selenium	.22 MG/KG	0.118	0.135	<0.220	0.211	0.113	0.178	0.173
Silver	3 MG/KG	ND	ND	ND	ND	ND	ND	ND
Thallium	10 MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	12 MG/KG	ND	ND	ND	ND	ND	ND	ND
Zinc	4 MG/KG	21.5	25.4	23.1	23.2	22.3	31.2	24.7

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

From: 01-JAN-2001 To: 31-DEC-2001

Source:		E-21	E-23	E-23 DUP	E-25	E-26
Date:		2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average
Aluminum	5 MG/KG	9620	11200	9720	10200	11500
Antimony	5 MG/KG	<5.00	ND	<5.00	ND	<5.00
Arsenic	.52 MG/KG	2.48	2.61	2.52	3.03	2.89
Beryllium	.2 MG/KG	ND	ND	ND	ND	ND
Cadmium	.5 MG/KG	ND	ND	ND	ND	<0.50
Chromium	3 MG/KG	16.2	17.4	16.8	16.6	18.2
Copper	2 MG/KG	9.93	9.75	8.78	10.10	9.48
Iron	3 MG/KG	11200	12700	11900	12000	13100
Lead	5 MG/KG	<5.00	ND	<5.00	ND	<5.00
Manganese	.48 MG/KG	87.4	103.0	95.8	97.2	114.0
Mercury	.03 MG/KG	<0.030	<0.030	<0.030	<0.030	ND
Nickel	3 MG/KG	7.48	8.73	7.33	7.40	7.18
Selenium	.22 MG/KG	0.180	0.153	0.210	0.198	0.213
Silver	3 MG/KG	ND	ND	ND	ND	ND
Thallium	10 MG/KG	ND	ND	ND	ND	ND
Tin	12 MG/KG	ND	ND	ND	ND	ND
Zinc	4 MG/KG	24.7	27.9	25.9	26.0	28.7

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	B-8	B-9	B-9 DUP	B-10	B-11	B-12	B-13	E-1	E-2	E-3
			2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
			Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
Aldrin	710	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	520	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	610	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	300	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	550	NG/KG	900	550	<550	ND	750	ND	ND	750	1500	<550
p,p-DDT	410	NG/KG	ND	1750	1900	ND	ND	ND	ND	ND	1150	ND
o,p-DDD	320	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	480	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	490	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene	1400	NG/KG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene	120	NG/KG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	480	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	370	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	450	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	360	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	440	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	2200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
=====												
Aldrin + Dieldrin	710	NG/KG	0	0	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	610	NG/KG	0	0	0	0	0	0	0	0	0	0
DDT and derivatives	590	NG/KG	900	2300	1900	0	750	0	0	750	2650	0
Chlordane + related cmpds.	480	NG/KG	0	0	0	0	0	0	0	0	0	0
=====												
Chlorinated Hydrocarbons	2200	NG/KG	900	2300	1900	0	750	0	0	750	2650	0

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	E-5	E-7	E-8	E-9	E-11	E-14	E-14 DUP	E-15	E-17	E-19
			2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
			Average	Average	Average	Average	Average	Average	Average	Average	Average	Average
Aldrin	710	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dieldrin	520	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	610	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	300	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p,p-DDE	550	NG/KG	700	550	<550	E800	<550	ND	ND	ND	ND	ND
p,p-DDT	410	NG/KG	ND	1350	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	320	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	480	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	570	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	490	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Chlordene	1400	NG/KG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Gamma Chlordene	120	NG/KG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oxychlordane	480	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trans Nonachlor	370	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cis Nonachlor	450	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beta Endosulfan	590	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	430	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin	720	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Endrin aldehyde	360	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mirex	440	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methoxychlor	2200	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
=====												
Aldrin + Dieldrin	710	NG/KG	0	0	0	0	0	0	0	0	0	0
Hexachlorocyclohexanes	610	NG/KG	0	0	0	0	0	0	0	0	0	0
DDT and derivatives	590	NG/KG	700	1900	0	800	0	0	0	0	0	0
Chlordane + related cmpds.	480	NG/KG	0	0	0	0	0	0	0	0	0	0
=====												
Chlorinated Hydrocarbons	2200	NG/KG	700	1900	0	800	0	0	0	0	0	0

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

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	E-20	E-21	E-23	E-23 DUP	E-25	E-26
			2001	2001	2001	2001	2001	2001
			Average	Average	Average	Average	Average	Average
Aldrin	710	NG/KG	ND	ND	ND	ND	ND	ND
Dieldrin	520	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Alpha isomer	610	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Beta isomer	570	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Gamma isomer	600	NG/KG	ND	ND	ND	ND	ND	ND
BHC, Delta isomer	300	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDD	590	NG/KG	ND	ND	ND	ND	ND	ND
p,p-DDE	550	NG/KG	ND	<550	550	ND	650	590
p,p-DDT	410	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDD	320	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDE	480	NG/KG	ND	ND	ND	ND	ND	ND
o,p-DDT	570	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor	400	NG/KG	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	490	NG/KG	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	400	NG/KG	ND	ND	ND	ND	ND	ND
Gamma (trans) Chlordane	430	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Chlordene	1400	NG/KG	NA	NA	NA	NA	NA	NA
Gamma Chlordene	120	NG/KG	NA	NA	NA	NA	NA	NA
Oxychlordane	480	NG/KG	ND	ND	ND	ND	ND	ND
Trans Nonachlor	370	NG/KG	ND	ND	ND	ND	ND	ND
Cis Nonachlor	450	NG/KG	ND	ND	ND	ND	ND	ND
Alpha Endosulfan	400	NG/KG	ND	ND	ND	ND	ND	ND
Beta Endosulfan	590	NG/KG	ND	ND	ND	ND	ND	ND
Endosulfan Sulfate	430	NG/KG	ND	ND	ND	ND	ND	ND
Endrin	720	NG/KG	ND	ND	ND	ND	ND	ND
Endrin aldehyde	360	NG/KG	ND	ND	ND	ND	ND	ND
Mirex	440	NG/KG	ND	ND	ND	ND	ND	ND
Methoxychlor	2200	NG/KG	ND	ND	ND	ND	ND	ND
=====								
Aldrin + Dieldrin	710	NG/KG	0	0	0	0	0	0
Hexachlorocyclohexanes	610	NG/KG	0	0	0	0	0	0
DDT and derivatives	590	NG/KG	0	0	550	0	650	590
Chlordane + related cmpds.	480	NG/KG	0	0	0	0	0	0
=====								
Chlorinated Hydrocarbons	2200	NG/KG	0	0	550	0	650	590

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	B-8	B-9	B-9 DUP	B-10	B-11	B-12	B-13	E-1
			2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	3100	NG/KG	ND	ND	ND	ND	ND	ND	ND	<3100
PCB 49	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 44	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	2700	NG/KG	ND	ND	ND	ND	<2700	ND	ND	ND
PCB 70	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 66	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 101	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2600
PCB 99	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 119	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	2800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2900
PCB 81	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2500
PCB 77	2100	NG/KG	ND	ND	ND	ND	<2100	ND	ND	ND
PCB 149	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2500
PCB 123	2800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2700
PCB 114	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 138	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	<3000
PCB 158	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	2900	NG/KG	ND	ND	ND	ND	<2900	ND	ND	ND
PCB 157	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	<2600
PCB 170	3100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	3100	NG/KG	0	0	0	0	0	0	0	0

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	E-2	E-3	E-5	E-7	E-8	E-9	E-11	E-14
			2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	3100	NG/KG	<3100	<3100	ND	ND	ND	<3100	ND	ND
PCB 49	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 44	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 70	2700	NG/KG	<2700	ND	ND	ND	ND	<2700	ND	ND
PCB 66	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 101	2600	NG/KG	<2600	ND	ND	ND	ND	<2600	ND	ND
PCB 99	2500	NG/KG	<2500	ND	ND	ND	ND	<2500	ND	ND
PCB 119	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	2800	NG/KG	<2800	ND	ND	ND	ND	<2800	ND	ND
PCB 110	2900	NG/KG	<2900	ND	ND	ND	ND	<2900	ND	ND
PCB 81	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	2500	NG/KG	<2500	ND	ND	ND	ND	ND	ND	ND
PCB 77	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	2500	NG/KG	<2500	<2500	ND	ND	ND	<2500	ND	ND
PCB 123	2800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	2700	NG/KG	<2700	ND	ND	ND	ND	<2700	ND	ND
PCB 114	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	2600	NG/KG	<2600	ND	ND	ND	ND	<2600	ND	ND
PCB 138	3000	NG/KG	<3000	<3000	ND	ND	ND	<3000	ND	ND
PCB 158	2600	NG/KG	<2600	ND	ND	ND	ND	<2600	ND	ND
PCB 187	2700	NG/KG	<2700	ND	ND	ND	ND	ND	ND	ND
PCB 183	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	2600	NG/KG	<2600	<2600	<2600	ND	ND	<2600	ND	ND
PCB 170	3100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	3100	NG/KG	0	0	0	0	0	0	0	0

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	E-14 DUP	E-15	E-17	E-19	E-20	E-21	E-23	E-23 DUP
			2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 52	3100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 49	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 44	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 37	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 74	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 70	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 66	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 101	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 99	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 119	2400	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 87	2800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 110	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 81	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 151	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 77	2100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 149	2500	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 123	2800	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 118	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 114	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 105	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 138	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 158	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 187	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 183	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 126	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 128	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 167	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 177	3000	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 201	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 156	2900	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 157	2700	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 180	2600	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 170	3100	NG/KG	ND	ND	ND	ND	ND	ND	ND	ND
Total PCB's	3100	NG/KG	0	0	0	0	0	0	0	0

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	E-25	E-26
			2001	2001
			Avg	Avg
PCB 18	2600	NG/KG	ND	ND
PCB 28	3000	NG/KG	ND	ND
PCB 52	3100	NG/KG	ND	ND
PCB 49	2700	NG/KG	ND	ND
PCB 44	2600	NG/KG	ND	ND
PCB 37	2100	NG/KG	ND	ND
PCB 74	2700	NG/KG	ND	ND
PCB 70	2700	NG/KG	ND	ND
PCB 66	2100	NG/KG	ND	ND
PCB 101	2600	NG/KG	ND	ND
PCB 99	2500	NG/KG	ND	ND
PCB 119	2400	NG/KG	ND	ND
PCB 87	2800	NG/KG	ND	ND
PCB 110	2900	NG/KG	ND	ND
PCB 81	2500	NG/KG	ND	ND
PCB 151	2500	NG/KG	ND	ND
PCB 77	2100	NG/KG	ND	ND
PCB 149	2500	NG/KG	ND	ND
PCB 123	2800	NG/KG	ND	ND
PCB 118	2700	NG/KG	ND	ND
PCB 114	3000	NG/KG	ND	ND
PCB 105	2600	NG/KG	ND	ND
PCB 138	3000	NG/KG	ND	ND
PCB 158	2600	NG/KG	ND	ND
PCB 187	2700	NG/KG	ND	ND
PCB 183	2700	NG/KG	ND	ND
PCB 126	3000	NG/KG	ND	ND
PCB 128	2700	NG/KG	ND	ND
PCB 167	3000	NG/KG	ND	ND
PCB 177	3000	NG/KG	ND	ND
PCB 201	2900	NG/KG	ND	ND
PCB 156	2900	NG/KG	ND	ND
PCB 157	2700	NG/KG	ND	ND
PCB 180	2600	NG/KG	ND	ND
PCB 170	3100	NG/KG	ND	ND
Total PCB's	3100	NG/KG	0	0

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

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

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	B-8	B-9	B-9 DUP	B-10	B-11	B-12	B-13	E-1	E-3	E-5	E-7	E-8	E-9
			2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	42	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	25	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	35	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	23	UG/KG	ND	ND	ND	ND	ND	ND	ND	<23	<23	ND	ND	ND	<23
Benzo[A]pyrene	18	UG/KG	ND	ND	ND	ND	ND	ND	ND	33	26	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	27	UG/KG	ND	ND	ND	ND	ND	ND	ND	33	38	ND	ND	ND	ND
Benzo[e]pyrene	18	UG/KG	ND	ND	ND	ND	ND	ND	ND	23	<18	ND	ND	ND	ND
Benzo[G,H,I]perylene	25	UG/KG	ND	ND	ND	ND	ND	ND	ND	<25	<25	ND	ND	ND	ND
Benzo[K]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	<20	<20	ND	ND	ND	ND
Biphenyl	42	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	21	UG/KG	ND	ND	ND	ND	ND	ND	ND	<21	27	ND	ND	ND	<21
Dibenzo(A,H)anthracene	25	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	43	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	<39	ND	ND	ND	ND	ND
Fluorene	46	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	22	UG/KG	ND	ND	ND	ND	ND	ND	ND	<22	<22	ND	ND	ND	ND
1-methylphenanthrene	29	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	36	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	18	UG/KG	ND	ND	ND	ND	ND	ND	ND	<18	ND	ND	ND	ND	ND
Phenanthrene	37	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	27	UG/KG	ND	ND	ND	ND	ND	ND	ND	43	<27	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	46	UG/KG	0	0	0	0	0	0	0	132	91	0	0	0	0

Analyte	MDL	Units	E-11	E-14	E-14 DUP	E-15	E-17	E-19	E-2	E-20	E-21	E-23	E-23 DUP	E-25	E-26
			2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	42	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	25	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	35	UG/KG	ND	ND	ND	ND	ND	ND	<35	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	23	UG/KG	ND	ND	ND	ND	ND	ND	31	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	18	UG/KG	ND	ND	ND	ND	ND	ND	34	ND	<18	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	27	UG/KG	ND	ND	ND	ND	ND	ND	51	ND	<27	ND	ND	ND	ND
Benzo[e]pyrene	18	UG/KG	ND	ND	ND	ND	ND	ND	21	ND	19	ND	ND	ND	ND
Benzo[G,H,I]perylene	25	UG/KG	ND	ND	ND	ND	ND	ND	<25	ND	33	ND	ND	ND	ND
Benzo[K]fluoranthene	20	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	<20	ND	ND	ND	ND
Biphenyl	42	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	21	UG/KG	ND	ND	ND	ND	ND	ND	51	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	25	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	43	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	39	UG/KG	ND	ND	ND	ND	ND	ND	51	ND	ND	ND	ND	ND	ND
Fluorene	46	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	22	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	ND
1-methylphenanthrene	29	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	36	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perylene	18	UG/KG	ND	ND	ND	ND	ND	ND	<18	ND	<18	ND	ND	ND	ND
Phenanthrene	37	UG/KG	ND	ND	ND	ND	ND	ND	<37	ND	ND	ND	ND	ND	ND
Pyrene	27	UG/KG	ND	ND	ND	ND	ND	ND	60	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	39	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Base/Neutral Compounds	46	UG/KG	0	0	0	0	0	0	299	0	80	0	0	0	0

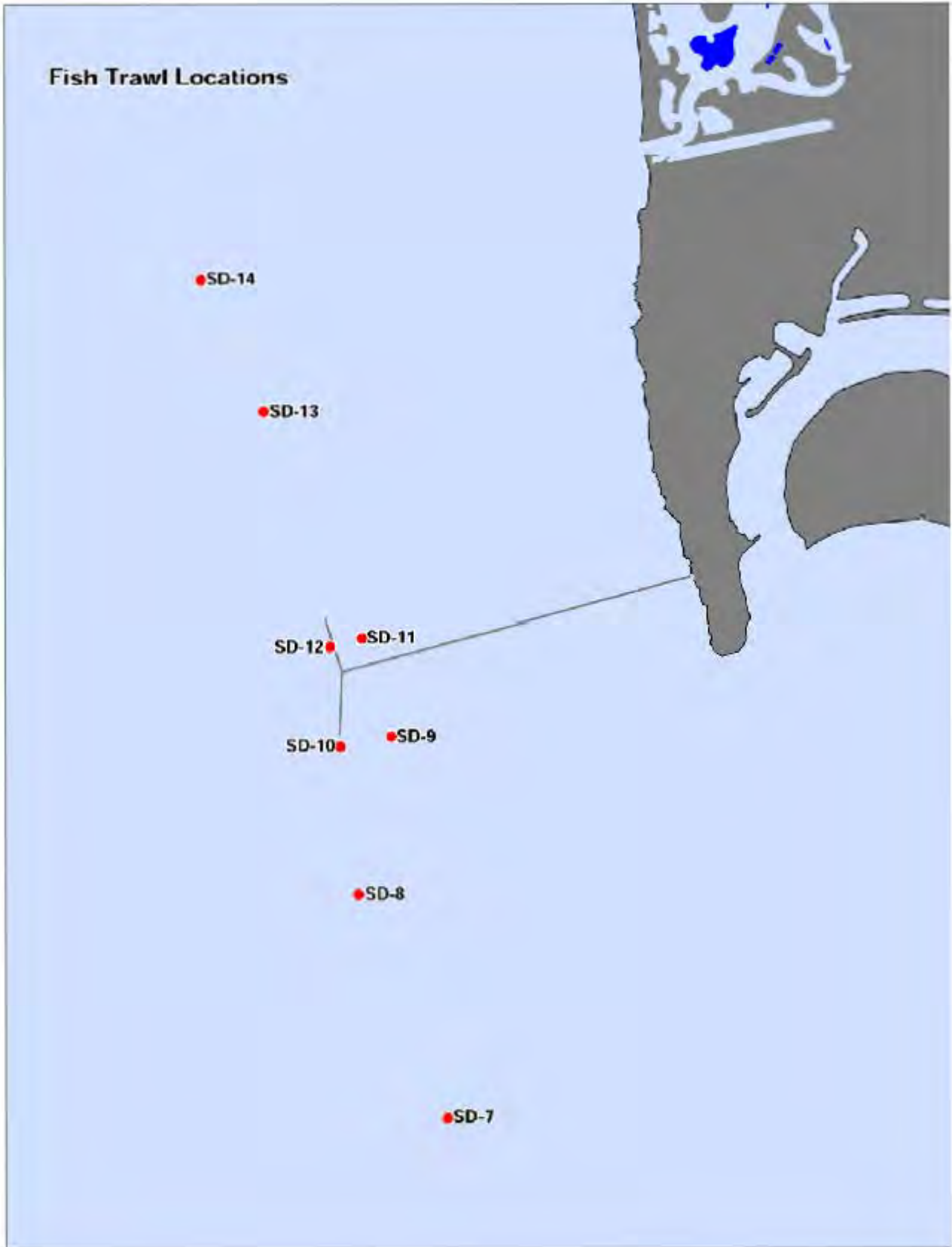
nd=not detected; NS=not sampled; NA=not analyzed

B. Fish Tissue Data.

Fish were taken from the following stations during 2001. 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.

<u>Station</u>	<u>Station</u>
RF-1	SD-7
RF-2	SD-8
	SD-9
	SD-10
	SD-11
	SD-12
	SD-13
	SD-14



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

From: 01-JAN-2001 To: 31-DEC-2001

Source:		SD-7	SD-9	SD-10	SD-11	SD-12	SD-13	SD-14
Date:		2001	2001	2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2.6 MG/KG	7.58	18.40	16.50	15.70	19.20	17.50	11.00
Antimony	3.7 MG/KG	ND	ND	ND	ND	ND	ND	ND
Arsenic	1.4 MG/KG	4.50	7.65	<1.40	1.83	<1.40	2.87	4.13
Beryllium	.035 MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.34 MG/KG	2.41	2.41	0.71	3.03	2.85	2.67	2.84
Chromium	.3 MG/KG	<0.30	ND	ND	<0.30	0.78	0.70	0.77
Copper	.76 MG/KG	16.90	14.70	13.20	18.30	22.80	20.40	19.10
Iron	1.3 MG/KG	202	212	98	174	205	204	165
Lead	2.5 MG/KG	ND	ND	ND	ND	ND	<2.50	ND
Manganese	.23 MG/KG	0.65	0.75	0.56	0.67	0.66	0.76	0.58
Mercury	.012 MG/KG	0.012	0.089	<0.012	0.167	0.260	0.216	0.119
Nickel	.79 MG/KG	ND	ND	ND	ND	ND	ND	ND
Selenium	.65 MG/KG	1.55	1.57	1.09	1.15	1.12	1.78	0.97
Silver	.62 MG/KG	ND	<0.62	ND	ND	ND	ND	ND
Thallium	5.7 MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	4.6 MG/KG	ND	ND	ND	ND	ND	ND	ND
Zinc	.58 MG/KG	52.4	40.4	60.6	70.0	108.0	81.9	77.1
Total Solids	.4 WT%	37.8	37.5	46.6	44.6	48.3	41.7	46.3

Source:		RF-1	RF-2
Date:		2001	2001
Analyte:	MDL Units	Average	Average
Aluminum	2.6 MG/KG	7.61	4.95
Antimony	3.7 MG/KG	ND	<3.70
Arsenic	1.4 MG/KG	<1.40	1.81
Beryllium	.035 MG/KG	ND	ND
Cadmium	.34 MG/KG	0.78	0.75
Chromium	.3 MG/KG	<0.30	<0.30
Copper	.76 MG/KG	9.95	17.40
Iron	1.3 MG/KG	105	67
Lead	2.5 MG/KG	ND	ND
Manganese	.23 MG/KG	0.93	0.73
Mercury	.012 MG/KG	0.159	0.369
Nickel	.79 MG/KG	ND	ND
Selenium	.65 MG/KG	1.63	1.78
Silver	.62 MG/KG	ND	ND
Thallium	5.7 MG/KG	ND	ND
Tin	4.6 MG/KG	ND	ND
Zinc	.58 MG/KG	27.3	64.0
Total Solids	.4 WT%	42.5	35.0

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

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

From: 01-JAN-2001 To: 31-DEC-2001

Source:		SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13
Date:		2001	2001	2001	2001	2001	2001	2001
Analyte:	MDL Units	Average	Average	Average	Average	Average	Average	Average
Aluminum	2.6 MG/KG	5.68	5.50	5.25	6.12	8.55	4.87	4.40
Antimony	3.7 MG/KG	ND	ND	ND	ND	ND	ND	ND
Arsenic	1.4 MG/KG	5.71	<1.40	7.77	3.28	3.22	2.92	3.35
Beryllium	.035 MG/KG	ND	ND	ND	ND	ND	ND	ND
Cadmium	.34 MG/KG	ND	ND	<0.34	ND	<0.34	<0.34	<0.34
Chromium	.3 MG/KG	0.62	1.08	<0.30	<0.30	<0.30	0.56	<0.30
Copper	.76 MG/KG	4.03	3.06	2.26	3.57	2.81	3.07	3.87
Iron	1.3 MG/KG	9.08	8.93	5.45	6.93	6.33	12.20	9.29
Lead	2.5 MG/KG	ND	ND	ND	ND	ND	ND	ND
Manganese	.23 MG/KG	<0.23	<0.23	ND	<0.23	<0.23	<0.23	ND
Mercury	.012 MG/KG	0.085	0.082	0.101	0.052	0.075	0.141	0.116
Nickel	.79 MG/KG	<0.79	<0.79	ND	ND	ND	<0.79	ND
Selenium	.5 MG/KG	0.522	0.208	0.555	<0.500	<0.430	0.228	0.409
Silver	.62 MG/KG	ND	ND	ND	ND	ND	<0.62	ND
Thallium	5.7 MG/KG	ND	ND	ND	ND	ND	ND	ND
Tin	4.6 MG/KG	ND	ND	ND	ND	ND	ND	ND
Zinc	.58 MG/KG	3.19	3.08	2.70	3.71	3.57	5.13	2.92
Total Solids	.4 WT%	19.9	21.0	19.8	20.5	20.7	21.9	21.0

Source:		SD-14	RF-1	RF-2
Date:		2001	2001	2001
Analyte:	MDL Units	Average	Average	Average
Aluminum	2.6 MG/KG	4.83	4.52	ND
Antimony	3.7 MG/KG	ND	ND	ND
Arsenic	1.4 MG/KG	3.11	1.62	<1.40
Beryllium	.035 MG/KG	ND	ND	ND
Cadmium	.34 MG/KG	<0.34	ND	ND
Chromium	.3 MG/KG	<0.30	<0.30	<0.30
Copper	.76 MG/KG	4.92	4.40	3.59
Iron	1.3 MG/KG	6.81	3.44	2.77
Lead	2.5 MG/KG	ND	ND	ND
Manganese	.23 MG/KG	<0.23	<0.23	ND
Mercury	.012 MG/KG	0.084	0.129	0.098
Nickel	.79 MG/KG	ND	ND	ND
Selenium	.5 MG/KG	0.250	0.322	0.255
Silver	.62 MG/KG	ND	ND	ND
Thallium	5.7 MG/KG	ND	ND	ND
Tin	4.6 MG/KG	ND	ND	ND
Zinc	.58 MG/KG	3.25	3.84	2.78
Total Solids	.4 WT%	21.0	22.8	22.6

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

POINT LOMA WASTEWATER TREATMENT PLANT
 FISH - Lipids & Total Solids
 From 01-JAN-2001 To 31-DEC-2001

Tissue	Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13	Avg
				2001	2001	2001	2001	2001	2001	2001	
				Avg	Avg	Avg	Avg	Avg	Avg	Avg	
====	====	====	====	====	====	====	====	====	====	====	====
Liver	Lipids	.005	WT%	13.4	18.3	18.6	16.8	21.5	24.4	18.2	
Liver	Total Solids	.4	WT%	37.8	43.9	37.5	46.6	44.6	48.3	41.7	
====	====	====	====	====	====	====	====	====	====	====	====
Muscle	Lipids	.005	WT%	0.2	0.4	0.1	0.5	0.2	0.5	0.2	
Muscle	Total Solids	.4	WT%	19.9	21.0	19.8	20.5	20.7	21.9	21.0	
				SD-14	RF-1	RF-2					
				2001	2001	2001					
Tissue	Analyte	MDL	Units	Avg	Avg	Avg					
====	====	====	====	====	====	====	====	====	====	====	====
Liver	Lipids	.005	WT%	17.4	15.9	8.4					
Liver	Total Solids	.4	WT%	46.3	42.5	35.0					
====	====	====	====	====	====	====	====	====	====	====	====
Muscle	Lipids	.005	WT%	0.4	0.9	0.7					
Muscle	Total Solids	.4	WT%	21.0	22.8	22.6					

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH LIVER - Chlorinated Pesticides
From 01-JAN-2001 To 31-DEC-2001

FISH LIVER

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13
			2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg
Hexachlorobenzene	13.3	UG/KG	E2.1	E4.2	E3.0	<13.3	E3.1	E3.5	E3.3
BHC, Gamma isomer	100	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor	20	UG/KG	ND	ND	<20.0	ND	ND	ND	ND
Aldrin	133	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	E128.0
Alpha Endosulfan	133	UG/KG	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3
Trans Nonachlor	20	UG/KG	<20.0	<20.0	E14.2	<20.0	<20.0	E13.8	<20.0
p,p-DDE	13.3	UG/KG	697.0	525.0	842.0	548.0	814.0	790.0	4480.0
Dieldrin	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	13.3	UG/KG	<13.3	ND	<13.3	<13.3	<13.3	ND	<13.3
Endrin	20	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	13.3	UG/KG	ND	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3
p,p-DDD	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	E8.5	E9.0	E89.2
p,p-DDT	13.3	UG/KG	E4.5	<13.3	E13.7	<13.3	<13.3	E7.0	E19.9
Mirex	13.3	UG/KG	ND	<13.3	<13.3	<13.3	<13.3	<13.3	ND

Analyte	MDL	Units	SD-14	RF-1
			2001	2001
			Avg	Avg
Hexachlorobenzene	13.3	UG/KG	<13.3	E2.8
BHC, Gamma isomer	100	UG/KG	ND	ND
Heptachlor	20	UG/KG	ND	ND
Aldrin	133	UG/KG	ND	ND
Heptachlor epoxide	20	UG/KG	ND	ND
o,p-DDE	13.3	UG/KG	<13.3	E22.0
Alpha Endosulfan	133	UG/KG	ND	ND
Alpha (cis) Chlordane	13.3	UG/KG	<13.3	<13.3
Trans Nonachlor	20	UG/KG	E11.3	<20.0
p,p-DDE	13.3	UG/KG	713.0	712.0
Dieldrin	20	UG/KG	ND	ND
o,p-DDD	13.3	UG/KG	ND	<13.3
Endrin	20	UG/KG	ND	ND
o,p-DDT	13.3	UG/KG	<13.3	<13.3
p,p-DDD	13.3	UG/KG	E7.5	E18.2
p,p-DDT	13.3	UG/KG	E5.9	<13.3
Mirex	13.3	UG/KG	<13.3	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

POINT LOMA WASTEWATER TREATMENT PLANT
 ANNUAL FISH LIVER - Chlorinated Pesticides
 From 01-JAN-2001 To 31-DEC-2001

FISH LIVER

Analyte	MDL	Units	RF-2
			2001
=====	====	====	=====
Avg			
Hexachlorobenzene	13.3	UG/KG	<13.3
BHC, Gamma isomer	100	UG/KG	ND
Heptachlor	20	UG/KG	ND
Aldrin	133	UG/KG	ND
Heptachlor epoxide	20	UG/KG	ND
o,p-DDE	13.3	UG/KG	<13.3
Alpha Endosulfan	133	UG/KG	ND
Alpha (cis) Chlordane	13.3	UG/KG	<13.3
Trans Nonachlor	20	UG/KG	<20.0
p,p-DDE	13.3	UG/KG	409.0
Dieldrin	20	UG/KG	ND
o,p-DDD	13.3	UG/KG	ND
Endrin	20	UG/KG	ND
o,p-DDT	13.3	UG/KG	<13.3
p,p-DDD	13.3	UG/KG	<13.3
p,p-DDT	13.3	UG/KG	<13.3
Mirex	13.3	UG/KG	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH MUSCLE - Chlorinated Pesticides

From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13
			2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg
Hexachlorobenzene	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
BHC, Gamma isomer	3.33	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor	2	UG/KG	ND	ND	ND	ND	ND	ND	ND
Aldrin	2	UG/KG	ND	ND	ND	ND	ND	ND	ND
Heptachlor epoxide	2	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDE	1.33	UG/KG	ND	<1.3	<1.3	<1.3	ND	ND	5.0
Alpha Endosulfan	6.67	UG/KG	ND	ND	ND	ND	ND	ND	ND
Alpha (cis) Chlordane	1.33	UG/KG	ND	<1.3	ND	ND	ND	ND	<1.3
Trans Nonachlor	2	UG/KG	<2.0	<2.0	ND	ND	<2.0	<2.0	<2.0
p,p-DDE	1.33	UG/KG	10.9	E7.5	5.1	7.2	E12.3	18.4	151.0
Dieldrin	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDD	1.33	UG/KG	ND	ND	ND	<1.3	ND	ND	ND
Endrin	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND
o,p-DDT	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND
p,p-DDD	1.33	UG/KG	<1.3	<1.3	ND	<1.3	<1.3	<1.3	E2.8
p,p-DDT	1.33	UG/KG	<1.3	<1.3	ND	<1.3	<1.3	<1.3	<1.3
Mirex	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND

Analyte	MDL	Units	SD-14	RF-1	RF-2
			2001	2001	2001
			Avg	Avg	Avg
Hexachlorobenzene	1.33	UG/KG	ND	<1.3	<1.3
BHC, Gamma isomer	3.33	UG/KG	ND	ND	ND
Heptachlor	2	UG/KG	ND	ND	ND
Aldrin	2	UG/KG	ND	ND	ND
Heptachlor epoxide	2	UG/KG	ND	ND	ND
o,p-DDE	1.33	UG/KG	ND	E1.7	<1.3
Alpha Endosulfan	6.67	UG/KG	ND	ND	ND
Alpha (cis) Chlordane	1.33	UG/KG	ND	<1.3	<1.3
Trans Nonachlor	2	UG/KG	ND	<2.0	<2.0
p,p-DDE	1.33	UG/KG	E7.0	43.0	41.3
Dieldrin	1.33	UG/KG	ND	ND	ND
o,p-DDD	1.33	UG/KG	ND	ND	ND
Endrin	1.33	UG/KG	ND	ND	ND
o,p-DDT	1.33	UG/KG	ND	ND	<1.3
p,p-DDD	1.33	UG/KG	<1.3	<1.3	<1.3
p,p-DDT	1.33	UG/KG	ND	<1.3	<1.3
Mirex	1.33	UG/KG	ND	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

POINT LOMA WASTEWATER TREATMENT PLANT
 FISH LIVER - Analysis of Poly Aromatic Hydrocarbon (PAH)
 From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12
			2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	35.8	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	17.9	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	16.8	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	38.4	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	11.6	UG/KG	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	21.5	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	14.9	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	22.2	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	12.3	UG/KG	ND	ND	ND	ND	ND	ND
Biphenyl	28.1	UG/KG	ND	ND	ND	ND	ND	ND
Chrysene	16.7	UG/KG	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	39.5	UG/KG	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	20.7	UG/KG	ND	ND	ND	ND	ND	ND
Fluoranthene	18.3	UG/KG	ND	ND	ND	ND	ND	ND
Fluorene	53.8	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	10.5	UG/KG	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	27.7	UG/KG	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	13.5	UG/KG	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	12.4	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	24	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	19	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	31.3	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	23.1	UG/KG	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	19.4	UG/KG	ND	ND	ND	ND	ND	ND

Analyte	MDL	Units	SD-13	SD-14
			2001	2001
			Avg	Avg
Acenaphthene	35.8	UG/KG	ND	ND
Acenaphthylene	17.9	UG/KG	ND	ND
Anthracene	16.8	UG/KG	ND	ND
Benzo[A]anthracene	38.4	UG/KG	ND	ND
Benzo[A]pyrene	11.6	UG/KG	ND	ND
3,4-benzo(B)fluoranthene	21.5	UG/KG	ND	ND
Benzo[e]pyrene	14.9	UG/KG	ND	ND
Benzo[G,H,I]perylene	22.2	UG/KG	ND	ND
Benzo[K]fluoranthene	12.3	UG/KG	ND	ND
Biphenyl	28.1	UG/KG	ND	ND
Chrysene	16.7	UG/KG	ND	ND
Dibenzo(A,H)anthracene	39.5	UG/KG	ND	ND
2,6-dimethylnaphthalene	20.7	UG/KG	ND	ND
Fluoranthene	18.3	UG/KG	ND	ND
Fluorene	53.8	UG/KG	ND	ND
Indeno(1,2,3-CD)pyrene	10.5	UG/KG	ND	ND
1-methylnaphthalene	27.7	UG/KG	ND	ND
2-methylnaphthalene	13.5	UG/KG	ND	ND
1-methylphenanthrene	12.4	UG/KG	ND	ND
Naphthalene	24	UG/KG	ND	ND
Perylene	19	UG/KG	ND	ND
Phenanthrene	31.3	UG/KG	ND	ND
Pyrene	23.1	UG/KG	ND	ND
2,3,5-trimethylnaphthalene	19.4	UG/KG	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
 FISH LIVER - Analysis of Poly Aromatic Hydrocarbon (PAH)
 From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	RF-1	RF-2
			2001	2001
			Avg	Avg
=====	====	=====	=====	=====
Acenaphthene	35.8	UG/KG	ND	ND
Acenaphthylene	17.9	UG/KG	ND	ND
Anthracene	16.8	UG/KG	ND	ND
Benzo[A]anthracene	38.4	UG/KG	ND	ND
Benzo[A]pyrene	11.6	UG/KG	ND	ND
3,4-benzo(B)fluoranthene	21.5	UG/KG	ND	ND
Benzo[e]pyrene	14.9	UG/KG	ND	ND
Benzo[G,H,I]perylene	22.2	UG/KG	ND	ND
Benzo[K]fluoranthene	12.3	UG/KG	ND	ND
Biphenyl	28.1	UG/KG	ND	ND
Chrysene	16.7	UG/KG	ND	ND
Dibenzo(A,H)anthracene	39.5	UG/KG	ND	ND
2,6-dimethylnaphthalene	20.7	UG/KG	ND	ND
Fluoranthene	18.3	UG/KG	ND	ND
Fluorene	53.8	UG/KG	ND	ND
Indeno(1,2,3-CD)pyrene	10.5	UG/KG	ND	ND
1-methylnaphthalene	27.7	UG/KG	ND	ND
2-methylnaphthalene	13.5	UG/KG	ND	ND
1-methylphenanthrene	12.4	UG/KG	ND	ND
Naphthalene	24	UG/KG	ND	ND
Perylene	19	UG/KG	ND	ND
Phenanthrene	31.3	UG/KG	ND	ND
Pyrene	23.1	UG/KG	ND	ND
2,3,5-trimethylnaphthalene	19.4	UG/KG	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
 ANNUAL FISH MUSCLE - Analysis of Poly Aromatic Hydrocarbon (PAH)
 From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12
			2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg
Acenaphthene	17.4	UG/KG	ND	ND	ND	ND	ND	ND
Acenaphthylene	9.7	UG/KG	ND	ND	ND	ND	ND	ND
Anthracene	21.2	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]anthracene	20	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[A]pyrene	34	UG/KG	ND	ND	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	7.6	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[e]pyrene	12	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[G,H,I]perylene	10.2	UG/KG	ND	ND	ND	ND	ND	ND
Benzo[K]fluoranthene	15.8	UG/KG	ND	ND	ND	ND	ND	ND
Biphenyl	12.3	UG/KG	ND	ND	ND	ND	ND	ND
Chrysene	12.2	UG/KG	ND	ND	ND	ND	ND	ND
Dibenzo(A,H)anthracene	11.9	UG/KG	ND	ND	ND	ND	ND	ND
2,6-dimethylnaphthalene	16	UG/KG	ND	ND	ND	ND	ND	ND
Fluoranthene	10.8	UG/KG	ND	ND	ND	ND	ND	ND
Fluorene	15.1	UG/KG	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	14.1	UG/KG	ND	ND	ND	ND	ND	ND
1-methylnaphthalene	20.2	UG/KG	ND	ND	ND	ND	ND	ND
2-methylnaphthalene	13.7	UG/KG	ND	ND	ND	ND	ND	ND
1-methylphenanthrene	8.1	UG/KG	ND	ND	ND	ND	ND	ND
Naphthalene	9.2	UG/KG	ND	ND	ND	ND	ND	ND
Perylene	14.3	UG/KG	ND	ND	ND	ND	ND	ND
Phenanthrene	9.9	UG/KG	ND	ND	ND	ND	ND	ND
Pyrene	33	UG/KG	ND	ND	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	19.2	UG/KG	ND	ND	ND	ND	ND	ND

Analyte	MDL	Units	SD-13	SD-14	RF-1	RF-2
			2001	2001	2001	2001
			Avg	Avg	Avg	Avg
Acenaphthene	17.4	UG/KG	ND	ND	ND	ND
Acenaphthylene	9.7	UG/KG	ND	ND	ND	ND
Anthracene	21.2	UG/KG	ND	ND	ND	ND
Benzo[A]anthracene	20	UG/KG	ND	ND	ND	ND
Benzo[A]pyrene	34	UG/KG	ND	ND	ND	ND
3,4-benzo(B)fluoranthene	7.6	UG/KG	ND	ND	ND	ND
Benzo[e]pyrene	12	UG/KG	ND	ND	ND	ND
Benzo[G,H,I]perylene	10.2	UG/KG	ND	ND	ND	ND
Benzo[K]fluoranthene	15.8	UG/KG	ND	ND	ND	ND
Biphenyl	12.3	UG/KG	ND	ND	ND	ND
Chrysene	12.2	UG/KG	ND	ND	ND	ND
Dibenzo(A,H)anthracene	11.9	UG/KG	ND	ND	ND	ND
2,6-dimethylnaphthalene	16	UG/KG	ND	ND	ND	ND
Fluoranthene	10.8	UG/KG	ND	ND	ND	ND
Fluorene	15.1	UG/KG	ND	ND	ND	ND
Indeno(1,2,3-CD)pyrene	14.1	UG/KG	ND	ND	ND	ND
1-methylnaphthalene	20.2	UG/KG	ND	ND	ND	ND
2-methylnaphthalene	13.7	UG/KG	ND	ND	ND	ND
1-methylphenanthrene	8.1	UG/KG	ND	ND	ND	ND
Naphthalene	9.2	UG/KG	ND	ND	ND	ND
Perylene	14.3	UG/KG	ND	ND	ND	ND
Phenanthrene	9.9	UG/KG	ND	ND	ND	ND
Pyrene	33	UG/KG	ND	ND	ND	ND
2,3,5-trimethylnaphthalene	19.2	UG/KG	ND	ND	ND	ND

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

POINT LOMA WASTEWATER TREATMENT PLANT
ANNUAL FISH LIVER - Analysis of Poly Chlorinated Biphenyls
From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13	SD-14
			2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	20	UG/KG	ND	<20.0	<20.0	ND	ND	ND	ND	ND
PCB 28	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3
PCB 49	13.3	UG/KG	<13.3	<13.3	E15.2	<13.3	<13.3	<13.3	<13.3	<13.3
PCB 37	13.3	UG/KG	<13.3	ND	<13.3	ND	<13.3	ND	<13.3	ND
PCB 70	13.3	UG/KG	E1.7	<13.3	<13.3	E1.8	E2.7	E3.2	<13.3	E2.2
PCB 101	13.3	UG/KG	E13.5	E69.0	E39.7	<13.3	E18.3	E24.5	E57.7	<13.3
PCB 119	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3	<13.3
PCB 87	13.3	UG/KG	<13.3	<13.3	<13.3	<13.3	E3.2	<13.3	<13.3	E2.5
PCB 110	13.3	UG/KG	<13.3	E54.9	32.3	<13.3	<13.3	<13.3	E25.6	E7.5
PCB 151	13.3	UG/KG	E9.8	<13.3	E15.8	E4.7	<13.3	E6.8	<13.3	E5.3
PCB 77	13.3	UG/KG	<13.3	ND	<13.3	ND	<13.3	ND	<13.3	ND
PCB 149	13.3	UG/KG	<13.3	E31.7	23.2	<13.3	<13.3	<13.3	E19.6	E7.2
PCB 123	13.3	UG/KG	E3.8	<13.3	E8.9	<13.3	E4.9	<13.3	<13.3	<13.3
PCB 118	13.3	UG/KG	45.0	98.5	102.0	E19.1	51.8	40.7	91.9	30.0
PCB 114	13.3	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 153/168	13.3	UG/KG	104.0	140.0	180.0	44.6	100.0	72.8	134.0	60.3
PCB 105	13.3	UG/KG	<13.3	E29.6	E27.0	<13.3	<13.3	E9.2	E26.0	E7.1
PCB 138	13.3	UG/KG	72.5	115.0	170.0	E31.2	102.0	65.7	132.0	44.8
PCB 158	13.3	UG/KG	E5.3	<13.3	<13.3	<13.3	E5.8	E4.3	<13.3	<13.3
PCB 187	13.3	UG/KG	42.2	E45.6	89.5	E20.7	58.2	39.8	63.3	E26.7
PCB 183	13.3	UG/KG	E14.3	E14.6	23.5	<13.3	E14.6	<13.3	E17.3	<13.3
PCB 126	13.3	UG/KG	<13.3	ND	<13.3	ND	<13.3	ND	ND	ND
PCB 128	13.3	UG/KG	<13.3	E24.9	25.7	<13.3	<13.3	<13.3	E17.9	<13.3
PCB 167	13.3	UG/KG	<13.3	<13.3	E7.5	<13.3	<13.3	<13.3	<13.3	<13.3
PCB 177	13.3	UG/KG	E7.9	<13.3	<13.3	E3.5	E7.3	E5.3	E8.2	E4.8
PCB 156	13.3	UG/KG	E6.8	<13.3	<13.3	<13.3	<13.3	E6.5	<13.3	<13.3
PCB 157	13.3	UG/KG	<13.3	<13.3	E4.4	<13.3	<13.3	<13.3	<13.3	<13.3
PCB 180	13.3	UG/KG	47.3	E50.3	75.7	E19.6	44.8	35.0	53.3	E28.3
PCB 170	13.3	UG/KG	21.8	E23.1	39.2	<13.3	22.3	<13.3	21.0	<13.3
PCB 169	13.3	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 189	13.3	UG/KG	<13.3	<13.3	<13.3	ND	<13.3	<13.3	<13.3	<13.3
PCB 194	13.3	UG/KG	E11.6	<13.3	E31.0	<13.3	E19.9	<13.3	E19.0	<13.3
PCB 206	13.3	UG/KG	E7.9	E6.1	E14.5	E4.8	<13.3	E6.5	<13.3	E4.6

E=estimated value, value is less than the Method Detection Limit but confirmed by GC/MS-MS
nd= not detected
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POINT LOMA WASTEWATER TREATMENT PLANT
 ANNUAL FISH LIVER - Analysis of Poly Chlorinated Biphenyls
 From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	RF-1	RF-2
			2001	2001
			Avg	Avg
PCB 18	20	UG/KG	ND	ND
PCB 28	13.3	UG/KG	<13.3	<13.3
PCB 49	13.3	UG/KG	<13.3	<13.3
PCB 37	13.3	UG/KG	<13.3	<13.3
PCB 70	13.3	UG/KG	E3.7	E1.7
PCB 101	13.3	UG/KG	E22.2	<13.3
PCB 119	13.3	UG/KG	<13.3	<13.3
PCB 87	13.3	UG/KG	<13.3	<13.3
PCB 110	13.3	UG/KG	E14.6	<13.3
PCB 151	13.3	UG/KG	<13.3	<13.3
PCB 77	13.3	UG/KG	ND	ND
PCB 149	13.3	UG/KG	E13.8	<13.3
PCB 123	13.3	UG/KG	<13.3	<13.3
PCB 118	13.3	UG/KG	E34.2	E16.7
PCB 114	13.3	UG/KG	ND	ND
PCB 153/168	13.3	UG/KG	57.7	E33.5
PCB 105	13.3	UG/KG	<13.3	<13.3
PCB 138	13.3	UG/KG	43.0	E23.7
PCB 158	13.3	UG/KG	E3.8	<13.3
PCB 187	13.3	UG/KG	E21.0	<13.3
PCB 183	13.3	UG/KG	<13.3	<13.3
PCB 126	13.3	UG/KG	ND	ND
PCB 128	13.3	UG/KG	<13.3	<13.3
PCB 167	13.3	UG/KG	<13.3	<13.3
PCB 177	13.3	UG/KG	E3.8	<13.3
PCB 156	13.3	UG/KG	<13.3	<13.3
PCB 157	13.3	UG/KG	<13.3	<13.3
PCB 180	13.3	UG/KG	E26.0	E13.8
PCB 170	13.3	UG/KG	<13.3	<13.3
PCB 169	13.3	UG/KG	ND	ND
PCB 189	13.3	UG/KG	ND	ND
PCB 194	13.3	UG/KG	<13.3	<13.3
PCB 206	13.3	UG/KG	E4.4	E2.5

nd= not detected
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 NS= not sampled

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

POINT LOMA WASTEWATER TREATMENT PLANT
 ANNUAL FISH MUSCLE - Analysis of Poly Chlorinated Biphenyls
 From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	SD-7	SD-8	SD-9	SD-10	SD-11	SD-12	SD-13	SD-14
			2001	2001	2001	2001	2001	2001	2001	2001
			Avg	Avg	Avg	Avg	Avg	Avg	Avg	Avg
PCB 18	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 28	1.33	UG/KG	ND	ND	ND	<1.3	<1.3	ND	<1.3	ND
PCB 49	1.33	UG/KG	ND	<1.3	<1.3	<1.3	<1.3	ND	<1.3	ND
PCB 37	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 70	1.33	UG/KG	<1.3	<1.3	ND	<1.3	<1.3	<1.3	<1.3	ND
PCB 101	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 119	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 87	1.33	UG/KG	ND	<1.3	ND	<1.3	<1.3	<1.3	<1.3	ND
PCB 110	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 151	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	ND
PCB 77	1.33	UG/KG	ND	<1.3	ND	ND	<1.3	ND	<1.3	ND
PCB 149	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 123	1.33	UG/KG	ND	ND	ND	ND	<1.3	ND	<1.3	ND
PCB 118	1.33	UG/KG	<1.3	<1.3	E0.5	<1.3	<1.3	<1.3	E2.2	<1.3
PCB 114	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 153/168	1.33	UG/KG	<1.3	E1.4	E0.9	<1.3	E1.4	E2.0	E2.8	<1.3
PCB 105	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 138	1.33	UG/KG	<1.3	<1.3	E0.7	<1.3	<1.3	<1.3	E2.0	<1.3
PCB 158	1.33	UG/KG	<1.3	<1.3	<1.3	ND	<1.3	<1.3	<1.3	ND
PCB 187	1.33	UG/KG	<1.3	<1.3	E0.4	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 183	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 126	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 128	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	ND	<1.3	<1.3	ND
PCB 167	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 177	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 156	1.33	UG/KG	<1.3	<1.3	<1.3	ND	<1.3	<1.3	<1.3	ND
PCB 157	1.33	UG/KG	ND	ND	ND	ND	ND	ND	<1.3	ND
PCB 180	1.33	UG/KG	<1.3	E0.5	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 170	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	ND	<1.3	ND
PCB 169	1.33	UG/KG	ND	ND	ND	ND	ND	ND	ND	ND
PCB 189	1.33	UG/KG	ND	ND	ND	ND	<1.3	ND	<1.3	ND
PCB 194	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
PCB 206	1.33	UG/KG	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	E0.3	<1.3

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

POINT LOMA WASTEWATER TREATMENT PLANT

ANNUAL FISH MUSCLE - Analysis of Poly Chlorinated Biphenyls
From 01-JAN-2001 To 31-DEC-2001

Analyte	MDL	Units	RF-1	RF-2
			2001	2001
=====	=====	=====	=====	=====
			Avg	Avg
PCB 18	1.33	UG/KG	ND	ND
PCB 28	1.33	UG/KG	<1.3	<1.3
PCB 49	1.33	UG/KG	<1.3	<1.3
PCB 37	1.33	UG/KG	ND	<1.3
PCB 70	1.33	UG/KG	<1.3	<1.3
PCB 101	1.33	UG/KG	E1.4	E1.4
PCB 119	1.33	UG/KG	<1.3	<1.3
PCB 87	1.33	UG/KG	<1.3	<1.3
PCB 110	1.33	UG/KG	<1.3	<1.3
PCB 151	1.33	UG/KG	<1.3	<1.3
PCB 77	1.33	UG/KG	ND	<1.3
PCB 149	1.33	UG/KG	<1.3	E1.4
PCB 123	1.33	UG/KG	<1.3	<1.3
PCB 118	1.33	UG/KG	E1.9	E1.8
PCB 114	1.33	UG/KG	ND	<1.3
PCB 153/168	1.33	UG/KG	E3.2	E4.0
PCB 105	1.33	UG/KG	<1.3	<1.3
PCB 138	1.33	UG/KG	E2.3	E2.7
PCB 158	1.33	UG/KG	<1.3	<1.3
PCB 187	1.33	UG/KG	<1.3	E1.4
PCB 183	1.33	UG/KG	<1.3	<1.3
PCB 126	1.33	UG/KG	ND	ND
PCB 128	1.33	UG/KG	<1.3	<1.3
PCB 167	1.33	UG/KG	<1.3	<1.3
PCB 177	1.33	UG/KG	<1.3	<1.3
PCB 156	1.33	UG/KG	<1.3	<1.3
PCB 157	1.33	UG/KG	<1.3	<1.3
PCB 180	1.33	UG/KG	E1.4	E1.8
PCB 170	1.33	UG/KG	ND	<1.3
PCB 169	1.33	UG/KG	ND	ND
PCB 189	1.33	UG/KG	<1.3	<1.3
PCB 194	1.33	UG/KG	<1.3	<1.3
PCB 206	1.33	UG/KG	E0.3	E0.3

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