APPENDIX E

Laboratory Analytical Data Results for Estuary Monitoring

Table E-1. Laboratory Analytical Results for San Gabriel River Estuary

Constituent	Units	Stations						
		4002	4034	4066	4194	4258	4322	4520
Toxicity								
Mean *Eohaustorius* Survival	%	96	93	96	97	92	88	89
Infauna Community Indices								
Number of species	#/0.1 m^2	14	30	6	14	23	28	18
Total abundance	#/0.1 m^2	223	286	15	37	1735	899	1160
Shannon-Wiener diversity		1.39	2.49	1.41	2.30	1.58	2.04	1.29
Evenness		0.53	0.73	0.79	0.87	0.50	0.61	0.45
Dominance		2	7	3	6	3	4	2
Sediment Size & TOC								
Gravel	%	0.21	0.25	0.28	0.28	0.19	0.00	0.33
Sand	%	88.99	83.14	99.72	94.28	68.08	82.08	91.29
Silt	%	10.11	15.52	0.00	5.35	29.19	16.66	6.85
Clay	%	0.70	1.11	0.00	0.09	2.54	1.27	1.46
Median size	microns	461.04	434.06	553.96	534.34	243.10	407.08	624.46
Mean size	microns	423.18	216.09	585.61	526.13	113.68	173.51	579.05
TOC	%	J0.195	J0.211	<0.017	J0.114	J0.226	0.399	0.273
Metals								
Aluminum	mg/kg	7310	7500	4400	4920	5890	4980	2840
Antimony	mg/kg	0.40	0.47	0.20	0.24	0.20	0.27	0.39
Arsenic	mg/kg	1.44	2.04	1.04	2.23	2.56	1.83	2.35
Barium	mg/kg	53.7	46.6	22.6	42.9	43.3	35.6	20.2
Beryllium	mg/kg	0.19	0.22	J0.09	0.19	0.23	0.23	0.10
Cadmium	mg/kg	0.12	J0.08	J0.05	0.14	J0.08	J0.06	0.14
Chromium	mg/kg	15.3	17.4	7.4	10.4	11.7	13.7	5.7
Copper	mg/kg	9.1	17.0	7.5	13.5	14.5	11.3	8.0
Iron	mg/kg	17300	18400	5510	8340	7760	10500	4980
Lead	mg/kg	11.5	18.3	4.7	15.8	10.8	21.4	9.8
Mercury	mg/kg	J0.02	0.04	0.10	0.04	0.04	0.03	0.02
Nickel	mg/kg	7.4	**23.8**	4.1	7.5	6.9	7.5	4.7
Selenium	mg/kg	0.34	0.51	0.26	0.44	0.47	0.46	<0.24
Silver	mg/kg	<0.025	0.27	0.65	0.11	0.13	J0.07	0.10
Zinc	mg/kg	37.2	47.0	22.0	43.5	39.6	36.1	48.3
Pesticides								
2,4'-DDD	ug/kg	<1	<1	<1	<1	<1	<1	<0.1
2,4'-DDE	ug/kg	<1	<1	<1	<1	<1	<1	<0.1
2,4'-DDT	ug/kg	<1	<1	<1	<1	<1	<1	<0.1
4,4'-DDD	ug/kg	<1	<1	<1	<1	<1	<1	<3.8
4,4'-DDE	ug/kg	J1.5	J2.8	1	J2.2	J3.7	J2	<3.8
4,4'-DDT	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
Total Detectable DDT	ug/kg	1.5	**2.8**	1.0	**2.2**	**3.7**	**2.0**	0.0
alpha-Chlordane	ug/kg	<1	<1	<1	<1	<1	<1	<0.14
gamma-Chlordane	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
Total Detectable Chlordane	ug/kg	0	0	0	0	0	0	0

Table E-1. Laboratory Analytical Results for San Gabriel River Estuary

Constituent	Units	Stations						
		4002	4034	4066	4194	4258	4322	4520
PAHs								
1,6,7-Trimethylnaphthalene	ug/kg	<1	<1	<1	<1	<1	<1	40.4
1-Methylnaphthalene	ug/kg	<1	<1	<1	J1.5	<1	<1	<12
1-Methylphenanthrene	ug/kg	<1	J3.8	<1	J1.1	12.9	<1	<41
2,6-Dimethylnaphthalene	ug/kg	<1	<1	<1	<1	<1	<1	79.6
2-Methylnaphthalene	ug/kg	<1	<1	<1	<1	<1	<1	97.7
Acenaphthene	ug/kg	<1	J3.6	<1	<1	18.8	<1	<28
Acenaphthylene	ug/kg	<1	<1	<1	<1	<1	<1	<15
Anthracene	ug/kg	<1	8.5	<1	J1.4	61.8	<1	<18
Benz(a)anthracene	ug/kg	J2	12.3	J3.4	16.7	246	5	39.7
Benzo(a)pyrene	ug/kg	<1	11.2	5.8	31	333	14.2	<55
Benzo(b)fluoranthene	ug/kg	10.4	12.4	J4.3	20.4	175	11.4	<63
Benzo(e)pyrene	ug/kg	9.7	9.1	J4.7	20.1	130	12.1	<57
Benzo(g,h,i)perylene	ug/kg	<1	6.1	J3.9	21.2	120	16.3	<56
Benzo(k)fluoranthene	ug/kg	8.7	10.6	5.1	23.8	211	14.2	<82
Biphenyl	ug/kg	<1	<1	<1	<1	<1	<1	29.1
Chrysene	ug/kg	9.4	15.1	J4.6	22	204	9.5	<36
Dibenz(a,h)anthracene	ug/kg	<1	<1	<1	J4.9	<1	J2.5	<52
Fluoranthene	ug/kg	11.3	45.2	7	35.2	410	9.4	42.5
Fluorene	ug/kg	<1	7.7	<1	<1	23.4	<1	<13
Naphthalene	ug/kg	<1	<1	<1	<1	J1.7	<1	38.5
Perylene	ug/kg	<1	<1	J2.3	11.7	70.3	6.2	<23
Phenanthrene	ug/kg	J2.7	43.1	<1	10.8	224	J1.8	26.7
Pyrene	ug/kg	11.6	33.8	6.9	34.6	372	11.7	90.7
Total Detectable PAHs	ug/kg	66	223	48	256	2614	114	485
PCBs								
PCB18	ug/kg	<1	<1	<1	<1	<1	<1	<0.17
PCB28	ug/kg	<1	<1	<1	<1	<1	<1	<0.09
PCB37	ug/kg	<1	<1	<1	<1	<1	<1	<0.11
PCB44	ug/kg	<1	<1	<1	<1	<1	<1	<0.076
PCB49	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
PCB52	ug/kg	<1	<1	<1	<1	<1	<1	<0.09
PCB66	ug/kg	<1	<1	<1	<1	<1	<1	<0.15
PCB70	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
PCB74	ug/kg	<1	<1	<1	<1	<1	<1	<0.16
PCB77	ug/kg	<1	<1	<1	<1	<1	<1	<0.19
PCB81	ug/kg	<1	<1	<1	<1	<1	<1	<0.23
PCB87	ug/kg	<1	<1	<1	<1	<1	<1	<0.18
PCB99	ug/kg	<1	<1	<1	<1	<1	<1	<0.39
PCB101	ug/kg	<1	<1	<1	<1	<1	<1	<2.6
PCB105	ug/kg	<1	<1	<1	<1	<1	<1	<0.11
PCB110	ug/kg	<1	<1	<1	<1	<1	<1	<0.34
PCB114	ug/kg	<1	<1	<1	<1	<1	<1	<0.13
PCB118	ug/kg	<1	<1	<1	<1	<1	<1	<0.25
PCB119	ug/kg	<1	<1	<1	<1	<1	<1	<0.15
PCB123	ug/kg	<1	<1	<1	<1	<1	<1	<0.19
PCB126	ug/kg	<1	<1	<1	<1	<1	<1	<0.31
PCB128/167	ug/kg	<1	<1	<1	<1	<1	<1	<0.26
PCB138	ug/kg	<1	<1	<1	<1	<1	<1	<0.16

Table E-1. Laboratory Analytical Results for San Gabriel River Estuary

Constituent	Units	Stations						
		4002	4034	4066	4194	4258	4322	4520
PCB149	ug/kg	<1	<1	<1	<1	<1	<1	<0.33
PCB151	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
PCB153	ug/kg	<1	<1	<1	<1	<1	<1	<0.2
PCB156	ug/kg	<1	<1	<1	<1	<1	<1	<0.051
PCB157	ug/kg	<1	<1	<1	<1	<1	<1	<0.08
PCB158	ug/kg	<1	<1	<1	<1	<1	<1	<0.072
PCB169	ug/kg	<1	<1	<1	<1	<1	<1	<0.15
PCB170	ug/kg	<1	<1	<1	<1	<1	<1	<0.057
PCB177	ug/kg	<1	<1	<1	<1	<1	<1	<0.1
PCB180	ug/kg	<1	<1	<1	<1	<1	<1	<0.092
PCB183	ug/kg	<1	<1	<1	<1	<1	<1	<0.31
PCB187	ug/kg	<1	<1	<1	<1	<1	<1	<0.26
PCB189	ug/kg	<1	<1	<1	<1	<1	<1	<0.085
PCB194	ug/kg	<1	<1	<1	<1	<1	<1	<0.14
PCB201	ug/kg	<1	<1	<1	<1	<1	<1	<0.034
PCB206	ug/kg	<1	<1	<1	<1	<1	<1	<0.095
Total Detectable PCBs	ug/kg	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Mean ER-M quotient		0.04	0.08	0.04	0.05	0.05	0.04	0.03

NR = Not reported

J = Estimated value above MDL and below RL

Chemisty in **Bold** = > ER-L

Chemisty in **Bold** = > ER-M

Toxicity in **Bold** = identified as moderately toxic (Bight 03 draft report)

Toxicity in **Bold** = identified as highly toxic (Bight 03 draft report)

Mean ERM-Q **Bold** = above 0.01 threshold

Table E-2. Laboratory Analytical Results for Los Angeles River Estuary

Constituent	Units	Stations				
		4142	4440	4600	4788	4856
Toxicity						
Mean *Eohaustorius* Survival	%	93	**65**	**76**	95	86
Infauna Community Indices						
Number of species	#/0.1 m^2	20	43	21	12	16
Total abundance	#/0.1 m^2	547	5014	320	283	1387
Shannon-Wiener diversity		0.97	1.63	1.47	1.40	1.06
Evenness		0.33	0.43	0.48	0.56	0.38
Dominance		1	3	2	3	2
Sediment Size & TOC						
Gravel	%	NR	0.23	0.00	0.23	0.00
Sand	%	NR	62.14	17.14	53.94	27.08
Silt	%	NR	35.49	77.21	44.28	68.97
Clay	%	NR	2.14	5.66	1.57	3.95
Median size	microns	NR	193.74	21.15	80.98	27.33
Mean size	microns	NR	119.12	22.40	121.82	34.84
TOC	%	J0.272	2.458	0.912	1.698	0.884
Metals						
Aluminum	mg/kg	3790	7850	19900	4390	6630
Antimony	mg/kg	0.14	0.82	0.66	0.21	0.58
Arsenic	mg/kg	0.90	5.29	6.61	1.89	2.07
Barium	mg/kg	30.2	55.4	96.2	31.2	44.2
Beryllium	mg/kg	J0.08	0.22	0.85	0.21	0.18
Cadmium	mg/kg	0.23	0.33	**1.47**	0.36	0.70
Chromium	mg/kg	5.9	14.5	50.0	14.2	10.8
Copper	mg/kg	6.7	28.2	**61.3**	12.7	24.6
Iron	mg/kg	6040	13900	23300	6590	10300
Lead	mg/kg	4.5	33.0	37.2	7.6	19.4
Mercury	mg/kg	0.07	0.09	0.13	0.09	0.01
Nickel	mg/kg	4.1	10.2	24.8	9.5	9.1
Selenium	mg/kg	0.24	0.57	2.07	0.37	<0.24
Silver	mg/kg	0.30	0.23	**1.78**	0.49	0.16
Zinc	mg/kg	65.2	98.8	**211.0**	55.7	101.0
Pesticides						
2,4'-DDD	ug/kg	<1	<0.1	41.5	26.5	<5.7
2,4'-DDE	ug/kg	<1	<0.1	34	18.8	<0.1
2,4'-DDT	ug/kg	<1	<0.1	40	17.1	<0.1
4,4'-DDD	ug/kg	<1	<3.8	54.4	36.3	<3.8
4,4'-DDE	ug/kg	<1	<3.8	54.9	28	<3.8
4,4'-DDT	ug/kg	<1	<0.2	53.2	28.9	<0.2
Total Detectable DDT	ug/kg	0.0	0.0	**278.0**	**155.6**	0.0
alpha-Chlordane	ug/kg	<1	<0.14	24.2	14.4	<0.14
gamma-Chlordane	ug/kg	<1	<0.2	27.3	16.4	<0.2
Total Detectable Chlordane	ug/kg	0	0	**51.5**	**30.8**	0

Table E-2. Laboratory Analytical Results for Los Angeles River Estuary

Constituent	Units	Stations				
		4142	4440	4600	4788	4856
PAHs						
1,6,7-Trimethylnaphthalene	ug/kg	<1	<21	15.6	12.3	<21
1-Methylnaphthalene	ug/kg	<1	16.5	11.5	9.2	39.8
1-Methylphenanthrene	ug/kg	J1.2	<41	33	23.2	<41
2,6-Dimethylnaphthalene	ug/kg	<1	<32	15.8	12.8	80.2
2-Methylnaphthalene	ug/kg	<1	35.2	17.6	13.3	100
Acenaphthene	ug/kg	<1	<28	33.1	21.6	<28
Acenaphthylene	ug/kg	<1	<15	31.7	20.8	<15
Anthracene	ug/kg	<1	<18	136	77.9	<18
Benz(a)anthracene	ug/kg	J2.6	55.8	462	300	35.2
Benzo(a)pyrene	ug/kg	<1	<55	1290	832	<55
Benzo(b)fluoranthene	ug/kg	5	<63	1210	794	<63
Benzo(e)pyrene	ug/kg	10.8	<57	651	428	<57
Benzo(g,h,i)perylene	ug/kg	7.8	<56	331	208	<56
Benzo(k)fluoranthene	ug/kg	<1	<82	944	676	<82
Biphenyl	ug/kg	<1	<10	13.2	7.5	
Chrysene	ug/kg	6.5	<36	609	409	<36
Dibenz(a,h)anthracene	ug/kg	<1	<52	191	120	<52
Fluoranthene	ug/kg	9.5	<24	795	465	37.2
Fluorene	ug/kg	<1	<13	35.9	24.8	16.6
Naphthalene	ug/kg	<1	37.2	12.7	9.6	51
Perylene	ug/kg	15.4	<23	259	168	<23
Phenanthrene	ug/kg	J2.6	42.2	228	138	40.3
Pyrene	ug/kg	11.7	112	1030	646	58
Total Detectable PAHs	ug/kg	73	299	**8356**	**5417**	458
PCBs						
PCB18	ug/kg	<1	<0.17	15.4	8.9	<0.17
PCB28	ug/kg	<1	<0.09	19.9	12.4	<0.09
PCB37	ug/kg	<1	<0.11	15.7	10.1	<0.11
PCB44	ug/kg	<1	<0.076	10.8	9.3	<0.076
PCB49	ug/kg	<1	<0.2	19.2	12.4	<0.2
PCB52	ug/kg	<1	<0.09	14.4	9.3	<0.09
PCB66	ug/kg	<1	<0.15	17	12	<0.15
PCB70	ug/kg	<1	<0.2	18.3	11.3	<0.2
PCB74	ug/kg	<1	<0.16	14.9	10.2	<0.16
PCB77	ug/kg	<1	<0.19	17.3	12.9	<0.19
PCB81	ug/kg	<1	<0.23	15.5	10.9	<0.23
PCB87	ug/kg	<1	<0.18	15.8	12.4	<0.18
PCB99	ug/kg	<1	<0.39	20.7	13.2	<0.39
PCB101	ug/kg	<1	<0.24	24.6	16.1	<2.6
PCB105	ug/kg	<1	<0.11	17	8.9	<0.11
PCB110	ug/kg	<1	<2.9	22.7	14.6	<2.9
PCB114	ug/kg	<1	<0.13	12.4	9.2	<0.13
PCB118	ug/kg	<1	<0.25	19.5	13	<0.25
PCB119	ug/kg	<1	<0.15	17	11.8	<0.15
PCB123	ug/kg	<1	<0.19	23.4	14.8	<0.19
PCB126	ug/kg	<1	<0.31	<1	7.9	<0.31
PCB128/167	ug/kg	<1	<0.26	15.7	14	<0.26
PCB138	ug/kg	<1	<0.16	25.8	19.5	<0.16

Table E-2. Laboratory Analytical Results for Los Angeles River Estuary

Constituent	Units	Stations				
		4142	4440	4600	4788	4856
PCB149	ug/kg	<1	<0.33	14.7	11	<0.33
PCB151	ug/kg	<1	<0.2	20	13.4	<0.2
PCB153	ug/kg	<1	<0.2	30.3	21	<1.2
PCB156	ug/kg	<1	<0.051	<1	8.3	<0.051
PCB157	ug/kg	<1	<0.08	<1	<1	<0.08
PCB158	ug/kg	<1	<0.072	13.5	10.6	<0.072
PCB169	ug/kg	<1	<0.15	<1	J4.1	<0.15
PCB170	ug/kg	<1	<0.057	27.7	15	<0.057
PCB177	ug/kg	<1	<0.1	23.1	14.2	<0.1
PCB180	ug/kg	<1	<0.092	27.6	18.9	<0.092
PCB183	ug/kg	<1	<0.31	21.6	15	<0.31
PCB187	ug/kg	<1	<0.26	25.1	20.4	<0.26
PCB189	ug/kg	<1	<0.085	12.4	11.8	<0.085
PCB194	ug/kg	<1	<0.14	23.7	18.7	<0.14
PCB201	ug/kg	<1	<0.034	21.8	18.6	<0.034
PCB206	ug/kg	<1	<0.095	22.5	14.9	<0.095
Total Detectable PCBs	ug/kg	0.0	0.0	**677.0**	**491.0**	0.0

Mean ER-M quotient		0.04	0.08	**1.62**	**0.93**	0.06

NR = Not reported

J = Estimated value above MDL and below RL

Chemisty in **Bold** = > ER-L

Chemisty in **Bold** = > ER-M

Toxicity in **Bold** = identified as moderately toxic (Bight 03 draft report)

Toxicity in **Bold** = identified as highly toxic (Bight 03 draft report)

Mean ERM-Q **Bold** = above 0.01 threshold

Table E-3. Laboratory Analytical Results for Dominguez Channel Estuary

Constituent	Units	Stations					
		4206	4270	4436	4852	5012	5108
Toxicity							
Mean *Eohaustorius* Survival	%	**32**	**20**	**25**	88	92	95
Infauna Community Indices							
Number of species	#/0.1 m^2	22	8	20	24	13	24
Total abundance	#/0.1 m^2	862	65	1099	1308	622	2026
Shannon-Wiener diversity		1.36	1.57	1.40	1.07	1.23	1.61
Evenness		0.44	0.76	0.47	0.34	0.48	0.51
Dominance		2	3	3	1	2	3
Sediment Size & TOC							
Gravel	%	0.00	0.00	0.00	1.95	0.00	0.00
Sand	%	16.33	15.40	29.30	80.00	41.40	32.31
Silt	%	73.96	75.61	57.21	14.43	53.17	60.72
Clay	%	9.70	8.99	13.50	3.46	5.43	6.96
Median size	microns	18.81	19.08	24.65	575.55	38.24	26.26
Mean size	microns	19.14	19.19	23.73	218.35	41.57	40.70
TOC	%	5.776	2.989	4.224	1.494	3.418	1.663
Metals							
Aluminum	mg/kg	23800	27200	29800	4920	16100	15000
Antimony	mg/kg	2.16	4.12	1.99	0.78	2.33	4.79
Arsenic	mg/kg	**12.20**	**15.40**	**17.20**	3.17	7.45	**12.20**
Barium	mg/kg	182.0	270.0	181.0	50.6	114.0	225.0
Beryllium	mg/kg	0.88	1.13	1.07	0.15	0.43	0.39
Cadmium	mg/kg	**4.70**	**3.09**	**4.71**	0.31	**4.32**	1.03
Chromium	mg/kg	**200.0**	**296.0**	**269.0**	26.3	63.6	**291.0**
Copper	mg/kg	**175.0**	**248.0**	**171.0**	26.4	**117.0**	**205.0**
Iron	mg/kg	27800	33100	33900	8680	23200	22500
Lead	mg/kg	**493.0**	**288.0**	**720.0**	37.9	139.0	**94.3**
Mercury	mg/kg	**0.59**	**0.40**	**0.48**	0.06	**0.24**	**0.47**
Nickel	mg/kg	**49.9**	**43.5**	**57.1**	9.4	**30.6**	**31.0**
Selenium	mg/kg	1.51	1.73	1.41	<0.24	0.26	0.72
Silver	mg/kg	**4.33**	**3.63**	**4.43**	0.14	0.56	**1.06**
Zinc	mg/kg	**789.0**	**666.0**	**822.0**	86.9	**461.0**	**254.0**
Pesticides							
2,4'-DDD	ug/kg	91.7	47	100	<5.7	<0.1	<0.1
2,4'-DDE	ug/kg	26.5	28.6	64.1	<0.1	<0.1	<0.1
2,4'-DDT	ug/kg	<1	<1	<1	<0.1	<0.1	<0.1
4,4'-DDD	ug/kg	403	202.7	699	10	29	5.2
4,4'-DDE	ug/kg	184	129	219	8.5	28	4.1
4,4'-DDT	ug/kg	208	<1	64.8	<0.2	<0.2	<0.2
Total Detectable DDT	ug/kg	**913.2**	**407.3**	**1146.9**	**18.5**	**57.0**	**9.3**
alpha-Chlordane	ug/kg	39.8	21.2	65.2	<0.14	<0.14	<0.14
gamma-Chlordane	ug/kg	56.4	32.2	87.3	<0.2	<0.2	<0.2
Total Detectable Chlordane	ug/kg	**96.2**	**53.4**	**152.5**	0	0	0

Table E-3. Laboratory Analytical Results for Dominguez Channel Estuary

Constituent	Units	Stations					
		4206	4270	4436	4852	5012	5108
PAHs							
1,6,7-Trimethylnaphthalene	ug/kg	17.7	5.8	J2.2	<21	44	<21
1-Methylnaphthalene	ug/kg	29.9	23.6	J3.2	39.9	55.1	131
1-Methylphenanthrene	ug/kg	36.3	53.6	26.2	<41	<41	<41
2,6-Dimethylnaphthalene	ug/kg	52.1	22.3	10.7	106	113	<32
2-Methylnaphthalene	ug/kg	90.5	32.9	14.5	106	136	224
Acenaphthene	ug/kg	9.2	10	J3.8	<28	<28	<28
Acenaphthylene	ug/kg	10.1	185	9.1	<15	19	137
Anthracene	ug/kg	76.3	1	38	20.4	35.4	<18
Benz(a)anthracene	ug/kg	543	337	462	192	258	555
Benzo(a)pyrene	ug/kg	1115	953	1073	263	427	547
Benzo(b)fluoranthene	ug/kg	699	560	774	449	694	481
Benzo(e)pyrene	ug/kg	797	599	593	233	431	498
Benzo(g,h,i)perylene	ug/kg	584	387	525	164	405	<56
Benzo(k)fluoranthene	ug/kg	677	462	718	206	363	<82
Biphenyl	ug/kg	10.9	6.2	J2.9	25.3	39.9	<10
Chrysene	ug/kg	1021	446	561	293	379	858
Dibenz(a,h)anthracene	ug/kg	251	<1	232	<52	<52	<52
Fluoranthene	ug/kg	487	410	483	244	431	1230
Fluorene	ug/kg	17.4	13.3	5.9	17.6	42.5	<13
Naphthalene	ug/kg	47	29	8.5	47.8	82.9	142
Perylene	ug/kg	214	156	210	74.1	116	<23
Phenanthrene	ug/kg	267	175	129	117	267	<21
Pyrene	ug/kg	1311	2132	1103	510	1810	5530
Total Detectable PAHs	ug/kg	**8363**	**7000**	**6988**	3108	**6149**	**10333**
PCBs							
PCB18	ug/kg	8	9.1	10.4	<0.17	<2.6	<0.17
PCB28	ug/kg	15.2	14.6	21	<0.09	<0.09	<0.09
PCB37	ug/kg	<1	<1	7.5	<0.11	2.2	<0.11
PCB44	ug/kg	<1	<1	<1	<0.076	<0.076	<0.076
PCB49	ug/kg	<1	<1	55.7	<0.2	<0.2	<0.2
PCB52	ug/kg	8.7	<1	8.5	<0.09	5.8	<0.09
PCB66	ug/kg	24	26.1	19.2	<2.1	4	<2.1
PCB70	ug/kg	<1	15	14.9	<2.7	<0.2	4.7
PCB74	ug/kg	<1	14.4	J4	<0.16	<2.7	<0.16
PCB77	ug/kg	<1	<1	<1	<0.19	<0.19	<0.19
PCB81	ug/kg	<1	5.7	6.4	<0.23	<0.23	<0.23
PCB87	ug/kg	<1	<1	<1	<0.18	2.9	<0.18
PCB99	ug/kg	<1	8.2	7.8	<2.5	2.9	<0.39
PCB101	ug/kg	23.5	30.7	25.4	<2.6	8.1	2.6
PCB105	ug/kg	<1	<1	<1	<2.6	<2.6	<0.11
PCB110	ug/kg	14.5	19.1	21.7	<2.9	5.4	<2.9
PCB114	ug/kg	<1	<1	<1	<0.13	<0.13	<0.13
PCB118	ug/kg	<1	7.7	12.6	<2.7	4.7	<0.25
PCB119	ug/kg	<1	<1	<1	<0.15	<0.15	<0.15
PCB123	ug/kg	<1	21.8	19.7	<0.19	<0.19	<0.19
PCB126	ug/kg	<1	<1	<1	<0.31	<0.31	<0.31
PCB128/167	ug/kg	<1	<1	<1	<0.26	<0.26	<0.26
PCB138	ug/kg	17.8	16.5	17.2	<3	5.7	<0.16

Table E-3. Laboratory Analytical Results for Dominguez Channel Estuary

Constituent	Units	Stations					
		4206	4270	4436	4852	5012	5108
PCB149	ug/kg	27.7	<1	<1	<2.5	5	<2.5
PCB151	ug/kg	<1	<1	J4.6	<0.2	<2.5	<0.2
PCB153	ug/kg	21.3	22.7	25.5	<1.2	<1.2	<1.2
PCB156	ug/kg	<1	<1	<1	<0.051	<0.051	<0.051
PCB157	ug/kg	<1	<1	<1	<0.08	<0.08	<0.08
PCB158	ug/kg	<1	<1	<1	<0.072	<0.072	<0.072
PCB169	ug/kg	44.2	57.4	33.3	<0.15	<0.15	<0.15
PCB170	ug/kg	<1	<1	<1	<3.1	<0.057	<0.057
PCB177	ug/kg	<1	<1	<1	<0.1	<3	<0.1
PCB180	ug/kg	26.5	27.4	23	<2.6	4.2	<0.092
PCB183	ug/kg	10.4	6.8	6.5	<0.31	<0.31	<0.31
PCB187	ug/kg	24.2	11.3	14.4	<0.26	<2.7	<0.26
PCB189	ug/kg	<1	<1	<1	<0.085	<0.085	<0.085
PCB194	ug/kg	26.4	<1	<1	<0.14	<0.14	<0.14
PCB201	ug/kg	<1	<1	9.8	<0.034	<0.034	<0.034
PCB206	ug/kg	22.4	8	9.2	<0.095	2.4	<0.095
Total Detectable PCBs	ug/kg	**<u>314.8</u>**	**<u>322.5</u>**	**<u>378.3</u>**	0.0	**53.3**	7.3

Mean ER-M quotient		**3.60**	**2.10**	**4.84**	**0.11**	**0.44**	**0.38**

NR = Not reported

J = Estimated value above MDL and below RL

Chemisty in **Bold** = > ER-L

Chemisty in **<u>Bold</u>** = > ER-M

Toxicity in **Bold** = identified as moderately toxic (Bight 03 draft report)

Toxicity in **<u>Bold</u>** = identified as highly toxic (Bight 03 draft report)

Mean ERM-Q **Bold** = above 0.01 threshold

Table E-4. Laboratory Analytical Results for Ballona Creek Estuary

Constituent	Units	Stations				
		4053	4213	5735	5767	5787
Toxicity						
Mean *Eohaustorius* Survival	%	**0**	**59**	**27**	**19**	90
Infauna Community Indices						
Number of species	#/0.1 m^2	37	12	45	53	85
Total abundance	#/0.1 m^2	16,836	5767	1628	1800	3809
Shannon-Wiener diversity		1.31	1.09	2.57	2.52	2.23
Evenness		0.36	0.44	0.67	0.63	0.50
Dominance		2	2	6	5	4
Sediment Size & TOC						
Gravel	%	55.00	55.70	0.21	0.29	0.68
Sand	%	35.62	42.34	48.53	57.80	79.65
Silt	%	8.62	1.80	48.76	39.84	18.97
Clay	%	0.84	0.16	2.50	2.07	0.70
Median size	microns	2222.89	2187.01	58.30	125.47	710.87
Mean size	microns	1759.90	2093.95	115.75	133.83	221.73
TOC	%	4.946	0.497	0.669	1.196	0.352
Metals						
Aluminum	mg/kg	8370	5350	6210	6040	3240
Antimony	mg/kg	1.07	0.21	0.85	0.71	0.43
Arsenic	mg/kg	4.01	2.37	3.54	7.52	2.97
Barium	mg/kg	57.7	34.0	46.0	40.9	18.8
Beryllium	mg/kg	0.23	0.21	0.17	0.19	0.12
Cadmium	mg/kg	0.84	0.13	0.83	0.96	0.31
Chromium	mg/kg	21.9	19.5	21.1	19.3	10.6
Copper	mg/kg	**36.4**	11.5	32.9	33.4	10.6
Iron	mg/kg	10600	8390	12900	10600	6390
Lead	mg/kg	41.0	12.7	**111.0**	**59.3**	35.5
Mercury	mg/kg	0.11	0.03	0.05	0.08	0.03
Nickel	mg/kg	13.1	9.7	13.3	12.5	7.6
Selenium	mg/kg	0.77	0.47	<0.24	0.26	<0.24
Silver	mg/kg	0.86	0.44	0.66	0.87	0.36
Zinc	mg/kg	**202.0**	73.5	**186.0**	**165.0**	107.0
Pesticides						
2,4'-DDD	ug/kg	<1	<1	<5.7	<5.7	<5.7
2,4'-DDE	ug/kg	<1	J1.4	<0.1	<0.1	<0.1
2,4'-DDT	ug/kg	<1	<1	<0.1	<0.1	<0.1
4,4'-DDD	ug/kg	<1	<1	5.4	5	<3.8
4,4'-DDE	ug/kg	17.3	<1	<3.8	4.7	<3.8
4,4'-DDT	ug/kg	<1	<1	<0.2	<0.2	<0.2
Total Detectable DDT	ug/kg	**17.3**	1.4	**5.4**	**9.7**	0.0
alpha-Chlordane	ug/kg	10.4	<1	<0.14	<0.14	<0.14
gamma-Chlordane	ug/kg	11.2	J1.3	<0.2	<0.2	<0.2
Total Detectable Chlordane	ug/kg	**21.6**	**1.3**	0	0	0

Table E-4. Laboratory Analytical Results for Ballona Creek Estuary

Constituent	Units	Stations				
		4053	4213	5735	5767	5787
PAHs						
1,6,7-Trimethylnaphthalene	ug/kg	J1.8	<1	<21	<21	<21
1-Methylnaphthalene	ug/kg	<1	<1	<12	<12	49.7
1-Methylphenanthrene	ug/kg	15.3	9.6	<41	<41	<41
2,6-Dimethylnaphthalene	ug/kg	J3.5	<1	<32	<32	136
2-Methylnaphthalene	ug/kg	J2	<1	28	17.7	107
Acenaphthene	ug/kg	J4.6	<1	<28	<28	<28
Acenaphthylene	ug/kg	J3.7	<1	<15	<15	<15
Anthracene	ug/kg	15	J1.2	<18	<18	<18
Benz(a)anthracene	ug/kg	123	7.8	<32	50.7	<32
Benzo(a)pyrene	ug/kg	156	5.3	<55	<55	<55
Benzo(b)fluoranthene	ug/kg	168	<1	<63	<63	<63
Benzo(e)pyrene	ug/kg	152	9.01	<57	<57	<57
Benzo(g,h,i)perylene	ug/kg	145.3	<1	<56	<56	<56
Benzo(k)fluoranthene	ug/kg	167	8.8	<82	<82	<82
Biphenyl	ug/kg	<1	<1	21.4	<10	26.9
Chrysene	ug/kg	236	6.8	<36	75.9	<36
Dibenz(a,h)anthracene	ug/kg	22.3	<1	<52	<52	<52
Fluoranthene	ug/kg	319	12.7	44.1	91.2	<24
Fluorene	ug/kg	6.2	<1	<13	<13	<13
Naphthalene	ug/kg	J4	<1	<21	<21	60
Perylene	ug/kg	65.4	<1	<23	<23	<23
Phenanthrene	ug/kg	J1.4	J3	28.5	55.8	28
Pyrene	ug/kg	317	J4.9	60.3	197	<35
Total Detectable PAHs	ug/kg	1929	69	182	488	408
PCBs						
PCB18	ug/kg	<1	<1	5.2	<0.17	<0.17
PCB28	ug/kg	<1	<1	<0.09	<3	<0.09
PCB37	ug/kg	<1	<1	<0.11	<0.11	<0.11
PCB44	ug/kg	<1	<1	<0.076	<0.076	<0.076
PCB49	ug/kg	<1	<1	<0.2	<0.2	<0.2
PCB52	ug/kg	<1	<1	<0.09	<0.09	<0.09
PCB66	ug/kg	<1	<1	<0.15	<0.15	<0.15
PCB70	ug/kg	<1	<1	<0.2	<0.2	<0.2
PCB74	ug/kg	<1	<1	<0.16	<0.16	<0.16
PCB77	ug/kg	<1	<1	<0.19	<0.19	<0.19
PCB81	ug/kg	<1	<1	<0.23	<0.23	<0.23
PCB87	ug/kg	<1	<1	<0.18	<2.8	<2.8
PCB99	ug/kg	<1	<1	<0.39	<2.5	<2.5
PCB101	ug/kg	<1	<1	2.8	<2.6	<2.6
PCB105	ug/kg	<1	<1	<0.11	<0.11	<2.6
PCB110	ug/kg	<1	<1	<2.9	<2.9	<2.9
PCB114	ug/kg	<1	<1	<0.13	<0.13	<0.13
PCB118	ug/kg	<1	<1	<2.7	<2.7	<2.7
PCB119	ug/kg	<1	<1	<0.15	<0.15	<0.15
PCB123	ug/kg	<1	<1	<0.19	<0.19	<0.19
PCB126	ug/kg	<1	<1	<0.31	<0.31	<0.31
PCB128/167	ug/kg	<1	<1	<0.26	<3.3	<0.26
PCB138	ug/kg	<1	<1	<0.16	<3	<3

Table E-4. Laboratory Analytical Results for Ballona Creek Estuary

Constituent	Units	Stations				
		4053	4213	5735	5767	5787
PCB149	ug/kg	<1	<1	<0.33	<2.5	<2.5
PCB151	ug/kg	<1	<1	<0.2	<0.2	<0.2
PCB153	ug/kg	<1	<1	<0.2	<1.2	<1.2
PCB156	ug/kg	<1	<1	<0.051	<0.051	<0.051
PCB157	ug/kg	<1	<1	<0.08	<0.08	<0.08
PCB158	ug/kg	<1	<1	<0.072	<0.072	<0.072
PCB169	ug/kg	<1	<1	<0.15	<0.15	<0.15
PCB170	ug/kg	<1	<1	<0.057	<0.057	<0.057
PCB177	ug/kg	<1	<1	<0.1	<0.1	<0.1
PCB180	ug/kg	<1	<1	<2.6	<2.6	<2.6
PCB183	ug/kg	<1	<1	<0.31	<0.31	<0.31
PCB187	ug/kg	<1	<1	<0.26	<0.26	<0.26
PCB189	ug/kg	<1	<1	<0.085	<0.085	<0.085
PCB194	ug/kg	<1	<1	<0.14	<0.14	<0.14
PCB201	ug/kg	<1	<1	<0.034	<0.034	<0.034
PCB206	ug/kg	<1	<1	<0.095	<0.095	<0.095
Total Detectable PCBs	ug/kg	0.0	0.0	8.0	0.0	0.0

Mean ER-M quotient		**0.44**	0.08	**0.15**	**0.14**	0.07

NR = Not reported

J = Estimated value above MDL and below RL

Chemisty in **Bold** = > ER-L

Chemisty in **Bold** = > ER-M

Toxicity in **Bold** = identified as moderately toxic (Bight 03 draft report)

Toxicity in **Bold** = identified as highly toxic (Bight 03 draft report)

Mean ERM-Q **Bold** = above 0.01 threshold

Table E-5. Laboratory Analytical Results for Malibu Lagoon

Constituent	Units	Stations				
		4197	4683	4939	5739	5771
Toxicity						
Mean *Eohaustorius* Survival	%	83	98	92	95	91
Infauna Community Indices						
Number of species	#/0.1 m^2	3	6	3	7	3
Total abundance	#/0.1 m^2	11	284	5	406	37
Shannon-Wiener diversity		0.86	0.25	1.05	0.38	0.33
Evenness		0.78	0.14	0.96	0.20	0.30
Dominance		2	1	2	1	1
Sediment Size & TOC						
Gravel	%	0.00	0.00	0.46	0.28	0.00
Sand	%	50.03	52.22	93.07	69.17	48.34
Silt	%	48.32	46.20	5.54	29.28	49.71
Clay	%	1.66	1.58	0.92	1.28	1.95
Median size	microns	62.58	68.43	520.65	433.73	57.97
Mean size	microns	56.14	68.74	449.49	153.17	57.07
TOC	%	1.525	4.519	J0.282	0.378	3.24
Metals						
Aluminum	mg/kg	15900	12800	3630	9320	12500
Antimony	mg/kg	0.41	1.35	J0.09	1.38	1.56
Arsenic	mg/kg	3.77	2.74	1.69	2.42	2.96
Barium	mg/kg	82.5	70.3	17.5	25.6	64.9
Beryllium	mg/kg	0.53	0.40	0.17	0.20	0.41
Cadmium	mg/kg	**2.16**	**2.76**	0.25	0.73	**2.73**
Chromium	mg/kg	53.1	43.1	10.3	33.7	40.0
Copper	mg/kg	23.2	45.7	3.6	14.4	**35.6**
Iron	mg/kg	22400	24300	5670	17900	25300
Lead	mg/kg	6.6	20.5	1.9	5.5	15.6
Mercury	mg/kg	0.06	0.05	0.04	0.01	0.08
Nickel	mg/kg	**42.4**	**40.3**	8.0	**35.7**	**41.0**
Selenium	mg/kg	2.42	1.80	0.38	0.31	1.69
Silver	mg/kg	0.26	0.22	0.17	<0.013	0.12
Zinc	mg/kg	67.1	**169.0**	14.5	47.2	122.0
Pesticides						
2,4'-DDD	ug/kg	<1	<0.1	<1	<0.1	<0.1
2,4'-DDE	ug/kg	<1	<0.1	<1	<0.1	<0.1
2,4'-DDT	ug/kg	<1	<0.1	<1	<0.1	<0.1
4,4'-DDD	ug/kg	<1	<0.1	<1	<0.1	<0.1
4,4'-DDE	ug/kg	<1	<3.8	<1	<3.8	<0.1
4,4'-DDT	ug/kg	<1	<0.2	<1	<0.2	<0.2
Total Detectable DDT	ug/kg	0.0	0.0	0.0	0.0	0.0
alpha-Chlordane	ug/kg	<1	<0.14	<1	<0.14	<0.14
gamma-Chlordane	ug/kg	<1	<0.2	<1	<0.2	<0.2
Total Detectable Chlordane	ug/kg	0	0	0	0	0

Table E-5. Laboratory Analytical Results for Malibu Lagoon

Constituent	Units	Stations				
		4197	4683	4939	5739	5771
PAHs						
1,6,7-Trimethylnaphthalene	ug/kg	<1	<21	<1	<21	<21
1-Methylnaphthalene	ug/kg	<1	62.4	<1	21.2	<12
1-Methylphenanthrene	ug/kg	<1	<41	<1	<41	<41
2,6-Dimethylnaphthalene	ug/kg	<1	706	<1	47.8	<32
2-Methylnaphthalene	ug/kg	<1	107	<1	55.1	<12
Acenaphthene	ug/kg	J3.3	<28	<1	<28	<28
Acenaphthylene	ug/kg	<1	<15	<1	<15	<15
Anthracene	ug/kg	<1	<18	5.1	<18	<18
Benz(a)anthracene	ug/kg	J2.6	<32	18.9	<32	<32
Benzo(a)pyrene	ug/kg	J3.7	<55	19.1	<55	<55
Benzo(b)fluoranthene	ug/kg	J3.2	<63	14.2	<63	<63
Benzo(e)pyrene	ug/kg	J3.6	<57	9.3	<57	<57
Benzo(g,h,i)perylene	ug/kg	<1	<56	5.3	<56	<56
Benzo(k)fluoranthene	ug/kg	J1.5	<82	14.1	<82	<82
Biphenyl	ug/kg	<1		<1	<10	<10
Chrysene	ug/kg	J3.8	39.8	17.3	<36	<36
Dibenz(a,h)anthracene	ug/kg	<1	<52	J2.6	<52	<52
Fluoranthene	ug/kg	6	<24	39.6	<24	<24
Fluorene	ug/kg	<1	<13	J1.2	<13	<13
Naphthalene	ug/kg	<1	90.8	<1	23	62.9
Perylene	ug/kg	7.1	<23	11.3	<23	<23
Phenanthrene	ug/kg	J1.1	27.6	19.6	<21	39.4
Pyrene	ug/kg	5.8	50.4	31.8	<35	171
Total Detectable PAHs	ug/kg	42	1084	209	147	273
PCBs						
PCB18	ug/kg	<1	<0.17	<1	<0.17	<0.17
PCB28	ug/kg	<1	<0.09	<1	<0.09	<0.09
PCB37	ug/kg	<1	<0.11	<1	<0.11	<0.11
PCB44	ug/kg	<1	<0.076	<1	<0.076	<0.076
PCB49	ug/kg	<1	<0.2	<1	<0.2	<0.2
PCB52	ug/kg	<1	<0.09	<1	<0.09	<0.09
PCB66	ug/kg	<1	<0.15	<1	<0.15	<0.15
PCB70	ug/kg	<1	<0.2	<1	<0.2	<0.2
PCB74	ug/kg	<1	<0.16	<1	<0.16	<0.16
PCB77	ug/kg	<1	<0.19	<1	<0.19	<0.19
PCB81	ug/kg	<1	<0.23	<1	<0.23	<0.23
PCB87	ug/kg	<1	<0.18	<1	<0.18	<0.18
PCB99	ug/kg	<1	<0.39	<1	<0.39	<0.39
PCB101	ug/kg	<1	<0.24	<1	<0.24	<0.24
PCB105	ug/kg	<1	<0.11	<1	<0.11	<0.11
PCB110	ug/kg	<1	<0.34	<1	<0.34	<0.34
PCB114	ug/kg	<1	<0.13	<1	<0.13	<0.13
PCB118	ug/kg	<1	<0.25	<1	<0.25	<0.25
PCB119	ug/kg	<1	<0.15	<1	<0.15	<0.15
PCB123	ug/kg	<1	<0.19	<1	<0.19	<0.19
PCB126	ug/kg	<1	<0.31	<1	<0.31	<0.31
PCB128/167	ug/kg	<1	<0.26	<1	<0.26	<0.26
PCB138	ug/kg	<1	<0.16	<1	<0.16	<0.16

Table E-5. Laboratory Analytical Results for Malibu Lagoon

Constituent	Units	Stations				
		4197	4683	4939	5739	5771
PCB149	ug/kg	<1	<0.33	<1	<0.33	<0.33
PCB151	ug/kg	<1	<0.2	<1	<0.2	<0.2
PCB153	ug/kg	<1	<0.2	<1	<0.2	<0.2
PCB156	ug/kg	<1	<0.051	<1	<0.051	<0.051
PCB157	ug/kg	<1	<0.08	<1	<0.08	<0.08
PCB158	ug/kg	<1	<0.072	<1	<0.072	<0.072
PCB169	ug/kg	<1	<0.15	<1	<0.15	<0.15
PCB170	ug/kg	<1	<0.057	<1	<0.057	<0.057
PCB177	ug/kg	<1	<0.1	<1	<0.1	<0.1
PCB180	ug/kg	<1	<0.092	<1	<0.092	<0.092
PCB183	ug/kg	<1	<0.31	<1	<0.31	<0.31
PCB187	ug/kg	<1	<0.26	<1	<0.26	<0.26
PCB189	ug/kg	<1	<0.085	<1	<0.085	<0.085
PCB194	ug/kg	<1	<0.14	<1	<0.14	<0.14
PCB201	ug/kg	<1	<0.034	<1	<0.034	<0.034
PCB206	ug/kg	<1	<0.095	<1	<0.095	<0.095
Total Detectable PCBs	ug/kg	0.0	0.0	0.0	0.0	0.0

Mean ER-M quotient		**0.13**	**0.16**	0.03	0.08	**0.15**

NR = Not reported

J = Estimated value above MDL and below RL

Chemisty in **Bold** = > ER-L

Chemisty in **Bold** = > ER-M

Toxicity in **Bold** = identified as moderately toxic (Bight 03 draft report)

Toxicity in **Bold** = identified as highly toxic (Bight 03 draft report)

Mean ERM-Q **Bold** = above 0.01 threshold