

8. The results of these studies were consolidated into weight-of-evidence categorization tables. Stations were grouped based on chemical and ecotoxicological results into 9 possible categories that considered the magnitude of contamination by chemicals of concern, occurrence of toxicity using multiple toxicity test protocols, benthic community degradation, and in some cases, tissue bioaccumulation. Specific thresholds were established for each measure, beyond which stations were considered to have elevated chemistry, significant toxicity, degraded benthic community structure, or elevated tissue concentrations.

Stations in the Consolidated Slip area were the Industrial Harbor stations that met all the criteria for Category 1. Samples from these stations had elevated chemistry, recurrent toxicity, and degraded benthic community structure. A majority of the Industrial Harbor stations met the criteria for Categories 5 or 6. These were stations with either, elevated chemistry and mixed results from biological measures (Cat. 5), or with measured biological impact but chemistry values below thresholds or not measured (Cat. 6).

The majority of Marina stations met the criteria for Categories 5 and 6. Some stations in Marina Del Rey had sediments with elevated chemistry; these stations were also significantly toxic to amphipods. The RBI at some of these stations was relatively low, but did not exceed the threshold for significant benthic community degradation.

The majority of Lagoon stations also met the criteria for Categories 5 and 6. Stations in Colorado Lagoon, Ballona Creek, and McGrath Lake had elevated chemistry and were significantly toxic to amphipods, but benthic community structure was not characterized at these stations. Stations in Mugu Lagoon all met the criteria for Category 6. Individual pesticides exceeded some guideline values in Mugu Lagoon, and amphipod survival was variable. Benthic community structure was degraded at all of the 6 Mugu Lagoon stations analyzed.

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Table 12. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Industrial Harbor Stations. Stations are ranked in descending order by ERM Quotient.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
47004.0	Consolidated Slip - 200E - Depth 2	1657	46	4.38	6.30	15	27
47004.0	Consolidated Slip - 200E - Surface	1656	46	1.29	1.86	6	17
49004.0	Kaiser Intl.- Berth 49	1793	54	2.70	5.71	17	19
40006.1	Consolidated Slip - Rep 1	1050	25	1.95	2.66	7	14
40006.1	Consolidated Slip - Rep 2	1051	25	1.65	2.28	7	16
40006.1	Consolidated Slip - Rep 3	1052	25	1.47	2.05	8	19
40006.1	Consolidated Slip	16	1	1.27	1.76	6	13
47002.0	Consolidated Slip - 200 - Surface	1650	46	1.92	2.45	8	15
47002.0	Consolidated Slip - 200 - Depth 2	1651	46	1.57	2.06	4	10
47009.0	Consolidated Slip - 200G - Surface	1664	46	1.66	2.23	8	17
47003.0	Consolidated Slip - 200B - Surface	1653	46	1.63	2.14	6	12
47008.0	Consolidated Slip - Storm Drain	1663	46	1.61	2.12	6	12
47001.0	Consolidated Slip - 198 - Surface	1647	46	1.43	1.88	5	8
47001.0	Consolidated Slip - 198 - Depth 2	1648	46	1.42	1.95	5	12
40006.2	Consolidated Slip	17	1	1.29	1.77	5	18
47007.0	Consolidated Slip - End - Surface	1662	46	1.01	1.32	4	5
40019.3	Inner Fish Harbor	57	2	0.91	1.27	7	14
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	0.80	1.10	3	5
40019.2	Inner Fish Harbor	56	2	0.66	0.90	5	6
40019.1	Inner Fish Harbor	55	2	0.62	0.89	4	12
40007.2	Long Beach Harbor - Channel 2	20	3	0.59	0.81	4	14
40011.3	Inner Harbor - Channel 3	33	3	0.57	0.69	3	3
40001.3	Southwest Slip	3	1	0.56	0.84	10	16
44012.0	Port Hueneme - Wharf B	1626	45	0.54	0.79	7	15
40031.1	Palos Verdes - Swartz 6	76	3	0.52	0.67	3	5
40001.2	Southwest Slip - Rep 1	1062	25	0.52	0.75	5	12
40001.2	Southwest Slip - Rep 2	1063	25	0.50	0.72	5	13
40001.2	Southwest Slip	2	1	0.42	0.56	4	9
40001.2	Southwest Slip - Rep 3	1064	25	0.32	0.44	1	4
40013.1	Inner Queensway Bay - Rep 3	1058	25	0.52	0.73	1	2
40013.1	Inner Queensway Bay	37	3	0.38	0.54	1	2
40013.1	Inner Queensway Bay - Rep 2	1057	25	0.31	0.43	1	1
40013.1	Inner Queensway Bay - Rep 1	1056	25	0.28	0.41	1	1
40014.2	Outer Queensway Bay	41	3	0.49	0.67	2	2
40014.3	Outer Queensway Bay	42	3	0.48	0.64	2	1
40031.3	Palos Verdes - Swartz 6	78	3	0.47	0.58	3	3
40013.2	Inner Queensway Bay	38	3	0.44	0.63	1	3
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	0.43	0.57	3	5
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	0.39	0.52	2	4

Table 12 cont. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Industrial Harbor Stations. Stations are ranked in descending order by ERMQ.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
40031.2	Palos Verdes (Swartz 6) - Rep 1	1038	25	0.38	0.49	3	4
40031.2	Palos Verdes (Swartz 6)	77	3	0.37	0.49	3	4
40031.2	Palos Verdes (Swartz 6) - Rep 2	1003	23	0.36	0.49	3	4
40031.2	Palos Verdes (Swartz 6) - Rep 1	1002	23	0.32	0.44	2	3
40031.2	Palos Verdes (Swartz 6) - Rep 3	1040	25	0.30	0.41	3	4
40031.2	Palos V.(Swartz 6) - Rep 4 Blind	1005	23	0.29	0.42	1	0
40031.2	Palos Verdes (Swartz 6) - Rep 1	1189	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1190	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1191	30	NA	NA	NA	NA
40005.1	East Basin - Turning Basin	13	1	0.41	0.54	3	3
48009.0	San Pedro Bay Outer Harbor	1694	48	0.39	0.52	2	1
40001.1	Southwest Slip	1	1	0.38	0.51	1	13
40004.2	Lower Main Channel	11	1	0.37	0.55	1	2
40004.2	Lower Main Channel - Rep 3	832	20	0.24	0.35	1	0
40004.2	Lower Main Channel - Rep 2	831	20	0.21	0.29	1	0
40004.2	Lower Main Channel - Rep 1	830	20	0.20	0.28	1	0
40004.2	Lower Main Channel	789	18	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 2	1069	26	0.36	0.60	2	2
40010.1	Off Cabrillo Beach - Rep 3	1070	26	0.34	0.57	2	2
40010.1	Off Cabrillo Beach - Rep 1	1068	26	0.33	0.55	1	2
40010.1	Off Cabrillo Beach - Rep 1	1006	23	0.31	0.47	1	2
40010.1	Off Cabrillo Beach	28	2	0.28	0.44	1	1
40010.1	Off Cabrillo Beach	136	4	0.26	0.37	1	1
40010.1	Off Cabrillo Beach	810	19	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	1331	32	NA	NA	NA	NA
49005.0	Kaiser Intl.- Berth 48	1794	54	0.34	0.63	1	5
40004.3	Lower Main Channel	12	1	0.34	0.48	2	3
44013.0	Port Hueneme – Wharf #1	1627	45	0.34	0.55	1	12
40010.3	Off Cabrillo Beach - Rep 2	1075	26	0.33	0.53	1	2
40010.3	Off Cabrillo Beach - Rep 1	1074	26	0.32	0.50	1	1
40010.3	Off Cabrillo Beach - Rep 3	1008	23	0.30	0.47	1	2
40010.3	Off Cabrillo Beach	30	2	0.28	0.43	1	1
40010.3	Off Cabrillo Beach - Rep 3	1076	26	0.26	0.43	1	1
40010.3	Off Cabrillo Beach	138	4	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	1333	32	NA	NA	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	0.33	0.43	1	1
40010.2	Off Cabrillo Beach - Rep 1	1071	26	0.32	0.51	1	2
40010.2	Off Cabrillo Beach - Rep 2	1072	26	0.30	0.48	1	1
40010.2	Off Cabrillo Beach - Rep 2	1007	23	0.30	0.44	1	0



Table 12 cont. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Industrial Harbor Stations. Stations are ranked in descending order by ERMQ.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
40010.2	Off Cabrillo Beach - Rep 3	1073	26	0.27	0.44	1	1
40010.2	Off Cabrillo Beach	29	2	0.26	0.38	1	0
40010.2	Off Cabrillo Beach	137	4	NA	NA	NA	NA
40010.2	Off Cabrillo Beach	1332	32	NA	NA	NA	NA
40011.2	Inner Harbor - Channel 3	32	3	0.30	0.45	1	2
44011.0	Los Cerritos Channel Tidal P - Rep3	1079	26	0.30	0.41	1	1
44011.0	Los Cerritos Channel Tidal P - Rep1	1077	26	0.29	0.39	1	1
44011.0	Los Cerritos Channel Tidal P - Rep2	1078	26	0.27	0.37	1	2
44011.0	Los Cerritos Channel Tidal P	611	11	NA	NA	NA	NA
40033.1	Outer Harbor - Pola 10	82	1	0.28	0.40	1	4
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1042	25	0.27	0.37	2	1
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	0.26	0.35	2	1
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	0.25	0.35	1	1
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	0.23	0.32	1	1
40018.3	Long Beach Outer Harbor - 18 - Rep1	1041	25	0.22	0.31	1	1
40018.3	Long Beach Outer Harbor - 18	1695	48	0.25	0.37	2	1
40018.3	Long Beach Outer Harbor - 18 - Rep3	1043	25	0.21	0.30	1	1
40018.3	Long Beach Outer Harbor - 18	54	3	0.21	0.28	1	0
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA	0	0
40012.0	Southeast Basin	1632	45	0.25	0.33	1	1
40020.2	Long Beach Outer Harbor - 20	1696	48	0.23	0.31	2	1
40012.1	Southeast Basin - Rep 1	1047	25	0.23	0.30	1	1
40012.1	Southeast Basin - Rep 2	1048	25	0.21	0.28	1	0
40012.1	Southeast Basin	34	2	0.20	0.27	1	0
40012.1	Southeast Basin - Rep 3	1049	25	0.18	0.23	1	0
40012.1	Southeast Basin	812	19	NA	NA	NA	NA
40008.1	East Basin - Pier C	22	2	0.23	0.30	1	0
48010.0	Turning Basin	1697	48	0.22	0.31	1	0
40017.3	Long Beach Channel - Rep 2	1060	25	0.21	0.29	1	0
40017.3	Long Beach Channel - Rep 1	1059	25	0.19	0.26	1	0
40017.3	Long Beach Channel - Rep 3	1061	25	0.17	0.22	1	0
40017.3	Long Beach Channel	51	3	0.16	0.21	1	0
40002.2	West Basin - Pier 143	5	1	0.21	0.29	1	0
40016.3	Terminal Island Stp	48	2	0.20	0.26	1	1
40012.2	Southeast Basin	35	2	0.20	0.26	1	1

Table 12 cont. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Industrial Harbor Stations. Stations are ranked in descending order by ERMQ.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
40009.0	West Basin Entrance	1699	48	0.20	0.25	0	0
40009.1	West Basin Entrance - Ref 1	834	20	0.18	0.24	1	0
40009.1	West Basin Entrance - Ref 3	836	20	0.18	0.24	0	0
40009.1	West Basin Entrance - Ref 2	835	20	0.17	0.23	1	0
40009.1	West Basin Entrance	25	2	0.16	0.19	0	0
40008.3	East Basin - Pier C	24	2	0.18	0.23	0	0
40015.1	Fish Harbor Entrance	43	2	0.18	0.23	1	0
40016.1	Terminal Island Stp	46	2	0.18	0.23	1	1
40015.3	Fish Harbor Entrance	45	2	0.17	0.22	1	0
40003.1	Turning Basin - Pier 151	7	1	0.17	0.23	1	1
40020.3	Long Beach Outer Harbor - 20	60	3	0.16	0.23	1	0
40009.3	West Basin Entrance	27	2	0.15	0.20	0	0
40020.2	Long Beach Outer Harbor - 20	59	3	0.15	0.21	1	0
40015.1	Fish Harbor Entrance	1698	48	0.15	0.21	1	0
40020.1	Long Beach Outer Harbor - 20	58	3	0.14	0.19	1	0
40032.3	San Pedro Bay - POLA 19	105	2	0.14	0.17	1	0
40032.3	San Pedro Bay - POLA 19	81	1	0.11	0.14	1	0
40015.2	Fish Harbor Entrance	44	2	0.13	0.18	1	0
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	0.13	0.18	0	0
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	0.11	0.14	0	0
40003.2	Turning Basin, Pier 151	8	1	0.11	0.15	0	0
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	0.11	0.13	0	0
40016.2	Terminal Island Stp	47	2	0.13	0.16	0	0
40030.1	San Pedro Breakwater	73	2	0.11	0.13	1	0
40030.2	San Pedro Breakwater	74	2	0.11	0.13	1	0
40032.1	San Pedro Bay - POLA 19	103	2	0.10	0.16	1	0
40032.2	San Pedro Bay - POLA 19	104	2	0.10	0.13	1	0
40002.1	West Basin - Pier 143	4	1	NA	NA	NA	NA
40002.3	West Basin - Pier 143	6	1	NA	NA	NA	NA
40003.3	Turning Basin - Pier 151	9	1	NA	NA	NA	NA
40004.1	Lower Main Channel	10	1	NA	NA	NA	NA
40005.2	East Basin - Turning Basin	14	1	NA	NA	NA	NA
40005.3	East Basin - Turning Basin	15	1	NA	NA	NA	NA
40006.3	Consolidated Slip	18	1	NA	NA	NA	NA
40032.1	San Pedro Bay - POLA 19	79	1	NA	NA	NA	NA
40032.2	San Pedro Bay - POLA 19	80	1	NA	NA	NA	NA
40033.2	Outer Harbor - POLA 10	83	1	NA	NA	NA	NA
40033.3	Outer Harbor - POLA 10	84	1	NA	NA	NA	NA

Table 12 cont. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Industrial Harbor Stations. Stations are ranked in descending order by ERMQ.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
40008.2	East Basin - Pier C	23	2	NA	NA	NA	NA
40009.2	West Basin Entrance	26	2	NA	NA	NA	NA
40012.3	Southeast Basin	36	2	NA	NA	NA	NA
40030.3	San Pedro Breakwater	75	2	NA	NA	1	0
40007.1	Long Beach Harbor - Channel 2	19	3	NA	NA	NA	NA
40007.3	Long Beach Harbor - Channel 2	21	3	NA	NA	NA	NA
40013.3	Inner Queensway Bay	39	3	NA	NA	NA	NA
40014.1	Outer Queensway Bay	40	3	NA	NA	NA	NA
40017.1	Long Beach Channel	49	3	NA	NA	NA	NA
40017.2	Long Beach Channel	50	3	NA	NA	NA	NA
40018.1	Long Beach Outer Harbor - 18	52	3	NA	NA	NA	NA
40018.2	Long Beach Outer Harbor - 18	53	3	NA	NA	NA	NA
44012.0	Port Hueneme - Wharf B	612	11	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	NA	NA	NA	NA
40009.1	West Basin Entrance	790	18	NA	NA	NA	NA
40013.1	Inner Queensway Bay	791	18	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	792	18	NA	NA	NA	NA
40016.2	Terminal Island Stp	793	18	NA	NA	NA	NA
40017.3	Long Beach Channel	811	19	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	NA	NA	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA	1	1
46002.0	Hugo Neuproler - #2	1624	45	NA	NA	1	1
46003.0	Hugo Neuproler - #3	1625	45	NA	NA	0	0
47003.0	Consolidated Slip - 200B - Depth 2	1654	46	NA	NA	7	10
47005.0	Consolidated Slip - 200T - Surface	1659	46	NA	NA	10	11
47005.0	Consolidated Slip - 200T - Depth 2	1660	46	NA	NA	9	9
47005.0	Consolidated Slip - 200T - Depth 3	1661	46	NA	NA	5	9
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA	0	0
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA	0	0
48010.0	Turning Basin	1772	53	NA	NA	0	0
40015.1	Fish Harbor Entrance	1773	53	NA	NA	0	0
40009.0	West Basin Entrance	1774	53	NA	NA	0	0
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA	1	1
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA	1	0
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA	1	0

Table 13. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
47004.0	Consolidated Slip - 200E - Depth 2	1657	46	NA	NA	NA	NA	33.00	23.00	*	T
47004.0	Consolidated Slip - 200E - Surface	1656	46	NA	NA	NA	NA	40.00	27.00	*	T
49004.0	Kaiser Intl. - Berth 49	1793	54	NA	NA	NA	NA	84.00	5.00	*	NT
40006.1	Consolidated Slip - Rep 1	1050	25	62.00	21.68	*	T	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 2	1051	25	65.00	9.35	*	T	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 3	1052	25	80.00	11.18	*	NT	NA	NA	NA	NA
40006.1	Consolidated Slip	16	1	58.00	17.20	*	T	NA	NA	NA	NA
47002.0	Consolidated Slip - 200 - Surface	1650	46	NA	NA	NA	NA	54.00	7.00	*	T
47002.0	Consolidated Slip - 200 - Depth 2	1651	46	NA	NA	NA	NA	86.00	4.00	*	NT
47009.0	Consolidated Slip - 200g - Surface	1664	46	NA	NA	NA	NA	50.00	20.00	*	T
47003.0	Consolidated Slip - 200b - Surface	1653	46	NA	NA	NA	NA	70.00	7.00	*	T
47008.0	Consolidated Slip - Storm Drain	1663	46	NA	NA	NA	NA	52.00	21.00	*	T
47001.0	Consolidated Slip - 198 - Surface	1647	46	NA	NA	NA	NA	61.00	19.00	*	T
47001.0	Consolidated Slip - 198 - Depth 2	1648	46	NA	NA	NA	NA	64.00	13.00	*	T
40006.2	Consolidated Slip	17	1	59.00	16.40	*	T	NA	NA	NA	NA
47007.0	Consolidated Slip - End - Surface	1662	46	NA	NA	NA	NA	65.00	15.00	*	T
40019.3	Inner Fish Harbor	57	2	54.00	21.00	*	T	NA	NA	NA	NA
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	NA	NA	NA	NA	61.00	21.00	*	T
40019.2	Inner Fish Harbor	56	2	73.00	4.50	*	NT	NA	NA	NA	NA
40019.1	Inner Fish Harbor	55	2	83.00	18.90	ns	NT	NA	NA	NA	NA
40007.2	Long Beach Harbor - Channel 2	20	3	88.00	11.50	ns	NT	NA	NA	NA	NA
40011.3	Inner Harbor - Channel 3	33	3	82.00	2.50	*	NT	NA	NA	NA	NA
40001.3	Southwest Slip	3	1	71.00	13.40	*	NT	NA	NA	NA	NA
44012.0	Port Hueneme - Wharf B	1626	45	NA	NA	NA	NA	98.00	4.00	ns	NT

Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RAMN	RA	SD	RA t-test	RAMSD	EE MN	EE SD	EE t-test	EE MSD
40031.1	Palos Verdes - Swartz 6	76	3	86.00	7.40		ns	NT	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 1	1062	25	69.00	12.45		*	T	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 2	1063	25	72.00	7.58		*	T	NA	NA	NA	NA
40001.2	Southwest Slip	2	1	51.00	17.80		*	T	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 3	1064	25	58.00	15.25		*	T	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 3	1058	25	71.00	11.40		*	T	NA	NA	NA	NA
40013.1	Inner Queensway Bay	37	3	83.00	13.00		ns	NT	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 2	1057	25	76.00	9.62		*	NT	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 1	1056	25	83.00	8.37		*	NT	NA	NA	NA	NA
40014.2	Outer Queensway Bay	41	3	80.00	14.60		*	NT	NA	NA	NA	NA
40014.3	Outer Queensway Bay	42	3	64.00	36.30		ns	NT	NA	NA	NA	NA
40031.3	Palos Verdes - Swartz 6	78	3	96.00	2.20		ns	NT	NA	NA	NA	NA
40013.2	Inner Queensway Bay	38	3	84.00	6.50		*	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	87.00	8.37		*	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	89.00	10.00		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1038	25	70.00	11.73		*	T	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6)	77	3	93.00	7.60		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1003	23	91.00	7.00		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1002	23	97.00	4.00		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1040	25	85.00	14.58		ns	NT	NA	NA	NA	NA
40031.2	Palos V.(Swartz 6) - Rep 4 Blind	1005	23	91.00	11.00		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1189	30	86.00	12.94		ns	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1190	30	86.00	6.52		*	NT	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1191	30	91.00	11.94		ns	NT	NA	NA	NA	NA
40005.1	East Basin - Turning Basin	13	1	74.00	11.90		*	NT	NA	NA	NA	NA
48009.0	San Pedro Bay Outer Harbor	1694	48	NA	NA		NA	NA	96.00	4.00	ns	NT
40001.1	Southwest Slip	1	1	65.00	28.90		*	NT	NA	NA	NA	NA

Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA	MN	RA	SD	RA	t-test	RA	MSD	EE	MN	EE	SD	EE	t-test	EE	MSD
40004.2	Lower Main Channel	11	1	80.00	7.90			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 3	832	20	93.00	8.00			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 2	831	20	91.00	12.00			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 1	830	20	91.00	4.00			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40004.2	Lower Main Channel	789	18	68.00	18.20			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 2	1069	26	48.00	11.51			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 3	1070	26	46.00	16.36			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1068	26	80.00	16.96			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1006	23	68.00	10.00			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	28	2	92.00	7.60			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	136	4	89.00	14.30			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	810	19	58.00	11.00			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	1331	32	92.00	2.74			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
49005.0	Kaiser Intl. - Berth 48	1794	54	NA	NA			NA		NA	96.00	4.00	NA	NA	NA	NA	ns	NA	NA
40004.3	Lower Main Channel	12	1	81.00	9.60			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	1627	45	NA	NA			NA		NA	99.00	2.00	NA	NA	NA	NA	ns	NA	NA
40010.3	Off Cabrillo Beach - Rep 2	1075	26	64.00	15.57			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 1	1074	26	60.00	14.14			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1008	23	69.00	10.00			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	30	2	91.00	9.60			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1076	26	48.00	18.91			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	138	4	84.00	5.50			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	1333	32	91.00	5.48			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	85.00	6.90			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 1	1071	26	78.00	13.04			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1072	26	63.00	14.83			*		T	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1007	23	90.00	7.00			ns		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 3	1073	26	72.00	14.83			*		NT	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
40010.2	Off Cabrillo Beach	29	2	88.00	9.10	ns	NT	NA	NA	NA	NA
40010.2	Off Cabrillo Beach	137	4	89.00	5.50	ns	NT	NA	NA	NA	NA
40010.2	Off Cabrillo Beach	1332	32	82.50	10.41	*	NT	NA	NA	NA	NA
40011.2	Inner Harbor - Channel 3	32	3	84.00	5.30	ns	NT	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep 3	1079	26	62.00	17.54	*	T	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep 1	1077	26	66.00	14.75	*	NT	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep 2	1078	26	62.00	18.23	*	T	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P	611	11	65.00	19.40	*	T	NA	NA	NA	NA
40033.1	Outer Harbor - POLA 10	82	1	71.00	20.40	*	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1042	25	70.00	10.61	*	T	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	89.00	4.00	*	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	91.00	5.00	ns	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	93.00	7.00	ns	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1041	25	56.00	15.97	*	T	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1695	48	NA	NA	NA	NA	75.00	23.00	ns	NT
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1043	25	72.00	13.04	*	T	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	54	3	93.00	4.50	ns	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	88.00	7.58	*	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	89.00	5.48	*	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	81.00	12.45	*	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	90.00	10.00	ns	NT	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA	NA	NA	59.00	30.00	*	T
40012.0	Southeast Basin	1632	45	NA	NA	NA	NA	99.00	2.00	ns	NT
40020.2	Long Beach Outer Harbor - 20	1696	48	NA	NA	NA	NA	81.00	15.00	*	NT
40012.1	Southeast Basin - Rep1	1047	25	39.00	15.17	*	T	NA	NA	NA	NA
40012.1	Southeast Basin - Rep2	1048	25	51.00	15.17	*	T	NA	NA	NA	NA
40012.1	Southeast Basin	34	2	77.00	14.00	*	NT	NA	NA	NA	NA
40012.1	Southeast Basin - Rep3	1049	25	66.00	4.18	*	T	NA	NA	NA	NA

Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
40012.1	Southeast Basin	812	19	34.00	21.00	*	T	NA	NA	NA	NA
40008.1	East Basin - Pier C	22	2	80.00	16.20	ns	NT	NA	NA	NA	NA
48010.0	Turning Basin	1697	48	NA	NA	NA	NA	95.00	5.00	ns	NT
40017.3	Long Beach Channel - Rep 2	1060	25	47.00	17.89	*	T	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 1	1059	25	71.00	10.84	*	T	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 3	1061	25	61.00	8.22	*	T	NA	NA	NA	NA
40017.3	Long Beach Channel	51	3	88.00	8.40	ns	NT	NA	NA	NA	NA
40002.2	West Basin- Pier 143	5	1	78.00	13.00	*	NT	NA	NA	NA	NA
40016.3	Terminal Island Stp	48	2	80.00	12.70	*	NT	NA	NA	NA	NA
40012.2	Southeast Basin	35	2	78.00	13.50	*	NT	NA	NA	NA	NA
40009.0	West Basin Entrance	1699	48	NA	NA	NA	NA	86.00	7.00	*	NT
40009.1	West Basin Entrance - Ref 1	834	20	97.00	4.00	ns	NT	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 3	836	20	91.00	7.00	ns	NT	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 2	835	20	86.00	10.00	ns	NT	NA	NA	NA	NA
40009.1	West Basin Entrance	25	2	88.00	5.70	ns	NT	NA	NA	NA	NA
40008.3	East Basin - Pier C	24	2	76.00	8.90	*	NT	NA	NA	NA	NA
40015.1	Fish Harbor Entrance	43	2	83.00	5.00	*	NT	NA	NA	NA	NA
40016.1	Terminal Island Stp	46	2	72.00	5.70	*	NT	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	45	2	92.00	7.60	ns	NT	NA	NA	NA	NA
40003.1	Turning Basin - Pier 151	7	1	64.00	16.40	*	NT	NA	NA	NA	NA
40020.3	Long Beach Outer Harbor - 20	60	3	84.00	9.60	*	NT	NA	NA	NA	NA
40009.3	West Basin Entrance	27	2	87.00	5.70	ns	NT	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	59	3	92.00	11.00	ns	NT	NA	NA	NA	NA
40015.1	Fish Harbor Entrance	1698	48	NA	NA	NA	NA	89.00	10.00	ns	NT
40020.1	Long Beach Outer Harbor - 20	58	3	83.00	7.60	*	NT	NA	NA	NA	NA
40032.3	San Pedro Bay - POLA 19	105	2	86.00	15.20	ns	NT	NA	NA	NA	NA
40032.3	San Pedro Bay - POLA 19	81	1	93.00	2.70	ns	NT	NA	NA	NA	NA
40015.2	Fish Harbor Entrance	44	2	83.00	7.60	*	NT	NA	NA	NA	NA



Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA	MN	RA	SD	RA	t-test	RA	MSD	EE	MN	EE	SD	EE	t-test	EE	MSD
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	82.00	12.55				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	91.00	6.52				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151	8	1	63.00	29.90				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	85.00	10.00				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40016.2	Terminal Island Stp	47	2	88.00	8.40				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40030.1	San Pedro Breakwater	73	2	90.00	3.50				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40030.2	San Pedro Breakwater	74	2	94.00	6.50				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40032.1	San Pedro Bay - POLA 19	103	2	94.00	5.50				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40032.2	San Pedro Bay - POLA 19	104	2	94.00	5.50				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40002.1	West Basin - Pier 143	4	1	75.00	13.90				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40002.3	West Basin - Pier 143	6	1	74.00	10.80				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40003.3	Turning Basin - Pier 151	9	1	81.00	9.60				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40004.1	Lower Main Channel	10	1	78.00	6.70				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40005.2	East Basin - Turning Basin	14	1	73.00	7.60				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40005.3	East Basin - Turning Basin	15	1	79.00	15.60				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40006.3	Consolidated Slip	18	1	67.00	11.50				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40032.1	San Pedro Bay - POLA 19	79	1	86.00	4.20				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40032.2	San Pedro Bay - POLA 19	80	1	85.00	9.40				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40033.2	Outer Harbor - POLA 10	83	1	70.00	21.80				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40033.3	Outer Harbor - POLA 10	84	1	65.00	17.30				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40008.2	East Basin - Pier C	23	2	78.00	11.50				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40009.2	West Basin Entrance	26	2	81.00	2.20				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40012.3	Southeast Basin	36	2	69.00	16.40				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40030.3	San Pedro Breakwater	75	2	95.00	6.10				ns	NT		NA	NA	NA	NA	NA	NA	NA	NA
40007.1	Long Beach Harbor - Channel 2	19	3	82.00	10.40				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40007.3	Long Beach Harbor - Channel 2	21	3	78.00	14.40				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40013.3	Inner Queensway Bay	39	3	81.00	10.80				*	NT		NA	NA	NA	NA	NA	NA	NA	NA
40014.1	Outer Queensway Bay	40	3	78.00	10.40				*	NT		NA	NA	NA	NA	NA	NA	NA	NA

Table 13 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Industrial Harbor Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic w/ t-test & MSD. NT = Not Toxic; NA = Not Analyz.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
40017.1	Long Beach Channel	49	3	76.00	11.40	*	NT	NA	NA	NA	NA
40017.2	Long Beach Channel	50	3	82.00	9.70	*	NT	NA	NA	NA	NA
40018.1	Long Beach Outer Harbor - 18	52	3	67.00	14.40	*	T	NA	NA	NA	NA
40018.2	Long Beach Outer Harbor - 18	53	3	79.00	11.40	*	NT	NA	NA	NA	NA
44012.0	Port Hueneme - Wharf B	612	11	70.00	15.40	*	T	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	73.00	11.50	*	T	NA	NA	NA	NA
40009.1	West Basin Entrance	790	18	60.00	18.40	*	T	NA	NA	NA	NA
40013.1	Inner Queensway Bay	791	18	50.00	19.00	*	T	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	792	18	75.00	21.50	ns	NT	NA	NA	NA	NA
40016.2	Terminal Island Stip	793	18	63.00	28.00	*	T	NA	NA	NA	NA
40017.3	Long Beach Channel	811	19	54.00	26.30	*	T	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	77.00	13.51	*	NT	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	86.00	6.52	*	NT	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	82.00	2.74	*	NT	NA	NA	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA	NA	NA	95.00	6.00	ns	NT
46002.0	Hugo Neuproler - #2	1624	45	NA	NA	NA	NA	98.00	3.00	ns	NT
46003.0	Hugo Neuproler - #3	1625	45	NA	NA	NA	NA	92.00	6.00	*	NT
47003.0	Consolidated Slip - 200B - Depth 2	1654	46	NA	NA	NA	NA	8.00	12.00	*	T
47005.0	Consolidated Slip - 200T - Surface	1659	46	NA	NA	NA	NA	0.00	0.00	*	T
47005.0	Consolidated Slip - 200T - Depth 2	1660	46	NA	NA	NA	NA	18.00	40.00	*	T
47005.0	Consolidated Slip - 200T - Depth 3	1661	46	NA	NA	NA	NA	13.00	29.00	*	T
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA	NA	NA	85.00	10.00	*	NT
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA	NA	NA	85.00	13.00	*	NT
48010.0	Turning Basin	1772	53	NA	NA	NA	NA	69.00	43.00	ns	NT
40015.1	Fish Harbor Entrance	1773	53	NA	NA	NA	NA	72.00	19.00	*	T
40009.0	West Basin Entrance	1774	53	NA	NA	NA	NA	74.00	12.00	*	NT
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA	NA	NA	NA	NA	NA	NA
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA	NA	NA	NA	NA	NA	NA
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA	NA	NA	NA	NA	NA	NA

Table 14a. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (100% concentration). HRP 100 MN = Mean percent normal development of *Haliotis rufescens* in 100% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 100 MN	HRP 100 SD	HRP 100 t-test	HRP 100 MSD
47004.0	Consolidated Slip - 200E - Depth 2	1657	46	NA	NA	NA	NA
47004.0	Consolidated Slip - 200E - Surface	1656	46	NA	NA	NA	NA
49004.0	Kaiser Intl.- Berth 49	1793	54	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 1	1050	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 2	1051	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 3	1052	25	NA	NA	NA	NA
40006.1	Consolidated Slip	16	1	0.00	0.00	*	T
47002.0	Consolidated Slip - 200 - Surface	1650	46	NA	NA	NA	NA
47002.0	Consolidated Slip - 200 - Depth 2	1651	46	NA	NA	NA	NA
47009.0	Consolidated Slip - 200G - Surface	1664	46	NA	NA	NA	NA
47003.0	Consolidated Slip - 200B - Surface	1653	46	NA	NA	NA	NA
47008.0	Consolidated Slip - Storm Drain	1663	46	NA	NA	NA	NA
47001.0	Consolidated Slip - 198 - Surface	1647	46	NA	NA	NA	NA
47001.0	Consolidated Slip - 198 - Dept h 2	1648	46	NA	NA	NA	NA
40006.2	Consolidated Slip	17	1	0.00	0.00	*	T
47007.0	Consolidated Slip - End - Surface	1662	46	NA	NA	NA	NA
40019.3	Inner Fish Harbor	57	2	0.00	0.00	*	T
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	NA	NA	NA	NA
40019.2	Inner Fish Harbor	56	2	88.60	6.10	ns	NT
40019.1	Inner Fish Harbor	55	2	0.00	0.00	*	T
40007.2	Long Beach Harbor - Channel 2	20	3	0.00	0.00	*	T
40011.3	Inner Harbor - Channel 3	33	3	0.00	0.00	*	T
40001.3	Southwest Slip	3	1	0.70	0.60	*	T
44012.0	Port Hueneme - Wharf B	1626	45	NA	NA	NA	NA
40031.1	Palos Verdes - Swartz 6	76	3	0.00	0.00	*	T
40001.2	Southwest Slip - Rep 1	1062	25	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 2	1063	25	NA	NA	NA	NA
40001.2	Southwest Slip	2	1	81.40	7.90	*	NT
40001.2	Southwest Slip - Rep 3	1064	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 3	1058	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay	37	3	0.00	0.00	*	T
40013.1	Inner Queensway Bay - Rep 2	1057	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 1	1056	25	NA	NA	NA	NA
40014.2	Outer Queensway Bay	41	3	0.00	0.00	*	T
40014.3	Outer Queensway Bay	42	3	0.00	0.00	*	T
40031.3	Palos Verdes - Swartz 6	78	3	55.60	26.70	*	NT
40013.2	Inner Queensway Bay	38	3	0.00	0.00	*	T
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	NA	NA	NA	NA

Table 14a continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (100% concentration). HRP 100 MN = Mean percent normal development of *Haliotis rufescens* in 100% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 100 MN	HRP 100 SD	HRP 100 t-test	HRP 100 MSD
40031.2	Palos Verdes (Swartz 6) – Rep 1	1038	25	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6)	77	3	0.00	0.00	*	T
40031.2	Palos Verdes (Swartz 6) – Rep 2	1003	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) – Rep 1	1002	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) – Rep 3	1040	25	NA	NA	NA	NA
40031.2	Palos V.(Swartz 6) - Rep 4 Blind	1005	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) – Rep 1	1189	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) – Rep 2	1190	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) – Rep 3	1191	30	NA	NA	NA	NA
40005.1	East Basin - Turning Basin	13	1	0.00	0.00	*	T
48009.0	San Pedro Bay Outer Harbor	1694	48	NA	NA	NA	NA
40001.1	Southwest Slip	1	1	72.30	15.90	ns	NT
40004.2	Lower Main Channel	11	1	69.10	29.80	ns	NT
40004.2	Lower Main Channel - Rep 3	832	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 2	831	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 1	830	20	NA	NA	NA	NA
40004.2	Lower Main Channel	789	18	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 2	1069	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 3	1070	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1068	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1006	23	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	28	2	92.70	3.40	ns	NT
40010.1	Off Cabrillo Beach	136	4	1.70	2.90	*	T
40010.1	Off Cabrillo Beach	810	19	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	1331	32	NA	NA	NA	NA
49005.0	Kaiser Intl.- Berth 48	1794	54	NA	NA	NA	NA
40004.3	Lower Main Channel	12	1	78.70	28.20	ns	NT
44013.0	Port Hueneme - Wharf #1	1627	45	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 2	1075	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 1	1074	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1008	23	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	30	2	95.60	2.40	ns	NT
40010.3	Off Cabrillo Beach - Rep 3	1076	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	138	4	0.00	0.00	*	T
40010.3	Off Cabrillo Beach	1333	32	NA	NA	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	0.00	0.00	*	T
40010.2	Off Cabrillo Beach - Rep 1	1071	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1072	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1007	23	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 3	1073	26	NA	NA	NA	NA

Table 14a continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (100% concentration). HRP 100 MN = Mean percent normal development of *Haliotis rufescens* in 100% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 100 MN	HRP 100 SD	HRP 100 t-test	HRP 100 MSD
40010.2	Off Cabrillo Beach	29	2	93.80	1.80	ns	NT
40010.2	Off Cabrillo Beach	137	4	0.00	0.00	*	T
40010.2	Off Cabrillo Beach	1332	32	NA	NA	NA	NA
40011.2	Inner Harbor - Channel 3	32	3	0.00	0.00	*	T
44011.0	Los Cerritos Channel Tidal P - Rep3	1079	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep1	1077	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep2	1078	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P	611	11	NA	NA	NA	NA
40033.1	Outer Harbor - POLA 10	82	1	0.70	1.30	*	T
40018.3	Long Beach Outer Harbor - 18 - Rep2	1042	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep1	1041	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1695	48	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep3	1043	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	54	3	92.30	4.40	ns	NT
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA	NA	NA
40012.0	Southeast Basin	1632	45	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor- 20	1696	48	NA	NA	NA	NA
40012.1	Southeast Basin - Rep1	1047	25	NA	NA	NA	NA
40012.1	Southeast Basin - Rep2	1048	25	NA	NA	NA	NA
40012.1	Southeast Basin	34	2	23.50	37.40	*	T
40012.1	Southeast Basin - Rep3	1049	25	NA	NA	NA	NA
40012.1	Southeast Basin	812	19	NA	NA	NA	NA
40008.1	East Basin - Pier C	22	2	93.10	1.30	ns	NT
48010.0	Turning Basin	1697	48	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 2	1060	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 1	1059	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 3	1061	25	NA	NA	NA	NA
40017.3	Long Beach Channel	51	3	50.70	7.50	*	T
40002.2	West Basin - Pier 143	5	1	0.00	0.00	*	T
40016.3	Terminal Island Stp	48	2	94.50	1.40	ns	NT
40012.2	Southeast Basin	35	2	94.30	2.20	ns	NT
40009.0	West Basin Entrance	1699	48	NA	NA	NA	NA

Table 14a continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (100% concentration). HRP 100 MN = Mean percent normal development of *Haliotis rufescens* in 100% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 100 MN	HRP 100 SD	HRP 100 t-test	HRP 100 MSD
40009.1	West Basin Entrance - Ref 1	834	20	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 3	836	20	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 2	835	20	NA	NA	NA	NA
40009.1	West Basin Entrance	25	2	1.10	1.10	*	T
40008.3	East Basin - Pier C	24	2	0.00	0.00	*	T
40015.1	Fish Harbor Entrance	43	2	51.30	24.00	*	T
40016.1	Terminal Island Stp	46	2	91.60	2.50	*	NT
40015.3	Fish Harbor Entrance	45	2	9.80	9.50	*	T
40003.1	Turning Basin - Pier 151	7	1	0.00	0.00	*	T
40020.3	Long Beach Outer Harbor - 20	60	3	24.20	18.30	*	T
40009.3	West Basin Entrance	27	2	0.00	0.00	*	T
40020.2	Long Beach Outer Harbor - 20	59	3	0.00	0.00	*	T
40015.1	Fish Harbor Entrance	1698	48	NA	NA	NA	NA
40020.1	Long Beach Outer Harbor - 20	58	3	0.00	0.00	*	T
40032.3	San Pedro Bay - POLA 19	105	2	0.00	0.00	*	T
40032.3	San Pedro Bay - POLA 19	81	1	0.00	0.00	*	T
40015.2	Fish Harbor Entrance	44	2	34.90	21.30	*	T
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151	8	1	1.50	2.60	*	T
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	NA	NA	NA	NA
40016.2	Terminal Island Stp	47	2	71.20	27.10	ns	NT
40030.1	San Pedro Breakwater	73	2	0.00	0.00	*	T
40030.2	San Pedro Breakwater	74	2	0.00	0.00	*	T
40032.1	San Pedro Bay - POLA 19	103	2	0.00	0.00	*	T
40032.2	San Pedro Bay - POLA 19	104	2	0.00	0.00	*	T
40002.1	West Basin - Pier 143	4	1	0.00	0.00	*	T
40002.3	West Basin - Pier 143	6	1	0.00	0.00	*	T
40003.3	Turning Basin - Pier 151	9	1	23.30	38.70	*	T
40004.1	Lower Main Channel	10	1	26.20	33.50	*	T
40005.2	East Basin - Turning Basin	14	1	0.70	1.30	*	T
40005.3	East Basin - Turning Basin	15	1	0.00	0.00	*	T
40006.3	Consolidated Slip	18	1	0.00	0.00	*	T
40032.1	San Pedro Bay - POLA 19	79	1	65.70	23.90	ns	NT
40032.2	San Pedro Bay - POLA 19	80	1	30.70	53.10	ns	NT
40033.2	Outer Harbor - POLA 10	83	1	8.80	10.20	*	T
40033.3	Outer Harbor - POLA 10	84	1	3.30	5.70	*	T
40008.2	East Basin - Pier C	23	2	2.80	2.50	*	T
40009.2	West Basin Entrance	26	2	0.00	0.00	*	T

Table 14a continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (100% concentration). HRP 100 MN = Mean percent normal development of *Haliotis rufescens* in 100% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 100 MN	HRP 100 SD	HRP 100 t-test	HRP 100 MSD
40012.3	Southeast Basin	36	2	7.50	12.20	*	T
40030.3	San Pedro Breakwater	75	2	0.00	0.00	*	T
40007.1	Long Beach Harbor - Channel 2	19	3	0.00	0.00	*	T
40007.3	Long Beach Harbor - Channel 2	21	3	0.00	0.00	*	T
40013.3	Inner Queensway Bay	39	3	5.50	7.70	*	T
40014.1	Outer Queensway Bay	40	3	0.00	0.00	*	T
40017.1	Long Beach Channel	49	3	0.00	0.00	*	T
40017.2	Long Beach Channel	50	3	20.60	8.90	*	T
40018.1	Long Beach Outer Harbor - 18	52	3	0.00	0.00	*	T
40018.2	Long Beach Outer Harbor - 18	53	3	0.00	0.00	*	T
44012.0	Port Hueneme - Wharf B	612	11	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	NA	NA	NA	NA
40009.1	West Basin Entrance	790	18	NA	NA	NA	NA
40013.1	Inner Queensway Bay	791	18	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	792	18	NA	NA	NA	NA
40016.2	Terminal Island Stp	793	18	NA	NA	NA	NA
40017.3	Long Beach Channel	811	19	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	NA	NA	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA	NA	NA
46002.0	Hugo Neuproler - #2	1624	45	NA	NA	NA	NA
46003.0	Hugo Neuproler - #3	1625	45	NA	NA	NA	NA
47003.0	Consolidated Slip - 200B - Depth 2	1654	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Surface	1659	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Depth 2	1660	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Depth 3	1661	46	NA	NA	NA	NA
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA	NA	NA
48010.0	Turning Basin	1772	53	NA	NA	NA	NA
40015.1	Fish Harbor Entrance	1773	53	NA	NA	NA	NA
40009.0	West Basin Entrance	1774	53	NA	NA	NA	NA
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA	NA	NA
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA	NA	NA
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA	NA	NA

Table 14b. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (50% concentration). HRP 50 MN = Mean percent normal development of *Haliotis rufescens* in 50% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 50 MN	HRP 50 SD	HRP 50 t-test	HRP 50 MSD
47004.0	Consolidated Slip - 200E - Depth 2	1657	46	NA	NA	NA	NA
47004.0	Consolidated Slip - 200E - Surface	1656	46	NA	NA	NA	NA
49004.0	Kaiser Intl. - Berth 49	1793	54	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 1	1050	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 2	1051	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 3	1052	25	NA	NA	NA	NA
40006.1	Consolidated Slip	16	1	90.30	4.50	ns	NT
47002.0	Consolidated Slip - 200 - Surface	1650	46	NA	NA	NA	NA
47002.0	Consolidated Slip - 200 - Depth 2	1651	46	NA	NA	NA	NA
47009.0	Consolidated Slip - 200G - Surface	1664	46	NA	NA	NA	NA
47003.0	Consolidated Slip - 200B - Surface	1653	46	NA	NA	NA	NA
47008.0	Consolidated Slip - Storm Drain	1663	46	NA	NA	NA	NA
47001.0	Consolidated Slip - 198 - Surface	1647	46	NA	NA	NA	NA
47001.0	Consolidated Slip - 198 - Depth 2	1648	46	NA	NA	NA	NA
40006.2	Consolidated Slip	17	1	0.00	0.00	*	T
47007.0	Consolidated Slip - End - Surface	1662	46	NA	NA	NA	NA
40019.3	Inner Fish Harbor	57	2	0.00	0.00	*	T
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	NA	NA	NA	NA
40019.2	Inner Fish Harbor	56	2	95.80	1.60	ns	NT
40019.1	Inner Fish Harbor	55	2	0.00	0.00	*	T
40007.2	Long Beach Harbor - Channel 2	20	3	0.40	0.70	*	T
40011.3	Inner Harbor - Channel 3	33	3	0.00	0.00	*	T
40001.3	Southwest Slip	3	1	40.70	24.20	*	T
44012.0	Port Hueneme - Wharf B	1626	45	NA	NA	NA	NA
40031.1	Palos Verdes - Swartz 6	76	3	88.10	3.20	ns	NT
40001.2	Southwest Slip - Rep 1	1062	25	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 2	1063	25	NA	NA	NA	NA
40001.2	Southwest Slip	2	1	86.60	8.40	ns	NT
40001.2	Southwest Slip - Rep 3	1064	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 3	1058	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay	37	3	89.40	0.80	ns	NT
40013.1	Inner Queensway Bay - Rep 2	1057	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 1	1056	25	NA	NA	NA	NA
40014.2	Outer Queensway Bay	41	3	0.00	0.00	*	T
40014.3	Outer Queensway Bay	42	3	90.40	5.10	ns	NT
40031.3	Palos Verdes - Swartz 6	78	3	72.00	1.70	*	T
40013.2	Inner Queensway Bay	38	3	87.10	2.10	*	NT
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	NA	NA	NA	NA



Table 14b continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (50% concentration). HRP 50 MN = Mean percent normal development of *Haliotis rufescens* in 50% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 50 MN	HRP 50 SD	HRP 50 t-test	HRP 50 MSD
40031.2	Palos Verdes (Swartz 6) - Rep 1	1038	25	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6)	77	3	90.30	3.80	ns	NT
40031.2	Palos Verdes (Swartz 6) - Rep 2	1003	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1002	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1040	25	NA	NA	NA	NA
40031.2	Palos V.(Swartz 6) - Rep 4 Blind	1005	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1189	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1190	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1191	30	NA	NA	NA	NA
40005.1	East Basin - Turning Basin	13	1	41.90	42.10	ns	NT
48009.0	San Pedro Bay Outer Harbor	1694	48	NA	NA	NA	NA
40001.1	Southwest Slip	1	1	92.50	2.90	ns	NT
40004.2	Lower Main Channel	11	1	94.60	0.90	ns	NT
40004.2	Lower Main Channel - Rep 3	832	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 2	831	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 1	830	20	NA	NA	NA	NA
40004.2	Lower Main Channel	789	18	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 2	1069	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 3	1070	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1068	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1006	23	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	28	2	96.40	1.20	ns	NT
40010.1	Off Cabrillo Beach	136	4	2.20	0.90	*	T
40010.1	Off Cabrillo Beach	810	19	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	1331	32	NA	NA	NA	NA
49005.0	Kaiser Intl. - Berth 48	1794	54	NA	NA	NA	NA
40004.3	Lower Main Channel	12	1	91.30	2.90	ns	NT
44013.0	Port Hueneme - Wharf #1	1627	45	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 2	1075	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 1	1074	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1008	23	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	30	2	93.00	0.70	ns	NT
40010.3	Off Cabrillo Beach - Rep 3	1076	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	138	4	7.10	3.50	*	T
40010.3	Off Cabrillo Beach	1333	32	NA	NA	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	75.10	12.00	ns	NT
40010.2	Off Cabrillo Beach - Rep 1	1071	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1072	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1007	23	NA	NA	NA	NA

Table 14b continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (50% concentration). HRP 50 MN = Mean percent normal development of *Haliotis rufescens* in 50% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 50 MN	HRP 50 SD	HRP 50 t-test	HRP 50 MSD
40010.2	Off Cabrillo Beach - Rep 3	1073	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach	29	2	96.70	2.90	ns	NT
40010.2	Off Cabrillo Beach	137	4	1.00	1.80	*	T
40010.2	Off Cabrillo Beach	1332	32	NA	NA	NA	NA
40011.2	Inner Harbor - Channel 3	32	3	0.00	0.00	*	T
44011.0	Los Cerritos Channel Tidal P - Rep3	1079	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep1	1077	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep2	1078	26	NA	NA	NA	NA
44011.0	Los Cerritos Channel Tidal P	611	11	NA	NA	NA	NA
40033.1	Outer Harbor - POLA 10	82	1	0.00	0.00	*	T
40018.3	Long Beach Outer Harbor - 18 - Rep2	1042	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep1	1041	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1695	48	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep3	1043	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	54	3	91.40	2.50	ns	NT
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA	NA	NA
40012.0	Southeast Basin	1632	45	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	1696	48	NA	NA	NA	NA
40012.1	Southeast Basin - Rep 1	1047	25	NA	NA	NA	NA
40012.1	Southeast Basin - Rep 2	1048	25	NA	NA	NA	NA
40012.1	Southeast Basin	34	2	94.20	4.60	ns	NT
40012.1	Southeast Basin - Rep 3	1049	25	NA	NA	NA	NA
40012.1	Southeast Basin	812	19	NA	NA	NA	NA
40008.1	East Basin - Pier C	22	2	0.30	0.50	*	T
48010.0	Turning Basin	1697	48	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 2	1060	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 1	1059	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 3	1061	25	NA	NA	NA	NA
40017.3	Long Beach Channel	51	3	90.20	1.40	ns	NT
40002.2	West Basin - Pier 143	5	1	0.00	0.00	*	T
40016.3	Terminal Island Stp	48	2	96.60	0.50	ns	NT
40012.2	Southeast Basin	35	2	96.80	0.60	ns	NT

Table 14b continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (50% concentration). HRP 50 MN = Mean percent normal development of *Haliotis rufescens* in 50% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 50 MN	HRP 50 SD	HRP 50 t-test	HRP 50 MSD
40009.0	West Basin Entrance	1699	48	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 1	834	20	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 3	836	20	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 2	835	20	NA	NA	NA	NA
40009.1	West Basin Entrance	25	2	95.30	1.60	ns	NT
40008.3	East Basin - Pier C	24	2	93.20	3.70	ns	NT
40015.1	Fish Harbor Entrance	43	2	97.90	2.20	ns	NT
40016.1	Terminal Island Stp	46	2	97.70	1.40	ns	NT
40015.3	Fish Harbor Entrance	45	2	95.80	0.80	ns	NT
40003.1	Turning Basin - Pier 151	7	1	63.20	24.10	ns	NT
40020.3	Long Beach Outer Harbor - 20	60	3	88.70	0.60	ns	NT
40009.3	West Basin Entrance	27	2	96.80	0.60	ns	NT
40020.2	Long Beach Outer Harbor - 20	59	3	14.60	4.10	*	T
40015.1	Fish Harbor Entrance	1698	48	NA	NA	NA	NA
40020.1	Long Beach Outer Harbor - 20	58	3	6.30	11.00	*	T
40032.3	San Pedro Bay - POLA 19	105	2	0.00	0.00	*	T
40032.3	San Pedro Bay - POLA 19	81	1	15.00	7.80	*	T
40015.2	Fish Harbor Entrance	44	2	95.90	0.30	ns	NT
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151	8	1	97.90	1.40	ns	NT
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	NA	NA	NA	NA
40016.2	Terminal Island Stp	47	2	96.90	0.90	ns	NT
40030.1	San Pedro Breakwater	73	2	0.00	0.00	*	T
40030.2	San Pedro Breakwater	74	2	48.50	14.00	*	T
40032.1	San Pedro Bay - POLA 19	103	2	11.00	17.20	*	T
40032.2	San Pedro Bay - POLA 19	104	2	16.30	23.80	*	T
40002.1	West Basin - Pier 143	4	1	1.40	1.20	*	T
40002.3	West Basin - Pier 143	6	1	0.00	0.00	*	T
40003.3	Turning Basin - Pier 151	9	1	93.40	5.20	ns	NT
40004.1	Lower Main Channel	10	1	93.30	0.70	ns	NT
40005.2	East Basin - Turning Basin	14	1	88.60	4.60	ns	NT
40005.3	East Basin - Turning Basin	15	1	54.00	9.40	*	T
40006.3	Consolidated Slip	18	1	0.70	1.20	*	T
40032.1	San Pedro Bay - POLA 19	79	1	89.90	4.50	ns	NT
40032.2	San Pedro Bay - POLA 19	80	1	19.90	34.50	*	T
40033.2	Outer Harbor - POLA 10	83	1	86.50	10.80	ns	NT
40033.3	Outer Harbor - POLA 10	84	1	93.60	5.60	ns	NT
40008.2	East Basin - Pier C	23	2	95.20	2.80	ns	NT

Table 14b continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (50% concentration). HRP 50 MN = Mean percent normal development of *Haliotis rufescens* in 50% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 50 MN	HRP 50 SD	HRP 50 t-test	HRP 50 MSD
40009.2	West Basin Entrance	26	2	95.70	2.50	ns	NT
40012.3	Southeast Basin	36	2	62.50	50.40	ns	NT
40030.3	San Pedro Breakwater	75	2	59.50	25.30	ns	NT
40007.1	Long Beach Harbor - Channel 2	19	3	91.60	4.10	ns	NT
40007.3	Long Beach Harbor - Channel 2	21	3	0.40	0.60	*	T
40013.3	Inner Queensway Bay	39	3	90.00	3.20	ns	NT
40014.1	Outer Queensway Bay	40	3	92.50	5.20	ns	NT
40017.1	Long Beach Channel	49	3	72.20	8.60	*	T
40017.2	Long Beach Channel	50	3	86.80	7.60	ns	NT
40018.1	Long Beach Outer Harbor - 18	52	3	86.90	10.40	ns	NT
40018.2	Long Beach Outer Harbor - 18	53	3	1.10	1.90	*	T
44012.0	Port Hueneme - Wharf B	612	11	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	NA	NA	NA	NA
40009.1	West Basin Entrance	790	18	NA	NA	NA	NA
40013.1	Inner Queensway Bay	791	18	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	792	18	NA	NA	NA	NA
40016.2	Terminal Island Stp	793	18	NA	NA	NA	NA
40017.3	Long Beach Channel	811	19	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	NA	NA	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA	NA	NA
46002.0	Hugo Neuproler - #2	1624	45	NA	NA	NA	NA
46003.0	Hugo Neuproler - #3	1625	45	NA	NA	NA	NA
47003.0	Consolidated Slip -200B - Depth 2	1654	46	NA	NA	NA	NA
47005.0	Consolidated Slip -200T - Surface	1659	46	NA	NA	NA	NA
47005.0	Consolidated Slip -200T - Depth 2	1660	46	NA	NA	NA	NA
47005.0	Consolidated Slip -200T - Depth 3	1661	46	NA	NA	NA	NA
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA	NA	NA
48010.0	Turning Basin	1772	53	NA	NA	NA	NA
40015.1	Fish Harbor Entrance	1773	53	NA	NA	NA	NA
40009.0	West Basin Entrance	1774	53	NA	NA	NA	NA
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA	NA	NA
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA	NA	NA
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA	NA	NA

Table 14c. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (25% concentration). HRP 25 MN = Mean percent normal development of *Haliotis rufescens* in 25% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 25 MN	HRP 25 SD	HRP 25 t-test	HRP 25 MSD
47004.0	Consolidated Slip – 200E - Depth 2	1657	46	NA	NA	NA	NA
47004.0	Consolidated Slip – 200E - Surface	1656	46	NA	NA	NA	NA
49004.0	Kaiser Intl.- Berth 49	1793	54	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 1	1050	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 2	1051	25	NA	NA	NA	NA
40006.1	Consolidated Slip - Rep 3	1052	25	NA	NA	NA	NA
40006.1	Consolidated Slip	16	1	92.90	3.10	ns	NT
47002.0	Consolidated Slip – 200 - Surface	1650	46	NA	NA	NA	NA
47002.0	Consolidated Slip – 200 - Depth 2	1651	46	NA	NA	NA	NA
47009.0	Consolidated Slip – 200G - Surface	1664	46	NA	NA	NA	NA
47003.0	Consolidated Slip – 200B - Surface	1653	46	NA	NA	NA	NA
47008.0	Consolidated Slip – Storm Drain	1663	46	NA	NA	NA	NA
47001.0	Consolidated Slip – 198 - Surface	1647	46	NA	NA	NA	NA
47001.0	Consolidated Slip – 198 - Depth 2	1648	46	NA	NA	NA	NA
40006.2	Consolidated Slip	17	1	0.40	0.70	*	T
47007.0	Consolidated Slip – End - Surface	1662	46	NA	NA	NA	NA
40019.3	Inner Fish Harbor	57	2	93.00	3.20	ns	NT
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	NA	NA	NA	NA
40019.2	Inner Fish Harbor	56	2	95.80	0.50	ns	NT
40019.1	Inner Fish Harbor	55	2	0.00	0.00	*	T
40007.2	Long Beach Harbor - Channel 2	20	3	36.60	20.50	*	T
40011.3	Inner Harbor - Channel 3	33	3	62.20	30.60	ns	NT
40001.3	Southwest Slip	3	1	76.50	7.90	*	T
44012.0	Port Hueneme - Wharf B	1626	45	NA	NA	NA	NA
40031.1	Palos Verdes - Swartz 6	76	3	88.60	2.60	ns	NT
40001.2	Southwest Slip - Rep 1	1062	25	NA	NA	NA	NA
40001.2	Southwest Slip - Rep 2	1063	25	NA	NA	NA	NA
40001.2	Southwest Slip	2	1	72.80	18.90	ns	NT
40001.2	Southwest Slip - Rep 3	1064	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay - Rep 3	1058	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay	37	3	90.80	1.50	ns	NT
40013.1	Inner Queensway Bay - Rep 2	1057	25	NA	NA	NA	NA
40013.1	Inner Queensway Bay- Rep 1	1056	25	NA	NA	NA	NA
40014.2	Outer Queensway Bay	41	3	90.80	4.00	ns	NT
40014.3	Outer Queensway Bay	42	3	89.20	3.80	ns	NT
40031.3	Palos Verdes - Swartz 6	78	3	88.20	0.90	*	NT
40013.2	Inner Queensway Bay	38	3	88.40	1.20	ns	NT
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1038	25	NA	NA	NA	NA

Table 14c continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (25% concentration). HRP 25 MN = Mean percent normal development of *Haliotis rufescens* in 25% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 25 MN	HRP 25 SD	HRP 25 t-test	HRP 25 MSD
40031.2	Palos Verdes (Swartz 6)	77	3	92.00	2.70	ns	NT
40031.2	Palos Verdes (Swartz 6) - Rep 2	1003	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1002	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1040	25	NA	NA	NA	NA
40031.2	Palos V.(Swartz 6) – Rep 4 Blind	1005	23	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1189	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1190	30	NA	NA	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1191	30	NA	NA	NA	NA
40005.1	East Basin - Turning Basin	13	1	97.50	2.70	ns	NT
48009.0	San Pedro Bay Outer Harbor	1694	48	NA	NA	NA	NA
40001.1	Southwest Slip	1	1	92.80	3.90	ns	NT
40004.2	Lower Main Channel	11	1	95.20	3.10	ns	NT
40004.2	Lower Main Channel - Rep 3	832	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 2	831	20	NA	NA	NA	NA
40004.2	Lower Main Channel - Rep 1	830	20	NA	NA	NA	NA
40004.2	Lower Main Channel	789	18	NA	NA	NA	NA
40010.1	Off Cabrillo Beach – Rep 2	1069	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach – Rep 3	1070	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach – Rep 1	1068	26	NA	NA	NA	NA
40010.1	Off Cabrillo Beach – Rep 1	1006	23	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	28	2	96.90	2.20	ns	NT
40010.1	Off Cabrillo Beach	136	4	52.90	31.90	ns	NT
40010.1	Off Cabrillo Beach	810	19	NA	NA	NA	NA
40010.1	Off Cabrillo Beach	1331	32	NA	NA	NA	NA
49005.0	Kaiser Intl. - Berth 48	1794	54	NA	NA	NA	NA
40004.3	Lower Main Channel	12	1	96.90	1.20	ns	NT
44013.0	Port Hueneme - Wharf #1	1627	45	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 2	1075	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 1	1074	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1008	23	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	30	2	92.40	8.20	ns	NT
40010.3	Off Cabrillo Beach - Rep 3	1076	26	NA	NA	NA	NA
40010.3	Off Cabrillo Beach	138	4	50.10	19.20	*	T
40010.3	Off Cabrillo Beach	1333	32	NA	NA	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	90.00	1.70	ns	NT
40010.2	Off Cabrillo Beach - Rep 1	1071	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1072	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1007	23	NA	NA	NA	NA
40010.2	Off Cabrillo Beach - Rep 3	1073	26	NA	NA	NA	NA
40010.2	Off Cabrillo Beach	29	2	96.10	1.50	ns	NT

Table 14c continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (25% concentration). HRP 25 MN = Mean percent normal development of *Haliotis rufescens* in 25% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 25 MN	HRP 25 SD	HRP 25 t-test	HRP 25 MSD
40010.2	Off Cabrillo Beach	137	4	47.60	7.10	*	T
40010.2	Off Cabrillo Beach	1332	32	NA	NA	NA	NA
40011.2	Inner Harbor - Channel 3	32	3	87.60	3.60	ns	NT
44011.0	Los Cerritos Chnl Tidal P - Rep3	1079	26	NA	NA	NA	NA
44011.0	Los Cerritos Chnl Tidal P - Rep1	1077	26	NA	NA	NA	NA
44011.0	Los Cerritos Chnl Tidal P - Rep2	1078	26	NA	NA	NA	NA
44011.0	Los Cerritos Chnl Tidal P	611	11	NA	NA	NA	NA
40033.1	Outer Harbor- Pola 10	82	1	25.50	20.90	*	T
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1042	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep	1041	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1695	48	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep	1043	25	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	54	3	93.30	2.30	ns	NT
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	NA	NA	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA	NA	NA
40012.0	Southeast Basin	1632	45	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	1696	48	NA	NA	NA	NA
40012.1	Southeast Basin - Rep1	1047	25	NA	NA	NA	NA
40012.1	Southeast Basin - Rep2	1048	25	NA	NA	NA	NA
40012.1	Southeast Basin	34	2	95.80	2.60	ns	NT
40012.1	Southeast Basin - Rep3	1049	25	NA	NA	NA	NA
40012.1	Southeast Basin	812	19	NA	NA	NA	NA
40008.1	East Basin - Pier C	22	2	94.70	3.10	ns	NT
48010.0	Turning Basin	1697	48	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 2	1060	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 1	1059	25	NA	NA	NA	NA
40017.3	Long Beach Channel - Rep 3	1061	25	NA	NA	NA	NA
40017.3	Long Beach Channel	51	3	91.70	2.10	ns	NT
40002.2	West Basin - Pier 143	5	1	28.90	27.60	*	T
40016.3	Terminal Island Stp	48	2	95.80	2.70	ns	NT
40012.2	Southeast Basin	35	2	97.50	0.80	ns	NT
40009.0	West Basin Entrance	1699	48	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 1	834	20	NA	NA	NA	NA
40009.1	West Basin Entrance - Ref 3	836	20	NA	NA	NA	NA

Table 14c continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (25% concentration). HRP 25 MN = Mean percent normal development of *Haliotis rufescens* in 25% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 25 MN	HRP 25 SD	HRP 25 t-test	HRP 25 MSD
40009.1	West Basin Entrance - Ref 2	835	20	NA	NA	NA	NA
40009.1	West Basin Entrance	25	2	95.20	1.10	ns	NT
40008.3	East Basin - Pier C	24	2	92.80	3.00	ns	NT
40015.1	Fish Harbor Entrance	43	2	95.70	1.50	ns	NT
40016.1	Terminal Island Stp	46	2	97.10	1.70	ns	NT
40015.3	Fish Harbor Entrance	45	2	97.70	1.40	ns	NT
40003.1	Turning Basin - Pier 151	7	1	88.30	8.80	ns	NT
40020.3	Long Beach Outer Harbor - 20	60	3	91.10	3.00	ns	NT
40009.3	West Basin Entrance	27	2	94.70	3.00	ns	NT
40020.2	Long Beach Outer Harbor - 20	59	3	90.60	2.20	ns	NT
40015.1	Fish Harbor Entrance	1698	48	NA	NA	NA	NA
40020.1	Long Beach Outer Harbor - 20	58	3	64.30	47.60	ns	NT
40032.3	San Pedro Bay - POLA 19	105	2	60.60	31.70	ns	NT
40032.3	San Pedro Bay - POLA 19	81	1	91.60	5.00	ns	NT
40015.2	Fish Harbor Entrance	44	2	98.20	1.00	ns	NT
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	NA	NA	NA	NA
40003.2	Turning Basin, Pier 151	8	1	95.80	2.00	ns	NT
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	NA	NA	NA	NA
40016.2	Terminal Island Stp	47	2	96.50	1.50	ns	NT
40030.1	San Pedro Breakwater	73	2	35.50	6.50	*	T
40030.2	San Pedro Breakwater	74	2	90.00	5.60	ns	NT
40032.1	San Pedro Bay - POLA 19	103	2	90.10	8.10	ns	NT
40032.2	San Pedro Bay - POLA 19	104	2	9.60	5.60	*	T
40002.1	West Basin - Pier 143	4	1	87.70	1.80	*	NT
40002.3	West Basin - Pier 143	6	1	65.20	23.00	ns	NT
40003.3	Turning Basin - Pier 151	9	1	92.20	6.30	ns	NT
40004.1	Lower Main Channel	10	1	93.70	1.20	ns	NT
40005.2	East Basin- Turning Basin	14	1	94.00	3.70	ns	NT
40005.3	East Basin- Turning Basin	15	1	77.90	10.40	ns	NT
40006.3	Consolidated Slip	18	1	44.80	38.00	*	T
40032.1	San Pedro Bay - POLA 19	79	1	97.90	2.70	ns	NT
40032.2	San Pedro Bay - POLA 19	80	1	83.80	8.20	ns	NT
40033.2	Outer Harbor - POLA 10	83	1	96.90	2.90	ns	NT
40033.3	Outer Harbor - POLA 10	84	1	90.60	5.10	ns	NT
40008.2	East Basin - Pier C	23	2	97.60	0.70	ns	NT
40009.2	West Basin Entrance	26	2	94.90	1.90	ns	NT
40012.3	Southeast Basin	36	2	93.70	1.20	ns	NT
40030.3	San Pedro Breakwater	75	2	94.70	1.30	ns	NT



Table 14c continued. Development of abalone embryos (*Haliotis rufescens*) in Industrial Harbor station pore waters (25% concentration). HRP 25 MN = Mean percent normal development of *Haliotis rufescens* in 25% pore water. SD = Standard Deviation. \* = Significantly Toxic using a t-test. T= Toxic using a t-test and relative to the MSD criteria for this protocol. NT = Not toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	HRP 25 MN	HRP 25 SD	HRP 25 t-test	HRP 25 MSD
40007.1	Long Beach Harbor - Channel 2	19	3	90.70	2.60	ns	NT
40007.3	Long Beach Harbor - Channel 2	21	3	88.20	5.10	ns	NT
40013.3	Inner Queensway Bay	39	3	92.20	2.80	ns	NT
40014.1	Outer Queensway Bay	40	3	86.90	1.40	*	NT
40017.1	Long Beach Channel	49	3	93.70	0.30	ns	NT
40017.2	Long Beach Channel	50	3	91.60	2.00	ns	NT
40018.1	Long Beach Outer Harbor - 18	52	3	90.00	5.30	ns	NT
40018.2	Long Beach Outer Harbor - 18	53	3	94.20	1.80	ns	NT
44012.0	Port Hueneme - Wharf B	612	11	NA	NA	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	NA	NA	NA	NA
40009.1	West Basin Entrance	790	18	NA	NA	NA	NA
40013.1	Inner Queensway Bay	791	18	NA	NA	NA	NA
40015.3	Fish Harbor Entrance	792	18	NA	NA	NA	NA
40016.2	Terminal Island Stp	793	18	NA	NA	NA	NA
40017.3	Long Beach Channel	811	19	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	NA	NA	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	NA	NA	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA	NA	NA
46002.0	Hugo Neuproler - #2	1624	45	NA	NA	NA	NA
46003.0	Hugo Neuproler - #3	1625	45	NA	NA	NA	NA
47003.0	Consolidated Slip - 200B - Depth 2	1654	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Surface	1659	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Depth 2	1660	46	NA	NA	NA	NA
47005.0	Consolidated Slip - 200T - Depth 3	1661	46	NA	NA	NA	NA
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA	NA	NA
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA	NA	NA
48010.0	Turning Basin	1772	53	NA	NA	NA	NA
40015.1	Fish Harbor Entrance	1773	53	NA	NA	NA	NA
40009.0	West Basin Entrance	1774	53	NA	NA	NA	NA
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA	NA	NA
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA	NA	NA
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA	NA	NA

Table 15. Spearman Rank Correlation Coefficients for selected chemicals significantly correlated with amphipod survival at Industrial Harbor stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 126.

Chemical	Spearman rho	Significance
<b>Metals</b>		
Arsenic	-0.410	***
Cadmium	-0.360	***
Copper	-0.463	***
Lead	-0.455	***
Mercury	-0.388	***
Nickel	-0.489	***
Zinc	-0.546	***
<b>Pesticides</b>		
Total Chlordane	-0.403	***
<b>PCBs</b>		
PCB 5	-0.573	***
PCB 31	-0.644	***
Total PCBs	-0.274	**
<b>PAHs</b>		
Benz(a)anthracene	-0.346	***
Benzo(a)pyrene	-0.446	***
Benzo[e]pyrene	-0.401	***
Coronene	-0.720	***
Dibenz[a,h]anthracene	-0.427	***
1-Methylnaphthalene	-0.455	***
2-Methylnaphthalene	-0.424	***
Naphthalene	-0.417	***
LMW PAH	-0.341	***
HMW PAH	-0.411	***
Total PAH	-0.399	***
Fines	-0.350	***
TOC	-0.369	***
ERM Quotient	-0.353	***
# ERM Exceedances	-0.291	***

Table 16. Spearman Rank Correlation Coefficients for selected chemicals significantly correlated with abalone development in 25% pore water at Industrial Harbor stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 54.

Chemical	Spearman rho	Significance
Metals		
Tin	-0.306	*
Pesticides		
Total Chlordane	-0.354	**
PCBs		
PCB 8	-0.267	*
PCB187	-0.265	*
ERM Quotient*	-0.229	*
# ERM Exceedances*	-0.400	**

\*correlations with 50% pore water concentration data

Table 17. Relative Benthic Index values for Industrial Harbor stations. Station categories were D = Degraded ( $RBI \leq 0.30$ ); T = Transitional ( $RBI > 0.31 \leq 0.60$ ); U = Undegraded ( $RBI > 0.61$ ). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
47004.0	Consolidated Slip – 200E - Depth 2	1657	46	NA	NA
47004.0	Consolidated Slip – 200E - Surface	1656	46	0.34	T
49004.0	Kaiser Intl.- Berth 49	1793	54	0.58	T
40006.1	Consolidated Slip - Rep 1	1050	25	NA	NA
40006.1	Consolidated Slip - Rep 2	1051	25	NA	NA
40006.1	Consolidated Slip - Rep 3	1052	25	NA	NA
40006.1	Consolidated Slip	16	1	0.29	D
47002.0	Consolidated Slip – 200 - Surface	1650	46	0.25	D
47002.0	Consolidated Slip – 200 - Depth 2	1651	46	NA	NA
47009.0	Consolidated Slip – 200G - Surface	1664	46	0.24	D
47003.0	Consolidated Slip – 200B - Surface	1653	46	0.3	D
47008.0	Consolidated Slip – Storm Drain	1663	46	0.4	T
47001.0	Consolidated Slip – 198 - Surface	1647	46	0.39	T
47001.0	Consolidated Slip – 198 - Depth 2	1648	46	NA	NA
40006.2	Consolidated Slip	17	1	0.38	T
47007.0	Consolidated Slip – End - Surface	1662	46	0.46	T
40019.3	Inner Fish Harbor	57	2	0.35	T
47010.0	Dominguez - H. Ford Bridge - Surface	1665	46	0.21	D
40019.2	Inner Fish Harbor	56	2	0.38	T
40019.1	Inner Fish Harbor	55	2	0.36	T
40007.2	Long Beach Harbor - Channel 2	20	3	0.53	T
40011.3	Inner Harbor - Channel 3	33	3	0.7	U
40001.3	Southwest Slip	3	1	0.57	T
44012.0	Port Hueneme - Wharf B	1626	45	NA	NA
40031.1	Palos Verdes - Swartz 6	76	3	0.63	U
40001.2	Southwest Slip - Rep 1	1062	25	NA	NA
40001.2	Southwest Slip - Rep 2	1063	25	NA	NA
40001.2	Southwest Slip	2	1	0.50	T
40001.2	Southwest Slip - Rep 3	1064	25	NA	NA
40013.1	Inner Queensway Bay - Rep 3	1058	25	NA	NA
40013.1	Inner Queensway Bay	37	3	0.47	T
40013.1	Inner Queensway Bay - Rep 2	1057	25	NA	NA
40013.1	Inner Queensway Bay - Rep 1	1056	25	NA	NA
40014.2	Outer Queensway Bay	41	3	0.41	T
40014.3	Outer Queensway Bay	42	3	0.41	T
40031.3	Palos Verdes - Swartz 6	78	3	1	U
40013.2	Inner Queensway Bay	38	3	0.47	T
40031.2	Palos Verdes (Swartz 6) - Rep 2	1039	25	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1004	23	0.28	D
40031.2	Palos Verdes (Swartz 6) - Rep 1	1038	25	NA	NA
40031.2	Palos Verdes (Swartz 6)	77	3	0.77	U
40031.2	Palos Verdes (Swartz 6) - Rep 2	1003	23	0.44	T
40031.2	Palos Verdes (Swartz 6) - Rep 1	1002	23	0.28	D

Table 17 continued. Relative Benthic Index values for Industrial Harbor stations. Station categories were D = Degraded (RBI $\leq$ 0.30); T = Transitional (RBI $>$ 0.31 $\leq$ 0.60); U = Undegraded (RBI  $>$ 0.61). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
40031.2	Palos Verdes (Swartz 6) - Rep 3	1040	25	NA	NA
40031.2	Palos V.(Swartz 6) - Rep 4 Blind	1005	23	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 1	1189	30	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 2	1190	30	NA	NA
40031.2	Palos Verdes (Swartz 6) - Rep 3	1191	30	NA	NA
40005.1	East Basin - Turning Basin	13	1	0.42	T
48009.0	San Pedro Bay Outer Harbor	1694	48	0.7	U
40001.1	Southwest Slip	1	1	0.47	T
40004.2	Lower Main Channel	11	1	0.57	T
40004.2	Lower Main Channel - Rep 3	832	20	0.30	D
40004.2	Lower Main Channel - Rep 2	831	20	0.25	D
40004.2	Lower Main Channel - Rep 1	830	20	0.40	T
40004.2	Lower Main Channel	789	18	NA	NA
40010.1	Off Cabrillo Beach - Rep 2	1069	26	NA	NA
40010.1	Off Cabrillo Beach - Rep 3	1070	26	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1068	26	NA	NA
40010.1	Off Cabrillo Beach - Rep 1	1006	23	0.34	T
40010.1	Off Cabrillo Beach	28	2	0.67	U
40010.1	Off Cabrillo Beach	136	4	NA	NA
40010.1	Off Cabrillo Beach	810	19	NA	NA
40010.1	Off Cabrillo Beach	1331	32	NA	NA
49005.0	Kaiser Intl.- Berth 48	1794	54	0.65	U
40004.3	Lower Main Channel	12	1	0.54	T
44013.0	Port Hueneme - Wharf #1	1627	45	NA	NA
40010.3	Off Cabrillo Beach - Rep 2	1075	26	NA	NA
40010.3	Off Cabrillo Beach - Rep 1	1074	26	NA	NA
40010.3	Off Cabrillo Beach - Rep 3	1008	23	0.43	T
40010.3	Off Cabrillo Beach	30	2	1.00	U
40010.3	Off Cabrillo Beach - Rep 3	1076	26	NA	NA
40010.3	Off Cabrillo Beach	138	4	NA	NA
40010.3	Off Cabrillo Beach	1333	32	NA	NA
40011.1	Inner Harbor - Channel 3	31	3	0.63	U
40010.2	Off Cabrillo Beach - Rep 1	1071	26	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1072	26	NA	NA
40010.2	Off Cabrillo Beach - Rep 2	1007	23	0.27	D
40010.2	Off Cabrillo Beach - Rep 3	1073	26	NA	NA
40010.2	Off Cabrillo Beach	29	2	0.75	U
40010.2	Off Cabrillo Beach	137	4	NA	NA
40010.2	Off Cabrillo Beach	1332	32	NA	NA

Table 17 continued. Relative Benthic Index values for Industrial Harbor stations. Station categories were D = Degraded (RBI $\leq$ 0.30); T = Transitional (RBI $>$ 0.31 $\leq$ 0.60); U = Undegraded (RBI  $>$ 0.61). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
40011.2	Inner Harbor - Channel 3	32	3	0.53	T
44011.0	Los Cerritos Channel Tidal P - Rep3	1079	26	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep1	1077	26	NA	NA
44011.0	Los Cerritos Channel Tidal P - Rep2	1078	26	NA	NA
44011.0	Los Cerritos Channel Tidal P	611	11	NA	NA
40033.1	Outer Harbor - POLA 10	82	1	0.72	U
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1042	25	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	886	22	0.23	D
40018.3	Long Beach Outer Harbor - 18 - Rep 2	885	22	0.31	T
40018.3	Long Beach Outer Harbor - 18 - Rep 1	884	22	0.23	D
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1041	25	NA	NA
40018.3	Long Beach Outer Harbor - 18	1695	48	0.58	T
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1043	25	NA	NA
40018.3	Long Beach Outer Harbor - 18	54	3	0.52	T
40018.3	Long Beach Outer Harbor - 18 - Rep 1	1192	30	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 2	1193	30	NA	NA
40018.3	Long Beach Outer Harbor - 18 - Rep 3	1194	30	NA	NA
40018.3	Long Beach Outer Harbor - 18	1334	32	NA	NA
40018.3	Long Beach Outer Harbor - 18	1770	53	NA	NA
40012.0	Southeast Basin	1632	45	0.56	T
40020.2	Long Beach Outer Harbor - 20	1696	48	0.81	U
40012.1	Southeast Basin - Rep1	1047	25	NA	NA
40012.1	Southeast Basin - Rep2	1048	25	NA	NA
40012.1	Southeast Basin	34	2	0.61	U
40012.1	Southeast Basin - Rep3	1049	25	NA	NA
40012.1	Southeast Basin	812	19	NA	NA
40008.1	East Basin - Pier C	22	2	0.61	T
48010.0	Turning Basin	1697	48	0.69	U
40017.3	Long Beach Channel - Rep 2	1060	25	NA	NA
40017.3	Long Beach Channel - Rep 1	1059	25	NA	NA
40017.3	Long Beach Channel - Rep 3	1061	25	NA	NA
40017.3	Long Beach Channel	51	3	0.68	U
40002.2	West Basin - Pier 143	5	1	0.50	T
40016.3	Terminal Island Stp	48	2	0.68	U
40012.2	Southeast Basin	35	2	0.5	T
40009.0	West Basin Entrance	1699	48	0.57	T
40009.1	West Basin Entrance - Ref 1	834	20	0.46	T
40009.1	West Basin Entrance - Ref 3	836	20	0.32	T
40009.1	West Basin Entrance - Ref 2	835	20	0.38	T
40009.1	West Basin Entrance	25	2	0.53	T
40008.3	East Basin - Pier C	24	2	0.62	U
40015.1	Fish Harbor Entrance	43	2	0.66	U
40016.1	Terminal Island Stp	46	2	0.76	U

Table 17 continued. Relative Benthic Index values for Industrial Harbor stations. Station categories were D = Degraded (RBI $\leq$ 0.30); T = Transitional (RBI $>$ 0.31 $\leq$ 0.60); U = Undegraded (RBI  $>$ 0.61). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
40015.3	Fish Harbor Entrance	45	2	0.79	U
40003.1	Turning Basin - Pier 151	7	1	0.66	U
40020.3	Long Beach Outer Harbor - 20	60	3	0.6	T
40009.3	West Basin Entrance	27	2	0.60	T
40020.2	Long Beach Outer Harbor - 20	59	3	0.83	U
40015.1	Fish Harbor Entrance	1698	48	0.78	U
40020.1	Long Beach Outer Harbor - 20	58	3	0.63	U
40032.3	San Pedro Bay - POLA 19	105	2	NA	NA
40032.3	San Pedro Bay - POLA 19	81	1	0.84	U
40015.2	Fish Harbor Entrance	44	2	0.68	U
40003.2	Turning Basin, Pier 151 - Rep 3	1055	25	NA	NA
40003.2	Turning Basin, Pier 151 - Rep 2	1054	25	NA	NA
40003.2	Turning Basin, Pier 151	8	1	0.50	T
40003.2	Turning Basin, Pier 151 - Rep 1	1053	25	NA	NA
40016.2	Terminal Island Stp	47	2	0.75	U
40030.1	San Pedro Breakwater	73	2	NA	NA
40030.2	San Pedro Breakwater	74	2	NA	NA
40032.1	San Pedro Bay - POLA 19	103	2	NA	NA
40032.2	San Pedro Bay - POLA 19	104	2	NA	NA
40002.1	West Basin - Pier 143	4	1	0.48	T
40002.3	West Basin - Pier 143	6	1	0.48	T
40003.3	Turning Basin - Pier 151	9	1	0.54	T
40004.1	Lower Main Channel	10	1	0.69	U
40005.2	East Basin- Turning Basin	14	1	0.47	T
40005.3	East Basin- Turning Basin	15	1	0.46	T
40006.3	Consolidated Slip	18	1	0.30	D
40032.1	San Pedro Bay - POLA 19	79	1	0.79	U
40032.2	San Pedro Bay - POLA 19	80	1	0.92	U
40033.2	Outer Harbor - POLA 10	83	1	0.62	U
40033.3	Outer Harbor - POLA 10	84	1	0.57	T
40008.2	East Basin - Pier C	23	2	0.52	T
40009.2	West Basin Entrance	26	2	0.71	U
40012.3	Southeast Basin	36	2	0.68	U
40030.3	San Pedro Breakwater	75	2	NA	NA
40007.1	Long Beach Harbor - Channel 2	19	3	0.52	T
40007.3	Long Beach Harbor - Channel 2	21	3	0.52	T
40013.3	Inner Queensway Bay	39	3	0.46	T
40014.1	Outer Queensway Bay	40	3	0.42	T
40017.1	Long Beach Channel	49	3	0.52	T
40017.2	Long Beach Channel	50	3	0.55	T

Table 17 continued. Relative Benthic Index values for Industrial Harbor stations. Station categories were D = Degraded ( $RBI \leq 0.30$ ); T = Transitional ( $RBI > 0.31 \leq 0.60$ ); U = Undegraded ( $RBI > 0.61$ ). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
40018.1	Long Beach Outer Harbor - 18	52	3	0.51	T
40018.2	Long Beach Outer Harbor - 18	53	3	0.50	T
44012.0	Port Hueneme - Wharf B	612	11	NA	NA
44013.0	Port Hueneme - Wharf #1	613	11	NA	NA
40009.1	West Basin Entrance	790	18	NA	NA
40013.1	Inner Queensway Bay	791	18	NA	NA
40015.3	Fish Harbor Entrance	792	18	NA	NA
40016.2	Terminal Island Stp	793	18	NA	NA
40017.3	Long Beach Channel	811	19	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 1	1198	30	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 2	1199	30	NA	NA
44055.0	L.B. Naval Station - Pier 3 - Rep 3	1200	30	NA	NA
46001.0	Hugo Neuproler - #1	1623	45	NA	NA
46002.0	Hugo Neuproler - #2	1624	45	NA	NA
46003.0	Hugo Neuproler - #3	1625	45	NA	NA
47003.0	Consolidated Slip - 200B - Depth 2	1654	46	NA	NA
47005.0	Consolidated Slip - 200T - Surface	1659	46	0.54	T
47005.0	Consolidated Slip - 200T - Depth 2	1660	46	NA	NA
47005.0	Consolidated Slip - 200T - Depth 3	1661	46	NA	NA
48009.0	San Pedro Bay Outer Harbor	1769	53	NA	NA
40020.2	Long Beach Outer Harbor - 20	1771	53	NA	NA
48010.0	Turning Basin	1772	53	NA	NA
40015.1	Fish Harbor Entrance	1773	53	NA	NA
40009.0	West Basin Entrance	1774	53	NA	NA
49001.0	Cabrillo Beach Pier - West	1778	53	NA	NA
49002.0	Cabrillo Beach Pier - Central	1779	53	NA	NA
49003.0	Cabrillo Beach Pier - East	1780	53	NA	NA



Table 18. Spearman Rank Correlation Coefficients for selected chemicals significantly negatively correlated with Benthic Community Structure (as Relative Benthic Index) at Industrial Harbor stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 68 or 80 depending on chemical.

Chemical	Spearman rho	Sig.	Chemical	Spearman rho	Sig.
<u>Metals</u>			<u>Pesticides</u>		
Antimony	-0.304	**	Aldrin	-0.252	*
Arsenic	-0.392	***	Cis Chlordane	-0.357	***
Cadmium	-0.462	***	Trans Chlordane	-0.335	*
Chromium	-0.305	**	OP DDD	-0.392	***
Copper	-0.402	***	PP DDD	-0.462	***
Lead	-0.440	***	Total DDT	-0.312	**
Mercury	-0.219	*	Heptachlor	-0.414	***
Silver	-0.304	**	Trans Nonachlor	-0.404	***
Zinc	-0.414	***	Total Chlordane	-0.533	***
<u>PAHs</u>			<u>PCBs</u>		
Anthracene	-0.354	***	PCB 28	-0.449	***
Benzo(a)pyrene	-0.360	***	PCB 52	-0.549	***
Benzo[e]pyrene	-0.355	***	PCB 66	-0.470	***
Dibenz[a,h]anthracene	-0.388	***	PCB 101	-0.472	***
Fluoranthene	-0.397	***	PCB 138	-0.452	***
1-Methylnaphthalene	-0.344	***	PCB 153	-0.462	***
2-Methylnaphthalene	-0.377	***	PCB 187	-0.477	***
1-Methylphenanthrene	-0.497	***	Total PCBs	-0.464	***
LMW PAH	-0.390	***			
HMW PAH	-0.436	***			
Total PAH	-0.428	***			
<u>Organotins</u>			<u>Other</u>		
Tributyltin	-0.547	***	TOC	-0.555	***
			ERM Quotient	-0.443	***
			# ERM Exceedances	-0.316	**

Table 19a. Results of Principal Components Analysis (PCA) of amphipod survival in toxicity tests, benthic community structure metrics, and chemicals measured in Industrial Harbor sediments. Significantly correlated variables are indicated in 12 point bold type.

	Rotated Loadings			
	1	2	3	4
Amphipod Survival	<b>-0.675</b>	0.005	0.117	-0.318
No. of Gammarid Amph. Species	0.127	<b>0.869</b>	-0.076	0.077
No. of Gammarid Amph. Individ.s	-0.098	<b>0.648</b>	0.018	-0.184
No. of Other Crustacean Individ.s	-0.099	<b>0.898</b>	0.150	0.023
Mean No. of Crustacean Individ.s	0.099	<b>0.903</b>	-0.047	0.072
Tot. No. of Crustacean Species	-0.215	<b>0.658</b>	0.137	-0.301
Mean No. of Echinoderm Individ.s	-0.151	0.015	<b>0.695</b>	-0.221
Mean No. of Mollusc Individ.s	-0.175	-0.022	0.079	<b>-0.547</b>
Mean No. of Mollusc Species	-0.333	-0.029	-0.051	<b>-0.550</b>
Mean No. of Individuals	0.332	<b>0.788</b>	-0.173	-0.022
Total No. of Species	-0.079	0.308	-0.202	<b>-0.511</b>
Relative Benthic Index	<b>-0.472</b>	0.173	0.013	-0.290
ANTIMONY	<b>0.721</b>	0.154	-0.087	0.357
CADMIUM	<b>0.687</b>	0.223	0.163	0.051
COPPER	0.366	0.009	0.151	<b>0.738</b>
IRON	0.102	-0.099	<b>-0.473</b>	<b>0.686</b>
LEAD	<b>0.821</b>	-0.005	0.029	0.288
MANGANESE	-0.163	-0.117	<b>-0.684</b>	0.202
MERCURY	0.102	-0.095	0.129	<b>0.667</b>
ZINC	<b>0.747</b>	0.005	0.010	<b>0.474</b>
ALDRIN	<b>0.574</b>	-0.097	0.204	-0.083
CisChlordane	<b>0.798</b>	0.072	0.013	0.009
Total DDT	0.053	0.003	0.924	-0.192
DIELDRIN	<b>0.894</b>	0.070	-0.054	-0.076
METHOXY	<b>0.798</b>	-0.116	-0.020	-0.062
Total Chlordane	<b>0.942</b>	0.138	-0.017	-0.022
Total PCB	<b>0.786</b>	-0.044	0.167	0.073
HMW PAH	<b>0.694</b>	-0.011	-0.015	0.434
FINES	0.135	-0.015	-0.066	<b>0.594</b>
TOC	<b>0.751</b>	0.101	0.316	0.300
ERMQ	<b>0.930</b>	0.060	0.149	0.195
ERMEXCDS	<b>0.759</b>	-0.034	0.251	0.325
PELEXCDS	<b>0.750</b>	-0.115	0.222	0.383
% of total variance explained	26.89	10.317	11.549	11.352

Table 19b. Results of Principal Components Analysis (PCA) of Abalone Development in toxicity tests, Benthic Community Structure Metrics, and Chemicals measured in Industrial Harbor sediments. Significantly correlated variables are indicated in 12 point bold type.

	Rotated Loadings				
	1	2	3	4	5
Mean amphipod survival	-0.284	0.205	-0.417	-0.416	-0.293
Mean ab dev. (100% PW)	0.380	-0.027	-0.341	-0.183	-0.393
Mean ab dev. (50% PW)	-0.032	0.037	-0.138	0.025	<b>-0.697</b>
Mean ab dev. (25% PW)	-0.029	-0.031	-0.122	-0.161	<b>-0.642</b>
Unionized ammonia	0.038	-0.100	0.201	0.283	<b>0.721</b>
Mean No. of Gammarid Individ.s	0.017	-0.097	-0.938	0.074	-0.041
No. of Other Crustacean Individ.s	-0.054	0.141	-0.893	-0.058	-0.097
Tot. No. of Crustacean Individ.s	-0.010	-0.008	-0.960	0.026	-0.065
Mean No. of Echinoderm Individ.s	-0.227	<b>0.824</b>	-0.001	-0.134	-0.144
Mean No. of Echinoderm Sp.	-0.102	<b>0.816</b>	0.036	-0.186	-0.289
Mean No. of Mollusc Individ.s	-0.255	0.124	0.244	0.181	<b>-0.566</b>
Mean No. of Mollusc Sp.	-0.287	0.048	0.132	-0.129	<b>-0.534</b>
Mean No. of Polychaete Sp.	-0.036	-0.082	-0.034	<b>-0.489</b>	<b>-0.510</b>
Mean No. of Individuals	0.083	-0.206	-0.804	-0.192	-0.318
Total No. of Species	-0.168	0.064	-0.257	-0.429	<b>-0.619</b>
Relative Benthic Index	-0.318	0.203	-0.488	<b>-0.473</b>	-0.326
ALUMINUM	-0.319	<b>-0.638</b>	0.052	-0.302	-0.077
ANTIMONY	0.609	0.013	0.296	<b>0.567</b>	0.284
CADMIUM	0.240	0.443	-0.281	<b>0.738</b>	0.131
COPPER	0.596	0.169	-0.012	0.196	0.590
MANGANESE	0.312	<b>-0.536</b>	0.357	-0.280	-0.046
MERCURY	0.501	0.127	0.144	0.007	<b>0.465</b>
ZINC	0.555	0.061	0.031	<b>0.677</b>	0.391
TTL_DDT	-0.210	0.950	-0.039	0.010	-0.054
DIELDRIN	-0.003	-0.079	-0.154	<b>0.874</b>	-0.027
TOXAPH	0.014	0.048	0.108	<b>0.896</b>	-0.024
TBT	0.163	0.087	0.084	<b>0.579</b>	0.421
TTL_CHLR	0.011	0.020	0.108	<b>0.965</b>	0.065
TTL_PCB	0.341	0.478	0.117	<b>0.546</b>	<b>0.508</b>
HMW_PAH	0.444	0.014	0.159	0.201	<b>0.496</b>
FINES	0.760	0.011	-0.135	0.277	-0.038
TOC	0.399	0.251	-0.043	<b>0.686</b>	0.259
ERMQ	0.356	0.326	0.138	<b>0.743</b>	0.393
ERMEXCDS	0.318	0.345	0.178	0.359	<b>0.511</b>
PELEXCDS	0.378	0.243	0.224	<b>0.455</b>	<b>0.527</b>
% of Total Var explained	15.235	14.037	11.149	18.742	13.902

Table 20. Spearman Rank Correlation Coefficients for amphipod survival or abalone embryo development in laboratory toxicity tests significantly correlated with Benthic Community Structure metrics measured at Industrial Harbor stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 80 (amphipods) or 47 (abalone).

Benthic Community Metric		
Correlated with Amphipod Survival	Spearman rho	Significance
Total Number of Cystacean Species	0.373	***
Total Number of Species	0.367	***
Benthic Index	0.276	**
Benthic Community Metric		
Correlated with Abalone Development	Spearman rho	Significance
Total Number of Mollusc Individuals	0.280	*
Total Number of Mollusc Species	0.363	**
Total Number of Individuals	0.490	**
Total Number of Species	0.290	*

Table 21a. Results of total DDT and Total PCB tissue analyses of fish collected at selected Industrial Harbor stations (ng/g wet weight concentrations).

Station Number	Station Name	IDORG	Fish Species	LEG	TTL DDT (ng/g)	TTL DDT Quot.	TTL PCB (ng/g)	TTL PCB Quot.	EPA Excds	% Lipid
40020.2	Long Bch Out. Harb. 20	1781.0	Croaker	53	1096.7	3.7	465.2	46.5	2	9.8
49001.0	Cabr. Bch Pier- West	1782.0	Croaker	53	406.3	1.4	170.2	17.0	2	16.2
49002.0	Cabr. Bch Pier- Cent.	1783.0	Croaker	53	4984.8	16.6	686.6	68.7	2	14.5
49003.0	Cabr. Bch Pier- East	1784.0	Croaker	53	1839.2	6.1	407.3	40.7	2	14.3
49001.0	Cabr. Bch Pier- West	1785.0	Surfperch	53	51.2	0.2	40.1	4.0	1	14.2
49002.0	Cabr. Bch Pier- Cent.	1786.0	Surfperch	53	68.5	0.2	37.9	3.8	1	9.6
49003.0	Cabr. Bch Pier- East	1787.0	Surfperch	53	76.7	0.3	53.5	5.4	1	11.9
NAS	Wildlife Guideline (whole fish)				50		500			
USEPA	Screening Value (edible portion)				300		10			

Table 21b. Results of tissue analyses of *Macoma nasuta* bioaccumulation tests using selected Industrial Harbor sediments. Tissue concentrations are shown for those compounds that were elevated relative to the US EPA screening values (Total DDT and Total PCBs only; as ng/g wet weight concentrations). \* = significantly elevated concentrations, NS = not significant, NA = not analyzed.

Station Number	Station Name	IDORG	Tissue TYPE	TTL DDT	Sig.	TTL PCB	Sig.	TTL DDT Quot.	TTL PCB Quot.	EPA Exceedances
40009.0	West Basin Entrance - 1	1774.1	Macoma	15.49	*	16.526	*	0.052	1.6526	2
40009.0	West Basin Entrance - 2	1774.2	Macoma	11.02	*	11.088	*	0.037	1.1088	1
40009.0	West Basin Entrance - 3	1774.3	Macoma	18.86	*	17.598	*	0.063	1.7598	2
49001.0	Cabrillo Beach Pr - West - 1	1778.1	Macoma	9.59	NA	6.072	NA	0.032	0.6072	0
49002.0	Cabrillo Beach Pr - Center - 1	1779.1	Macoma	11.96	*	5.530	NS	0.040	0.5530	0
49002.0	Cabrillo Beach Pr - Center - 2	1779.2	Macoma	18.74	*	8.406	NS	0.062	0.8406	0
49002.0	Cabrillo Beach Pr - Center - 3	1779.3	Macoma	18.16	*	15.338	NS	0.061	1.5338	1
49003.0	Cabrillo Beach Pr - East - 1	1780.1	Macoma	9.10	*	4.546	*	0.030	0.4546	0
49003.0	Cabrillo Beach Pr - East - 2	1780.2	Macoma	13.43	*	5.272	*	0.045	0.5272	0
49003.0	Cabrillo Beach Pr - East - 3	1780.3	Macoma	10.64	*	5.536	*	0.035	0.5536	0
	GC - Home Control - 1	1806.1	Macoma	2.21		3.624			0.3624	0
	GC - Home Control - 2	1806.2	Macoma	2.18		4.370			0.4370	0
	GC - Home Control - 3	1806.3	Macoma	2.14		3.902			0.3902	0
	GC - Initial Before Exp - 1	1805.1	Macoma	2.31		3.600			0.3600	0
	GC - Initial Before Exp - 2	1805.2	Macoma	2.07		3.886			0.3886	0
	GC - Initial Before Exp - 3	1805.3	Macoma	2.15		3.716			0.3716	0

NAS Wildlife Guideline (whole fish)

USEPA Screening Val. (edible portion)

\* = significant relative to home sediment control using a separate variance t-test at  $p \leq 0.05$  ( $n=3$ );

50

300

500

10

10

10

Table 22. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urch.				Urch Benthic SWI Index
							% NH <sub>3</sub> Surv.	H <sub>2</sub> S	100% NH <sub>3</sub> PW	50% NH <sub>3</sub> H <sub>2</sub> S	25% NH <sub>3</sub> PW	H <sub>2</sub> S	
<b>Category 1 - Stations with elevated chemistry, recurrent toxicity and degraded benthos</b>													
40006.1	Consolidated Slip	16	1.273	p,p,DDE (13)	4.6	90.9	58	0	90	93	na	0.29	
40006.1	Consolidated Slip- R1	1050	1.949	TTL Chlordane (18)	4.3	93.6	62	na	na	na	na	na	
40006.1	Consolidated Slip- R2	1051	1.654	TTL PCB (3), Zn, Hg (1)	4.3	94.0	65	na	na	na	na	na	
40006.1	Consolidated Slip- R3	1052	1.473	HMWPAH (1)	4.5	94.6	80	na	na	na	na	na	
<b>Category 2 - Stations with elevated chemistry, one (of one) toxicity hit and degraded benthos.</b>													
47002.0	Consolidated Slip- 200- Surface	1650	1.917	p,p,DDE (7), TTL Chl. (8), HMWPAH (1)	4.1	80.7	54	na	na	na	na	0.25	
47002.0	Consolidated Slip- 200- Depth 2	1651	1.567	TTL, PCB (11), Dieldrin (1), Zn (1)	2.1	70.2	86	na	na	na	na	na	
47003.0	Consolidated Slip- 200B- Surface	1653	1.629	p,p,DDE (6), TTL Chl. (9),	3.4	62.6	70	na	na	na	na	0.30	
47003.0	Consolidated Slip- 200B- Depth 2	1654	na	TTL PCB (8), Dieldrin (1), DBA (1)	3.6	80.6	8	na	na	na	na	na	
47009.0	Consolidated Slip- 200G- Surface	1664	1.659	p,p,DDE (10), TTL Chl. (11), HMWPAH (1) TTL PCB (2), Dieldrin, Zn (1), Chlorpyr (90th)	4.9	92.8	50	na	na	na	na	0.24	
47010.0	Dominguez- H. Ford Bridge- Surf.	1665	0.801	p,p,DDE (4), TTL Chl. (11), TTL PCB (2)	3.5	99.5	61	N	na	na	na	0.21	
<b>Category 4 - Elevated Chemistry, one measure of Biological Impact (no data for second biological indicator)</b>													
44012.0	Port Hueneme- Wharf B	612	na	TTL PCB (2), ANT (1), BAA (1), BAP (1)	1.4	78.0	70	0	na	na	na	na	
44012.0	Port Hueneme- Wharf B	1626	0.536	CHR (1), DBA (1), HMWPAH (2)	1.3	38.1	98	0	S	na	na	na	
<b>Category 5 - Stations with elevated chemistry and mixed results from biological indicators</b>													
40001.2	Southwest Slip	2	0.420	Hg (1), p,p,DDE (3),	1.4	71.7	51	81	N	N	73	0.50	
40001.2	Southwest Slip- R1	1062	0.518	TTL PCB (1), BAP (1), DBA (1)	1.3	62.6	69	na	na	na	na	na	
40001.2	Southwest Slip- R2	1063	0.496	HMWPAH (2)	1.3	63.5	72	na	na	na	na	na	
40001.2	Southwest Slip- R3	1064	0.324		0.8	46.4	58	na	na	na	na	na	
40006.2	Consolidated Slip	17	1.289	Zn (1), TTL Chl. (4), p,p,DDE (10) TTL PCB (3), TBT (>95th)	4.3	92.9	59	0	N	N	0	0.38	

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	TOC	% Fines	Amphipod % Surv.	Larval Development - Ab or Urech.						Urch Benthic Index
								100% NH <sub>3</sub> PW	50% NH <sub>3</sub> H <sub>2</sub> S	25% NH <sub>3</sub> H <sub>2</sub> S	NH <sub>3</sub> PW	25% NH <sub>3</sub> H <sub>2</sub> S	SWI	
<b>Category 5 - Stations with elevated chemistry and mixed results from biological indicators</b>														
40013.1	Inner Queensway Bay	37	0.383	TTL Chlordane (4), p,p,DDE (1)	2.0	94.6	83	0	N	89	N	91	na	0.47
40013.1	Inner Queensway Bay	791	na		1.4	76.0	50	95	93	na	na	90	na	na
40013.1	Inner Queensway Bay- R1	1056	0.282		0.3	20.5	83	na	na	na	na	na	na	na
40013.1	Inner Queensway Bay- R2	1057	0.308		1.1	21.5	76	na	na	na	na	na	na	na
40013.1	Inner Queensway Bay- R3	1058	0.515		2.0	38.3	71	na	na	na	na	na	na	na
40019.3	Inner Fish Harbor	57	0.914	Cu (2), Hg (3), Zn (1), p,p,DDE (9) TBT (>95th)	3.0	91.1	54	0	N	0	N	93	na	0.35
47001.0	Consolidated Slip- 198- Surface	1647	1.429	TTL Chl. (9), p,p,DDE (7)	3.2	84.2	61	na	na	na	na	na	na	0.39
47001.0	Consolidated Slip- 198- Depth 2	1648	1.424	TTL PCB (5), DBA (1)	2.1	72.6	64	na	na	na	na	na	na	na
47004.0	Consolidated Slip- 200E- Surface	1656	1.289	Zn (1), TTL Chl. (9), p,p,DDE (7)	4.3	68.3	40	na	na	na	na	na	na	0.34
47004.0	Consolidated Slip- 200E- Depth 2	1657	4.377	TTL PCB (2), DBA (2), HMWPAH (1)	4.4	86.1	33	na	na	na	na	na	na	na
47005.0	Consolidated Slip- 200T- Surface	1659	na	Cr (1), Cu (2), Pb (2), Hg (4), Zn (1)	6.4	78.5	0	na	na	na	na	na	na	0.54
47005.0	Consolidated Slip- 200T- Depth 2	1660	na	p,p,DDE (5), TTL PCB (8)	5.2	76.9	18	na	na	na	na	na	na	na
47005.0	Consolidated Slip- 200T- Depth 3	1661	na	BAP (1), DBA (1) TBT (>95th)	6.9	87.2	13	na	na	na	na	na	na	na
47008.0	Consolidated Slip- Storm Drain	1663	1.608	Cd(1), TTL Chl (9), p,pDDE (6), TTL PCB (5)	4.0	73.4	52	na	na	na	na	na	na	0.40
<b>Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.</b>														
40002.1	West Basin- Pier 143	4	na		1.5	54.0	75	0	N	1	88	88	na	0.48
40002.2	West Basin- Pier 143	5	0.212	p,p,DDE (1)	0.9	75.5	78	0	N	0	N	29	na	0.50
40003.1	Turning Basin- Pier 151	7	0.168	p,p,DDE (1)	0.7	37.5	64	0	N	63	N	88	na	0.66
40003.3	Turning Basin- Pier 151	9	na		0.8	32.0	81	23	N	93	N	92	na	0.54



Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urech.						Urch SWI	Benthic Index
							% Surv.	NH <sub>3</sub> H <sub>2</sub> S	100% PW	NH <sub>3</sub> H <sub>2</sub> S	50% PW	NH <sub>3</sub> H <sub>2</sub> S	25% PW	NH <sub>3</sub> H <sub>2</sub> S		
Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.																
40004.1	Lower Main Channel	10	na		1.3	44.0	78		26	N	93	N	94	na	0.69	
40004.2	Lower Main Channel	11	0.368	p,p',DDE (10)	3.4	88.7	80		69	N	95	N	95	na	0.57	
40004.2	Lower Main Channel	789	na		0.7	81.0	68		97	N	96	90	na	na		
40004.2	Lower Main Channel- R1	830	0.195		1.6	36.1	91		0	N	0	0	na	0.40		
40004.2	Lower Main Channel- R2	831	0.209		1.2	37.0	91		0	N	0	41	na	0.25		
40004.2	Lower Main Channel- R3	832	0.242		2.1	54.4	93		0	N	13	63	na	0.30		
40005.2	East Basin- Turning Basin	14	na		0.6	71.0	73		1	N	89	94	na	0.47		
40005.3	East Basin- Turning Basin	15	na		0.6	77.0	79		0	N	54	78	na	0.46		
40006.3	Consolidated Slip	18	na		4.4	78.0	67		0	N	1	45	na	0.30		
40007.1	Long Beach Harbor- Channel 2	19	na		1.2	75.0	82		0		92	91	na	0.52		
40007.3	Long Beach Harbor- Channel 2	21	na		0.7	77.0	78		0		0	88	na	0.52		
40008.2	East Basin- Pier C	23	na		0.5	63.0	78		3	N	95	98	na	0.52		
40008.3	East Basin- Pier C	24	0.182	p,p',DDE (1)	0.8	70.9	76		0	N	93	93	na	0.62		
40009.2	West Basin Entrance	26	na		0.4	73.0	81		0	N	96	95	na	0.71		
40009.1	West Basin Entrance	25	0.160	p,p',DDE (1)	0.4	57.0	88		1		95	95	na	0.53		
40009.1	West Basin Entrance	790	na		0.8	77.0	60		92		81	88	na	na		
40009.1	West Basin Entrance- R1	834	0.184		0.8	71.8	97		0	N	14	79	na	0.46		
40009.1	West Basin Entrance- R2	835	0.173		0.7	70.9	86		0	N	13	89	na	0.38		
40009.1	West Basin Entrance- R3	836	0.181		1.0	66.3	91		55	N	76	88	na	0.32		
40009.3	West Basin Entrance	27	0.154		0.4	83.0	87		0	N	97	95	na	0.60		

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urech.				Urch SWI	Benthic Index
							% NH <sub>3</sub> Surv.	H <sub>2</sub> S	100% NH <sub>3</sub> PW	50% NH <sub>3</sub> H <sub>2</sub> S	25% NH <sub>3</sub> PW	NH <sub>3</sub> H <sub>2</sub> S		
40010.1	Off Cabrillo Beach	28	0.282	Cu (1), p,p-DDE (9)	2.9	93.0	92	93	96	97	na	0.67		
40010.1	Off Cabrillo Beach	136	0.260		2.3	88.1	89	2	2	53	na	na		
40010.1	Off Cabrillo Beach	810	na		2.7	92.6	58	0	93	na	na	na		
40010.1	Off Cabrillo Beach- 1	1006	0.305		2.8	95.7	68	46	96	96	na	0.34		
40010.1	Off Cabrillo Beach- 1	1068	0.332		2.5	91.9	80	na	na	na	na	na		
40010.1	Off Cabrillo Beach- 2	1069	0.363		2.6	95.2	48	na	na	na	na	na		
40010.1	Off Cabrillo Beach- 3	1070	0.344		2.6	91.1	46	na	na	na	na	na		
40010.1	Off Cabrillo Beach	1331	na		2.9	96.3	92	na	na	na	na	na		
40010.2	Off Cabrillo Beach	29	0.260	p,p-DDE (6)	2.5	76.3	88	94	97	96	na	0.75		
40010.2	Off Cabrillo Beach	137	na		1.3	72.0	89	0	1	48	na	na		
40010.2	Off Cabrillo Beach- R2	1007	0.299		2.3	69.9	90	5	31	38	na	0.27		
40010.2	Off Cabrillo Beach- R1	1071	0.318		2.3	82.7	78	na	na	na	na	na		
40010.2	Off Cabrillo Beach- R2	1072	0.304		2.1	71.8	63	na	na	na	na	na		
40010.2	Off Cabrillo Beach- R3	1073	0.272		2.2	77.9	72	na	na	na	na	na		
40010.2	Off Cabrillo Beach	1332	na		2.9	95.0	83	na	na	na	na	na		
40010.3	Off Cabrillo Beach	30	0.282	p,p-DDE (6)	1.1	90.0	91	96	93	92	na	1.00		
40010.3	Off Cabrillo Beach	138	na		1.3	95.0	84	0	7	50	na	na		
40010.3	Off Cabrillo Beach- R3	1008	0.301		2.0	92.8	69	95	96	64	na	0.43		
40010.3	Off Cabrillo Beach- R1	1074	0.319		2.2	89.5	60	na	na	na	na	na		
40010.3	Off Cabrillo Beach- R2	1075	0.329		2.3	95.3	64	na	na	na	na	0.68		
40010.3	Off Cabrillo Beach- R3	1076	0.258		2.0	90.3	48	na	na	na	na	na		
40010.3	Off Cabrillo Beach	1333	na		2.9	97.4	91	na	na	na	na	na		
40011.1	Inner Harbor- Channel 3	31	0.326	p,p-DDE (2)	1.0	87.0	85	0	75	90	na	0.63		
40011.2	Inner Harbor- Channel 3	32	0.304	p,p-DDE (2)	2.1	89.0	84	0	0	88	na	0.53		

Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Ureli.						Urch Benthic SWI Index
							% Surv.	NH <sub>3</sub> H <sub>2</sub> S	100% PW H <sub>2</sub> S	NH <sub>3</sub> H <sub>2</sub> S	50% PW H <sub>2</sub> S	NH <sub>3</sub> H <sub>2</sub> S	25% PW H <sub>2</sub> S	NH <sub>3</sub> H <sub>2</sub> S	
Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.															
40012.1	Southeast Basin	34	0.197		1.5	82.3	77		24	94	96			na	0.61
40012.1	Southeast Basin	812	na	p,p',DDE (2)	1.6	83.8	34		52	95	na			na	na
40012.1	Southeast Basin- R1	1047	0.231		1.5	84.4	39		na	na	na			na	na
40012.1	Southeast Basin- R2	1048	0.211		1.3	78.6	51		na	na	na			na	na
40012.1	Southeast Basin- R3	1049	0.176		1.0	70.8	66		na	na	na			na	na
40012.1	Southeast Basin	1632	0.249		1.6	81.1	99		0	S	na			na	0.56
40012.3	Southeast Basin	36	na		0.7	79.0	69		8	N	63		94	na	0.68
40013.3	Inner Queensway Bay	39	na		1.7	91.0	81		6	N	90		92	na	0.46
40014.1	Outer Queensway Bay	40	na		0.9	89.0	78		0	N	93		N	87	0.42
40015.1	Fish Harbor Entrance	43	0.178	p,p',DDE (2)	0.9	63.1	83		51	N	98		96	na	0.66
40015.1	Fish Harbor Entrance	1698	0.146		0.4	43.3	89		na	na	na		na	na	0.78
40015.1	Fish Harbor Entrance	1773	na		na	na	72		na	na	na		na	96	na
40015.2	Fish Harbor Entrance	44	0.134	p,p',DDE (2)	0.6	37.0	83		35	N	96		N	98	0.68
40016.2	Terminal Island STP	47	0.126		0.5	68.0	88		71	N	97		97	na	0.75
40016.2	Terminal Island STP	793	na		1.0	86.0	63		89	86	87		87	na	na
40017.1	Long Beach Channel	49	na		0.8	80.0	76		0	72	94		94	na	0.52
40017.2	Long Beach Channel	50	na		1.3	81.0	82		21	87	92		92	na	0.55
40017.3	Long Beach Channel	51	0.164	p,p',DDE (4)	1.4	83.5	88		51	N	90		92	na	0.68
40017.3	Long Beach Channel	811	na		1.0	74.0	54		0	0	na		na	na	na
40017.3	Long Beach Channel - R1	1059	0.190		1.4	87.5	71		na	na	na		na	na	na
40017.3	Long Beach Channel - R2	1060	0.214		1.4	87.6	47		na	na	na		na	na	na
40017.3	Long Beach Channel - R3	1061	0.168		1.4	75.9	61		na	na	na		na	na	na

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urchl.				Urch SWI	Benthic Index
							% NH <sub>3</sub> Surv.	H <sub>2</sub> S	100% NH <sub>3</sub> PW	50% NH <sub>3</sub> H <sub>2</sub> S	25% NH <sub>3</sub> PW	H <sub>2</sub> S H <sub>2</sub> S		
Category 6 -- Stations with measured biological impact but chemistry values below thresholds or not measured.														
40018.1	Long Beach Outer Harbor 18	52	na		0.6	71.0	67	0	87	90	na	0.51		
40018.2	Long Beach Outer Harbor 18	53	na		0.8	77.0	79	0	1	94	na	0.50		
40018.3	Long Beach Outer Harbor 18	54	0.208	p,p',DDE (3), TTL Chlordane (1)	1.4	79.1	93	92	91	93	na	0.52		
40018.3	Long Beach Outer Harbor 18- R1	884	0.233		1.3	75.1	93	0	91	89	na	0.23		
40018.3	Long Beach Outer Harbor 18- R2	885	0.253		1.5	79.9	91	0	91	94	na	0.31		
40018.3	Long Beach Outer Harbor 18- R3	886	0.255		1.3	76.5	89	0	34	81	na	0.23		
40018.3	Long Beach Outer Harbor 18- R1	1041	0.218		1.4	71.9	56	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18- R2	1042	0.266		1.3	79.1	70	na	na	na	na	0.30		
40018.3	Long Beach Outer Harbor 18- R3	1043	0.211		1.1	71.4	72	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18- R1	1192	na		1.5	84.6	88	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18- R2	1193	na		1.5	88.1	89	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18- R3	1194	na		1.4	82.9	81	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18	1334	na		1.3	78.0	90	na	na	na	na	na		
40018.3	Long Beach Outer Harbor 18	1695	0.253		1.2	79.9	75	na	na	na	97	0.58		
40018.3	Long Beach Outer Harbor 18	1770	na		na	na	59	na	na	na	96	na		
40020.1	Long Beach Outer Harbor 20	58	0.141	p,p',DDE (1)	0.5	57.0	83	0	6	64	na	0.63		
40020.2	Long Beach Outer Harbor 20	59	0.150	p,p',DDE (2), TTL Chlordane (1)	1.1	64.7	92	0	15	91	na	0.83		
40020.2	Long Beach Outer Harbor 20	1696	0.232		1.0	81.2	81	na	na	na	95	0.81		
40020.3	Long Beach Outer Harbor 20	60	0.164	p,p',DDE (2)	0.9	69.6	84	24	89	91	na	0.60		
40030.1	San Pedro Breakwater	73	0.112	p,p',DDE (3)	0.3	82.0	90	0	0	36	na	na		
40030.2	San Pedro Breakwater	74	0.108	p,p',DDE (3)	0.3	29.0	94	0	49	90	na	na		

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urch.						Urch SWI	Benthic Index
							% Surv.	NH <sub>3</sub> H <sub>2</sub> S	100% PW	NH <sub>3</sub> H <sub>2</sub> S	50% PW	NH <sub>3</sub> H <sub>2</sub> S	25% PW	NH <sub>3</sub> H <sub>2</sub> S		
Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.																
40030.3	San Pedro Breakwater	75	na		0.8	20.3	95		0	N	60	N	95		na	na
40031.2	Palos Verdes- Swartz 6	77	0.366	p,p'DDE (112), TTL DDT (1), TTL PCBs (1)	2.8	62.9	93	0	0	90		92		na	0.77	
40031.2	Palos Verdes- Swartz 6- R1	1002	0.318		2.9	60.3	97	0	2			93		na	0.28	
40031.2	Palos Verdes- Swartz 6- R2	1003	0.362		2.8	54.5	91	0	0			93		na	0.44	
40031.2	Palos Verdes- Swartz 6- R3	1004	0.385		2.8	54.3	89	86	97			97		na	0.28	
40031.2	Palos Verdes- Swartz 6- BLIND	1005	0.285		2.5	69.8	91	27	0			12		na	na	
40031.2	Palos Verdes- Swartz 6- R1	1038	0.376		1.9	55.1	70	na	na	na	na	na		na	na	
40031.2	Palos Verdes- Swartz 6- R2	1039	0.425		2.0	60.3	87	na	na	na	na	na		na	na	
40031.2	Palos Verdes- Swartz 6- R3	1040	0.302		2.0	41.7	85	na	na	na	na	na		na	na	
40031.2	Palos Verdes- Swartz 6- R1	1189	na		2.6	58.6	86	na	na	na	na	na		na	na	
40031.2	Palos Verdes- Swartz 6- R2	1190	na		2.6	57.8	86	na	na	na	na	na		na	na	
40031.2	Palos Verdes- Swartz 6- R3	1191	na		2.8	61.8	91	na	na	na	na	na		na	na	
40031.3	Palos Verdes- Swartz 6	78	0.470	p,p'DDE (81), TTL DDT (3), TTL PCB (1)	0.7	51.8	96	56	72			88		na	1.00	
40032.1	San Pedro Bay- POLA 19	79	na	p,p'DDE (2)	na	na	86	66	N	90	N	98		na	0.79	
40032.1	San Pedro Bay- POLA 19	103	0.104		0.4	26.0	94	0	N	11	N	90		na	na	
40032.2	San Pedro Bay- POLA 19	80	na	p,p'DDE (2)	1.8	15.0	85	31	N	20	N	84		na	0.92	
40032.2	San Pedro Bay- POLA 19	104	0.099		0.3	40.0	94	0	N	16	N	10		na	na	
40032.3	San Pedro Bay- POLA 19	81	0.112	p,p'DDE (5)	0.5	18.1	93	0	N	15	N	92		na	0.84	
40032.3	San Pedro Bay- POLA 19	105	0.137		0.3	40.0	86	0	N	0	N	61		na	na	
40033.1	Outer Harbor- POLA 10	82	0.278	p,p'DDE (16)	1.2	87.4	71	1	N	0	N	26		na	0.72	
40033.2	Outer Harbor- POLA 10	83	na		0.6	92.0	70	9	N	87	N	97		na	0.62	
40033.3	Outer Harbor- POLA 10	84	na		1.6	94.0	65	3	N	94	N	91		na	0.57	

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod			Larval Development - Ab or Urech.						Urch SWI	Benthic Index
							% Surv.	NH <sub>3</sub>	H <sub>2</sub> S	100% NH <sub>3</sub>	NH <sub>3</sub>	50% NH <sub>3</sub>	25% NH <sub>3</sub>	PW	H <sub>2</sub> S		
<b>Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.</b>																	
44011.0	Los Cerritos Channel Tidal P	611	na	Total Chlordane (1)	4.6	50.0	65	na	na	na	na	na	na	na	na	na	
44011.0	Los Cerritos Channel Tidal P- R1	1077	0.291	TBT (>90th)	1.0	62.7	66	na	na	na	na	na	na	na	na	na	
44011.0	Los Cerritos Channel Tidal P- R2	1078	0.272		1.0	64.4	62	na	na	na	na	na	na	na	na	na	
44011.0	Los Cerritos Channel Tidal P- R3	1079	0.301		0.9	56.9	62	na	na	na	na	na	na	na	na	na	
44013.0	Port Hueneme- Wharf 1	613	na	HMWPAH (1)	0.5	52.0	73	0	na	na	na	na	na	na	na	na	
44013.0	Port Hueneme- Wharf 1	1627	0.335		1.3	62.6	99	0	NS	na	na	na	na	na	na	na	
46001.0	Hugo Neuproler- 1	1623	na	TTL PCB (2)	1.5	70.3	95	40	NS	na	na	na	na	na	na	na	
46002.0	Hugo Neuproler- 2	1624	na	TTL PCB (2)	1.5	67.8	98	63	S	na	na	na	na	na	na	na	
46003.0	Hugo Neuproler- 3	1625	na		1.4	52.9	92	44	S	na	na	na	na	na	na	na	
<b>Category 7 - Stations with elevated chemistry but biological measures below thresholds.</b>																	
40001.3	Southwest Slip	3	0.559	ANT, BAA, CHR (1), BAP, DBA (2)	2.0	80.5	71	1	N	41	N	77	na	na	0.57		
40007.2	Long Beach Harbor- Channel 2	20	0.585	Hg (1), DBA (1), p,p,DDE (3), TTL PCB (1)	1.6	79.8	88	0	0	0	37	na	na	0.53			
40011.3	Inner Harbor- Channel 3	33	0.572	Hg (4), p,p,DDE (2)	1.5	88.4	82	0	0	0	62	na	na	0.70			
40019.1	Inner Fish Harbor	55	0.624	Cu (1), p,p,DDE (7), Hg, TPCB (2), TBT (>95th)	2.5	78.1	83	0	N	0	0	na	na	0.36			
40019.2	Inner Fish Harbor	56	0.664	Cu (1), Hg (2), p,p,DDE (7 TTL PCB (2), TBT (>95th)	2.3	76.6	73	89	N	96	96	na	na	0.38			
40031.1	Palos Verdes- Swartz 6	76	0.520	p,p,DDE (84), TTL DDT (3), TTL PCB (1)	0.9	63.0	86	0	88	89	89	na	na	0.63			
49004.0	Kaiser International- Berth 49	1793	2.695	Cu (1), TTL PCB (1), TTL PAH (3), p,p,DDE (2), HMWPAH (5), LMWPAH (29), Endosulf (>90th)	26.8	40.9	84	na	na	na	na	na	na	0.58			
49005.0	Kaiser International- Berth 48	1794	0.343	p,p,DDE (8)	2.9	96.4	96	na	na	na	na	na	na	0.65			

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity, and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod		Larval Development - Ab or Urch.						Urch SWI	Benthic Index
							% Surv.	NH <sub>3</sub> H <sub>2</sub> S	100% PW	NH <sub>3</sub> H <sub>2</sub> S	50% PW	NH <sub>3</sub> H <sub>2</sub> S	25% PW	NH <sub>3</sub> H <sub>2</sub> S		
<b>Category 8 - Stations with chemistry, toxicity and benthic degradation below thresholds, or not measured.</b>																
40001.1	Southwest Slip	1	0.382		1.6	70.1	65		72	N	93	N	93		na	0.47
40002.3	West Basin- Pier 143	6	na	p,p',DDE (3)	0.9	60.0	74		0	N	0	N	65	N	na	0.48
40003.2	Turning Basin- Pier 151	8	0.105		0.6	23.8	63		2	N	98	N	96		na	0.50
40003.2	Turning Basin- Pier 152- R1	1053	0.105		0.3	16.3	85		na	na	na	na	na		na	na
40003.2	Turning Basin- Pier 152- R2	1054	0.112		0.3	15.7	91		na	na	na	na	na		na	na
40003.2	Turning Basin- Pier 152- R3	1055	0.133		1.1	20.6	82		na	na	na	na	na		na	na
40004.3	Lower Main Channel	12	0.336	p,p',DDE (8), TTL PCB (1)	0.9	82.0	81		79	N	91	N	97		na	0.54
40005.1	East Basin- Turning Basin	13	0.410	p,p',DDE (3), TTL PCB (1), TTL Chlr. (1) TBT (>95th)	2.0	51.6	74		0	N	42		98		na	0.42
40009.0	West Basin Entrance	1699	0.195		0.7	75.3	86		na	na	na	na	na		97	0.57
40009.0	West Basin Entrance	1774	na		na	na	74		na	na	na	na	na		93	na
40012.2	Southeast Basin	35	0.198	p,p',DDE (2)	1.5	87.6	78		94		97		98		na	0.50
40013.2	Inner Queensway Bay	38	0.441	TTL Chlordane (3)	1.5	90.0	84		0	N	87	N	88		na	0.47
40014.2	Outer Queensway Bay	41	0.491	p,p',DDE (1), TTL Chlordane (3)	2.8	96.6	80		0	N	0	N	91	N	na	0.41
40014.3	Outer Queensway Bay	42	0.475	p,p',DDE (1), TTL Chlordane (3)	2.3	94.4	64		0	N	90	N	89		na	0.41
40020.0	Long Beach Outer Harbor 20	1771	na		na	na	85		na	na	na	na	na		89	na

Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on chemistry, toxicity and benthic community analysis. Shading indicates significant toxicity or benthic degradation. na = Not Analyzed; N = [ammonia] > than threshold effect value; S = [sulfide] > than threshold effect value; PW = Pore Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected Chemicals and factors by which they exceed ERM values	% TOC	% Fines	Amphipod % NH <sub>4</sub> Surv. H <sub>2</sub> S	Larval Development - Ab or Urchl.						Urchl Benthic Index
								100% NH <sub>4</sub> PW H <sub>2</sub> S	50% NH <sub>4</sub> PW H <sub>2</sub> S	NH <sub>3</sub> 25% H <sub>2</sub> S	NH <sub>3</sub> PW H <sub>2</sub> S	SWI		
<b>Category 8 - Stations with chemistry, toxicity and benthic degradation below thresholds, or not measured</b>														
44055.0	L.B. Naval Station Pier 3- R1	1198	na		2.3	96.8	77	na	na	na	na	na	na	na
44055.0	L.B. Naval Station Pier 3- R2	1199	na		1.2	85.0	86	na	na	na	na	na	na	na
44055.0	L.B. Naval Station Pier 3- R3	1200	na		2.2	86.3	82	na	na	na	na	na	na	na
48009.0	San Pedro Bay- Outer Harbor	1694	0.391	p'p,DDE (1), TTL Chlordane (3)	0.4	75.9	96	na	na	na	na	95	0.70	
48009.0	San Pedro Bay- Outer Harbor	1769	na		na	na	85	na	na	na	na	63	na	
49001.0	Cabrillo Beach Pier- West	1778	na		2.3	81.6	na	na	na	na	na	na	na	
49002.0	Cabrillo Beach Pier- Central	1779	na		1.4	100	na	na	na	na	na	na	na	
49003.0	Cabrillo Beach Pier- East	1780	na		1.4	100	na	na	na	na	na	na	na	
<b>Category 9 - Reference stations.</b>														
40015.3	Fish Harbor Entrance	45	0.173		0.8	29.4	92	10	N	96	98	na	0.79	
40015.3	Fish Harbor Entrance	792	na		0.6	61.0	75	91	83	89	89	na	na	
40008.1	East Basin- Pier C	22	0.228	p'p,DDE (1)	0.6	88.0	80	0	N	93	95	na	0.61	
40016.3	Terminal Island STP	48	0.204	p'p,DDE (3)	0.6	91.0	80	95	N	97	96	na	0.68	
40016.1	Terminal Island STP	46	0.175	p'p,DDE (4)	0.7	75.0	72	92	98	97	97	na	0.76	
48010.0	Turning Basin	1697	0.216	TTL PCB (1)	0.3	30.8	95	na	na	na	na	72	0.69	
48010.0	Turning Basin	1772	na		na	na	69	na	na	na	na	87	na	



Table 22 continued. Categorization of Los Angeles Region Industrial Harbor stations based on tissue chemistry analysis of field collected fish and laboratory exposed bivalves. Shading indicates chemical concentrations in *Macoma* which were significantly elevated relative to control values. Quotient value are derived from ratio of measured concentrations to US EPA screening values for Total DDT and PCBs (refer to Table 21).

Station Number	Station Name	ID/Org	Tissue		DDT		PCB		EPA Exceedances
			Type	Concentration	Total	Quotient	Total	Quotient	
Category 3 - Stations where field collected or laboratory exposed animals had elevated tissue concentrations									
40009.0	West Basin Entrance- R1	1774.1	Macoma	15.49	16.526	3.7	465.2	46.5	2
40009.0	West Basin Entrance- R2	1774.2	Macoma	11.02	11.088				
40009.0	West Basin Entrance- R3	1774.3	Macoma	18.86	17.598				
40020.2	Long Beach Outer Harbor 20	1781.0	Croaker	1096.7	465.2	3.7	465.2	46.5	2
49001.0	Cabrillo Beach Pier- West	1778.1	Macoma	9.59	6.072				
49001.0	Cabrillo Beach Pier- West	1782.0	Croaker	406.3	170.2	1.4	170.2	17	2
49001.0	Cabrillo Beach Pier- West	1785.0	Surfperch	51.2	40.1	0.2	40.1	4	1
49002.0	Cabrillo Beach Pier- Central- R1	1779.1	Macoma	11.96	5.53				
49002.0	Cabrillo Beach Pier- Central- R2	1779.2	Macoma	18.74	8.406				
49002.0	Cabrillo Beach Pier- Central- R3	1779.3	Macoma	18.16	15.338				
49002.0	Cabrillo Beach Pier- Central	1783.0	Croaker	4984.8	686.6	16.6	686.6	68.7	2
49002.0	Cabrillo Beach Pier- Central	1786.0	Surfperch	68.5	37.9	0.2	37.9	3.8	1
49003.0	Cabrillo Beach Pier- East- R1	1780.1	Macoma	9.1	4.546				
49003.0	Cabrillo Beach Pier- East- R2	1780.2	Macoma	13.43	5.272				
49003.0	Cabrillo Beach Pier- East- R3	1780.3	Macoma	10.64	5.536				
49003.0	Cabrillo Beach Pier- East	1784.0	Croaker	1839.2	407.3	6.1	407.3	40.7	2
49003.0	Cabrillo Beach Pier- East	1787.0	Surfperch	76.7	53.5	0.3	53.5	5.4	1

Table 23. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Marina stations. Stations are ranked in descending order by ERM Quotient.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
48005.0	Marina Del Rey - C1 (X1)	1690	48	1.14	1.64	3	6
44014.0	Marina Del Rey - Rep 2	1081	26	1.09	1.59	7	7
44014.0	Marina Del Rey	614	11	0.92	1.42	8	7
44014.0	Marina Del Rey	1630	45	0.81	1.20	5	7
44014.0	Marina Del Rey - Rep 1	1080	26	0.84	1.25	6	7
44014.0	Marina Del Rey - Rep 3	1082	26	0.72	1.10	5	5
44020.0	Shoreline Marina - Rep 3	1067	25	0.89	1.20	3	6
44020.0	Shoreline Marina	1631	45	0.80	1.13	3	5
44020.0	Shoreline Marina - Rep 1	1065	25	0.73	1.03	3	6
44020.0	Shoreline Marina - Rep 2	1066	25	0.81	1.10	3	6
44020.0	Shoreline Marina	620	11	0.63	0.89	3	5
48006.0	Shoreline Marina - A1 (X1)	1691	48	1.03	1.40	5	5
48003.0	Marina Del Rey - B1 (X1)	1688	48	0.81	1.26	6	7
48001.0	Marina Del Rey - A1 (X1)	1686	48	0.65	0.95	6	6
48004.0	Marina Del Rey - B2 (X2)	1689	48	0.53	0.78	1	3
48002.0	Marina Del Rey - A2 (X2)	1687	48	0.52	0.81	3	3
44023.0	Channel Islands Harbor	623	11	0.41	0.64	3	4
40023.1	Alamitos Bay - Long Beach Marina	1701	48	0.40	0.54	2	2
40023.1	Alamitos Bay - Long Beach	67	4	NA	NA	NA	NA
40023.1	Alamitos Bay - Long Beach Marina	1776	53	NA	NA	0	0
48007.0	Shoreline Marina - B1 (X1)	1692	48	0.38	0.54	2	4
48008.0	Shoreline Marina - C1 (X1)	1693	48	0.31	0.46	1	1
48011.0	King Harbor	1700	48	0.30	0.42	2	1
40022.2	Alamitos Bay - Entrance	65	4	0.25	0.36	2	1
40022.1	Alamitos Bay - Entrance	64	4	0.24	0.33	2	1
40022.3	Alamitos Bay - Entrance	66	4	NA	NA	NA	NA
40021.3	Alamitos Bay - Marine Stadium	63	4	0.18	0.26	0	0
48012.0	Channel Island Harbor - Front	1702	48	0.14	0.23	1	1
40021.1	Alamitos Bay - Marine Stadium	61	4	NA	NA	NA	NA
40021.2	Alamitos Bay - Marine Stadium	62	4	NA	NA	NA	NA
40023.2	Alamitos Bay - Long Beach	68	4	NA	NA	NA	NA
40023.3	Alamitos Bay - Long Beach	69	4	NA	NA	0	0
44021.0	Ventura Marina	621	11	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 1	1207	30	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 2	1208	30	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 3	1209	30	NA	NA	NA	NA
48011.0	King Harbor	1775	53	NA	NA	0	0
48012.0	Channel Island Harbor - Front	1777	53	NA	NA	0	0

Table 24. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Marina Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
48005.0	Marina Del Rey - C1 (X1)	1690	48	NA	NA	NA	NA	77.00	3.00	*	NT
44014.0	Marina Del Rey -Rep 2	1081	26	42.00	16.43	*	T	NA	NA	NA	NA
44014.0	Marina Del Rey	614	11	53.00	11.00	*	T	NA	NA	NA	NA
44014.0	Marina Del Rey	1630	45	NA	NA	NA	NA	92.00	13.00	ns	NT
44014.0	Marina Del Rey -Rep 1	1080	26	32.00	14.40	*	T	NA	NA	NA	NA
44014.0	Marina Del Rey -Rep 3	1082	26	35.00	18.03	*	T	NA	NA	NA	NA
44020.0	Shoreline Marina - Rep 3	1067	25	73.00	12.04	*	NT	NA	NA	NA	NA
44020.0	Shoreline Marina	1631	45	NA	NA	NA	NA	90.00	8.00	*	NT
44020.0	Shoreline Marina - Rep 1	1065	25	32.00	27.97	*	T	NA	NA	NA	NA
44020.0	Shoreline Marina - Rep 2	1066	25	59.00	22.75	*	T	NA	NA	NA	NA
44020.0	Shoreline Marina	620	11	28.00	9.10	*	T	NA	NA	NA	NA
48006.0	Shoreline Marina - A1 (X1)	1691	48	NA	NA	NA	NA	80.00	0.00	*	NT
48003.0	Marina Del Rey - B1 (X1)	1688	48	NA	NA	NA	NA	51.00	27.00	*	T
48001.0	Marina Del Rey - A1 (X1)	1686	48	NA	NA	NA	NA	49.00	29.00	*	T
48004.0	Marina Del Rey - B2 (X2)	1689	48	NA	NA	NA	NA	89.00	7.00	*	NT
48002.0	Marina Del Rey - A2 (X2)	1687	48	NA	NA	NA	NA	65.00	6.00	*	T
44023.0	Channel Islands Harbor	623	11	48.00	13.50	*	T	NA	NA	NA	NA
40023.1	Alamitos Bay - Long Beach Marina	1701	48	NA	NA	NA	NA	81.00	10.00	*	NT
40023.1	Alamitos Bay - Long Beach	67	4	81.00	18.20	ns	NT	NA	NA	NA	NA
40023.1	Alamitos Bay - Long Beach Marina	1776	53	NA	NA	NA	NA	75.00	14.00	*	NT
48007.0	Shoreline Marina - B1 (X1)	1692	48	NA	NA	NA	NA	71.00	35.00	ns	NT
48008.0	Shoreline Marina - C1 (X1)	1693	48	NA	NA	NA	NA	91.00	7.00	ns	NT
48011.0	King Harbor	1700	48	NA	NA	NA	NA	77.00	30.00	ns	NT
40022.2	Alamitos Bay - Entrance	65	4	92.00	7.60	ns	NT	NA	NA	NA	NA
40022.1	Alamitos Bay - Entrance	64	4	92.00	2.70	ns	NT	NA	NA	NA	NA
40022.3	Alamitos Bay - Entrance	66	4	81.00	7.40	*	NT	NA	NA	NA	NA
40021.3	Alamitos Bay - Marine Stadium	63	4	71.00	12.90	*	NT	NA	NA	NA	NA

Table 24 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Marina Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA MN	RA SD	RA t-test	RA MSD	EE MN	EE SD	EE t-test	EE MSD
48012.0	Channel Island Harbor - Front	1702	48	NA	NA	NA	NA	79.00	10.00	*	NT
40021.1	Alamitos Bay - Marine Stadium	61	4	75.00	11.70	*	NT	NA	NA	NA	NA
40021.2	Alamitos Bay - Marine Stadium	62	4	77.00	16.00	*	NT	NA	NA	NA	NA
40023.2	Alamitos Bay - Long Beach	68	4	79.00	12.90	*	NT	NA	NA	NA	NA
40023.3	Alamitos Bay - Long Beach	69	4	91.00	10.20	ns	NT	NA	NA	NA	NA
44021.0	Ventura Marina	621	11	67.00	8.40	*	T	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 1	1207	30	80.00	11.73	*	NT	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 2	1208	30	78.00	10.95	*	NT	NA	NA	NA	NA
44023.0	Channel Islands Harbor - Rep 3	1209	30	82.00	5.70	*	NT	NA	NA	NA	NA
48011.0	King Harbor	1775	53	NA	NA	NA	NA	26.00	34.00	*	T
48012.0	Channel Island Harbor - Front	1777	53	NA	NA	NA	NA	58.00	35.00	*	T

Table 25. Spearman Rank Correlation Coefficients for selected chemicals significantly correlated with amphipod survival at Marina stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 13, 25, or 28 depending on chemical.

Chemical	Spearman rho	Significance
Arsenic	-0.517	**
Copper	-0.510	**
Lead	-0.490	**
Mercury	-0.421	**
Nickel	-0.408	**
Zinc	-0.539	**
Tributyltin	-0.594	**
Fines	-0.246	NS
Clay	-0.542	*
TOC	-0.209	NS
ERM Quotient	-0.320	NS
PEL Quotient	-0.350	*
# ERM Exceedances	-0.321	*

Table 26. Spearman Rank Correlation Coefficients for selected chemicals significantly correlated with sea urchin development at the sediment-water interface at Marina stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 11 or 14 depending on chemical.

Chemical	Spearman rho	Significance
Pesticides		
OP DDT	-0.642	*
Endosulfan	-0.600	*
Mirex	-0.580	*
PCBs		
PCB 138	-0.555	*
PCB 153	-0.627	*
PCB 157	-0.549	*
PCB 170	-0.682	*
PCB 177	-0.582	*
PCB 180	-0.591	*
PCB 183	-0.691	*
PCB 187	-0.545	*
PCB 194	-0.609	*
PCB 201	-0.629	*
PCB 206	-0.664	*
Ammonia	-0.749	**
Hydrogen Sulfide	-0.517	*
Fines	-0.246	NS
Clay	-0.542	NS
TOC	-0.209	NS
ERM Quotient	-0.320	NS
# ERM Exceedances	-0.321	NS

Table 27. Relative Benthic Index values for Marina stations. Station categories were D = Degraded (RBI $\leq$ 0.30); T = Transitional (RBI $>$ 0.31 $\leq$ 0.60); U = Undegraded (RBI  $>$ 0.61). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
48005.0	Marina Del Rey- C1 (X1)	1690	48	0.66	U
44014.0	Marina Del Rey-Rep 2	1081	26	NA	NA
44014.0	Marina Del Rey	614	11	NA	NA
44014.0	Marina Del Rey	1630	45	0.34	T
44014.0	Marina Del Rey-Rep 1	1080	26	NA	NA
44014.0	Marina Del Rey-Rep 3	1082	26	NA	NA
44020.0	Shoreline Marina- Rep 3	1067	25	NA	NA
44020.0	Shoreline Marina	1631	45	0.38	T
44020.0	Shoreline Marina- Rep 1	1065	25	NA	NA
44020.0	Shoreline Marina- Rep 2	1066	25	NA	NA
44020.0	Shoreline Marina	620	11	NA	NA
48006.0	Shoreline Marina- A1 (X1)	1691	48	0.34	T
48003.0	Marina Del Rey- B1 (X1)	1688	48	0.43	T
48001.0	Marina Del Rey- A1 (X1)	1686	48	0.43	T
48004.0	Marina Del Rey- B2 (X2)	1689	48	0.62	U
48002.0	Marina Del Rey- A2 (X2)	1687	48	0.49	T
44023.0	Channel Islands Harbor	623	11	NA	NA
40023.1	Alamitos Bay-Long Beach Marina	1701	48	0.66	U
40023.1	Alamitos Bay- Long Beach	67	4	0.80	U
40023.1	Alamitos Bay-Long Beach Marina	1776	53	NA	NA
48007.0	Shoreline Marina- B1 (X1)	1692	48	0.26	D
48008.0	Shoreline Marina- C1 (X1)	1693	48	0.51	T
48011.0	King Harbor	1700	48	0.64	U
40022.2	Alamitos Bay- Entrance	65	4	0.73	U
40022.1	Alamitos Bay- Entrance	64	4	0.70	U
40022.3	Alamitos Bay- Entrance	66	4	0.70	U
40021.3	Alamitos Bay- Marine Stadium	63	4	0.62	U
48012.0	Channel Is. Harbor- Front	1702	48	0.75	U
40021.1	Alamitos Bay- Marine Stadium	61	4	0.58	T
40021.2	Alamitos Bay- Marine Stadium	62	4	0.39	T
40023.2	Alamitos Bay- Long Beach	68	4	0.53	T
40023.3	Alamitos Bay- Long Beach	69	4	0.58	T
44021.0	Ventura Marina	621	11	NA	NA
44023.0	Channel Islands Harbor-Rep 1	1207	30	NA	NA
44023.0	Channel Islands Harbor-Rep 2	1208	30	NA	NA
44023.0	Channel Islands Harbor-Rep 3	1209	30	NA	NA
48011.0	King Harbor	1775	53	NA	NA
48012.0	Channel Is. Harbor- Front	1777	53	NA	NA

Table 28. Spearman Rank Correlation Coefficients for selected chemicals significantly Correlated with Benthic Community Structure (as Relative Benthic Index = BI) at Marina stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 16.

Chemical	Spearman rho	Significance
<b>Metals</b>		
Antimony	-0.743	***
Chromium	-0.720	**
Copper	-0.774	***
Lead	-0.723	**
Mercury	-0.543	*
Silver	-0.446	*
Zinc	-0.752	***
<b>Pesticides</b>		
Trans Chlordane	-0.500	*
PP DDMU	-0.675	**
Dieldrin	-0.525	*
Cis Nonachlor	-0.473	*
Tributyltin	-0.711	**
<b>PCBs</b>		
PCB 44	-0.527	*
PCB 52	-0.538	*
PCB 66	-0.569	*
PCB 101	-0.532	*
PCB 118	-0.549	*
PCB 187	-0.429	*
PCB 195	-0.671	**
PCB 209	-0.629	**
Total PCBs	-0.512	*
Fines	-0.641	**
TOC	-0.664	**
ERMQ	-0.586	**
ERM Exceedances	-0.528	*



Table 29. Categorization of Los Angeles Region Marina stations based on chemistry, toxicity and benthic analysis. Shading indicates significant toxicity or benthic degradation. Shading indicates significant toxicity or benthic degradation. PW = Pore Water, SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected chemicals and factors by which the exceed ERM values		% TOC	% Fines	Amphipod		Abalone Development				Urchin Dev.		Urchin NH <sub>3</sub> SWI	NH <sub>3</sub> H <sub>2</sub> S	Benthic Index
								% NH <sub>3</sub> Surv	100% NH <sub>3</sub> PW	50% NH <sub>3</sub> PW	25% NH <sub>3</sub> PW	100% NH <sub>3</sub> PW	100% NH <sub>3</sub> H <sub>2</sub> S					
<b>Category 5 - Stations with elevated chemistry and mixed results from biological indicators</b>																		
44014.0	Marina Del Rey	614	0.920	p/p DDE (2)	1.10	93	53	na	na	na	na	2	na	na	na	na	na	
44014.0	Marina Del Rey- R1	1080	0.843	TTL Chlor (4)	2.51	95	32	na	na	na	na	na	na	na	na	na	na	
44014.0	Marina Del Rey- R2	1081	1.086	TTL PCBs (2)	2.42	85	42	na	na	na	na	na	na	na	na	na	na	
44014.0	Marina Del Rey- R3	1082	0.720	Zn, Hg, Pb (1)	2.46	98	55	na	na	na	na	na	na	na	na	na	na	
44014.0	Marina Del Rey	1630	0.811	Cu (2), TBT (>90th)	2.08	88	92	na	na	na	na	88	na	na	na	na	na	
44020.0	Shoreline Marina	620	0.628	TTL Chlor (8)	1.10	91	28	na	na	na	na	87	na	na	na	na	na	
44020.0	Shoreline Marina- R1	1065	0.733	p/p DDE (2)	2.93	62	32	na	na	na	na	na	na	na	na	na	na	
44020.0	Shoreline Marina- R2	1066	0.805	TTL PCBs (2)	2.86	100	59	na	na	na	na	na	na	na	na	na	na	
44020.0	Shoreline Marina- R3	1067	0.894		2.85	100	73	na	na	na	na	na	na	na	na	na	na	
44020.0	Shoreline Marina	1631	0.803		3.40	99	90	na	na	na	na	0	NS	na	na	na	na	
48001.0	Marina Del Rey - A1 (X1)	1686	0.651	Cu, Hg, Ni, Zn (1) p/pDDE (1), TTL Chlr (2)	1.76	100	49	na	na	na	na	na	na	na	91	na	0.43	
48002.0	Marina Del Rey - A2 (X2)	1687	0.522	Cu, Zn (1), TTL Chlor (2)	1.42	100	65	na	na	na	na	na	na	38	na	0.49		
48003.0	Marina Del Rey - B1 (X1)	1688	0.805	Cu, Ni, Zn (1), Hg (2) TTL Chlr(2), TTL PCBs (1)	2.26	100	51	na	na	na	na	na	na	78	na	0.43		
<b>Category 6 - Stations with measured biological impact but chemistry values below thresholds or not</b>																		
40021.1	Alamitos Bay- Mar. Stadium	61	na		0.60	53	75	0	15	97	na	na	na	na	na	na	na	
40021.2	Alamitos Bay- Mar. Stadium	62	na		1.00	79	77	0	N	91	na	na	na	na	na	na	na	
40023.1	Alamitos Bay- Long Beach	67	na		0.70	58	81	0	2	97	na	na	na	na	na	na	na	
40023.1	Alamitos Bay- Long Beach	1701	0.395	TTL Chlor. (2)	1.70	78	81	na	na	na	na	na	na	na	na	na	na	
40023.1	Alamitos Bay- LB Marina	1776	na	p/pDDE (1)			75	na	na	na	na	na	na	na	na	na	na	
40023.2	Alamitos Bay- Long Beach	68	na		0.80	53	79	0	N	61	na	na	na	na	na	na	na	
40023.3	Alamitos Bay- Long Beach	69	na		0.70	32	91	0	N	81	na	na	na	na	na	na	na	

Table 29 continued. Categorization of Los Angeles Region Marina stations based on chemistry, toxicity and benthic analysis. Shading indicates significant toxicity or benthic degradation. Shading indicates significant toxicity or benthic degradation. PW = Pore Water, SWI = Sediment-Water Interface.

Station Number	Station Name	Selected chemicals and factors by which the exceed ERM values			% Fines	Amphipod % NH <sub>3</sub> Surv	Abalone Development			Urchin Dev. 100% NH <sub>3</sub> PW	Urchin NH <sub>3</sub> H <sub>2</sub> S	Benthic Index			
		IDOrg	ERMQ	ERM values			100% NH <sub>3</sub> PW	50% NH <sub>3</sub> PW	25% NH <sub>3</sub> H <sub>2</sub> S						
Category 6 - Stations with measured biological impact but chemistry values below thresholds or not															
44021.0	Ventura Marina	621	na	na	0.77	97			17	na	na	14	na	na	na
44023.0	Channel Islands Harbor	623	0.410	p,pDDE (2), Ag (1)	0.70	70			na	na	na	1	na	na	na
44023.0	Channel Islands Harbor- R1	1207	na		1.45	82			na	na	na	na	na	na	na
44023.0	Channel Islands Harbor- R2	1208	na		1.47	88			na	na	na	na	na	na	na
44023.0	Channel Islands Harbor- R3	1209	na		0.78	60			na	na	na	na	na	na	na
48007.0	Shoreline Marina B1 (X1)	1692	0.375	Ni (1)	2.86	100			na	na	na	na	98	0.26	
48011.0	King Harbor	1700	0.297	p,pDDE (2), TTL PCBs (1)	1.05	50			na	na	na	na	66	0.64	
48011.0	King Harbor	1775	na		na	na			na	na	na	na	3	na	
48012.0	Channel Islands Harbor- Front	1702	0.142	p,pDDE (1)	0.81	83			na	na	na	na	92	0.75	
48012.0	Channel Islands Harbor- Front	1777	na			58			na	na	na	na	70	na	
Category 7 - Stations with elevated chemistry, but biological measures below thresholds															
48004.0	Marina Del Rey - B2 (X1)	1689	0.527	TTL Chl (3)	1.48	88			na	na	na	na	90	0.62	
48005.0	Marina Del Rey - C1 (X1)	1690	1.135	p,pDDE, TPCBs(1) TTL Chlor. (11)	2.93	88			na	na	na	na	57	0.66	
48006.0	Shoreline Marina A1 (X1)	1691	1.034	Zn, p,pDDE (1) TTL Chl (7), TTL, PCB(3)	2.56	100			na	na	na	na	86	0.34	
Category 8 - Stations with elevated chemistry, toxicity, and benthic degradation below thresholds															
48008.0	Shoreline Marina C1 (X1)	1693	0.311		0.96	93			na	na	na	na	96	0.51	
Category 9 - Reference stations															
40021.3	Alamitos Bay- Mar. Stadium	63	0.182		1.00	39			0	N	8	na	na	na	na
40022.1	Alamitos Bay- Entrance	64	0.244	TTL Chl, p,p DDE (1)	1.10	77			0	54	97	na	na	na	na
40022.2	Alamitos Bay- Entrance	65	0.252	TTL Chl, p,p DDE (1)	0.90	91			0	0	46	na	na	na	na
40022.3	Alamitos Bay- Entrance	66	na		0.90	90			0	N	7	na	na	na	na

Table 30. ERM and PEL Quotients and Number of Sediment Quality Guideline Exceedances at Lagoon stations. Stations are ranked in descending order by ERM Quotient.

STANUM	STATION	IDORG	LEG	ERMQ	PELQ	ERM EXCDS	PEL EXCDS
44027.0	McGrath Lake Estuary	1628	45	2.92	4.01	3	4
44027.0	McGrath Lake Estuary	627	11	2.20	3.03	4	5
44027.0	McGrath Lake Estuary - Rep 1	1210	30	NA	NA	NA	NA
44027.0	McGrath Lake Estuary - Rep 2	1211	30	NA	NA	NA	NA
44027.0	McGrath Lake Estuary - Rep 3	1212	30	NA	NA	NA	NA
44017.0	Colorado Lagoon	617	11	2.27	3.38	8	14
44024.0	Ballona Creek	624	11	1.80	2.68	4	9
44024.0	Ballona Creek - Rep 3	1085	26	1.61	2.30	5	8
44024.0	Ballona Creek - Rep 1	1083	26	1.33	1.92	5	6
44024.0	Ballona Creek - Rep 2	1084	26	1.17	1.68	6	8
48017.0	East Mugu Lagoon - C1 (X1)	1707	48	0.31	0.43	2	3
48015.0	Central Mugu Lagoon - B1 (X4)	1705	48	0.28	0.40	2	2
48016.0	Central Mugu Lagoon - B2 (X3)	1706	48	0.25	0.36	2	2
48018.0	East Mugu Lagoon - C2 (X2)	1708	48	0.22	0.34	2	2
48014.0	West Mugu Lagoon - A2 (X3)	1704	48	0.14	0.21	1	2
48013.0	West Mugu Lagoon - A1 (X2)	1703	48	0.12	0.17	1	1
44054.0	Mugu/Entrance - Rep 1	1629	45	0.07	0.10	1	0
44054.0	Mugu/Entrance - Rep 1	1213	30	NA	NA	NA	NA
44054.0	Mugu/Entrance - Rep 2	1214	30	NA	NA	NA	NA
44054.0	Mugu/Entrance - Rep 3	1215	30	NA	NA	NA	NA
44054.0	Mugu/Entrance	655	11	NA	NA	NA	NA
44016.0	Mugu Lagoon	616	11	NA	NA	NA	NA
44018.0	Malibu Lagoon	618	11	NA	NA	NA	NA
44026.0	Sim's Pond	626	11	NA	NA	NA	NA
44050.0	Callegus/Oxnard Ditch #3	651	11	NA	NA	NA	NA
44051.0	Mugu/Main Lagoon	652	11	NA	NA	NA	NA
44052.0	Mugu/Western Arm	653	11	NA	NA	NA	NA
44053.0	Mugu/Oxnard Ditch #1	654	11	NA	NA	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 1	1216	30	NA	NA	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 2	1217	30	NA	NA	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 3	1218	30	NA	NA	NA	NA
44022.0	Ventura River Estuary	622	13	NA	NA	NA	NA
44025.0	Santa Clara River Estuary	625	13	NA	NA	NA	NA

Table 31. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Marina Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	RA	SD	RA	SD	RA	t-test	RA	MSD	EE	MN	EE	SD	EE	t-test	EE	MSD
44027.0	Mcgrath Lake Estuary	1628	45	NA	NA	NA	NA	NA	NA	NA	NA	81.00	9.00	9.00	9.00	*	NA	NT	
44027.0	Mcgrath Lake Estuary	627	11	16.00	11.90	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44027.0	Mcgrath Lake Estuary-Rep 1	1210	30	72.00	13.51	*	NT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44027.0	Mcgrath Lake Estuary-Rep 2	1211	30	75.00	21.79	ns	NT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44027.0	Mcgrath Lake Estuary-Rep 3	1212	30	62.00	15.65	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44017.0	Colorado Lagoon	617	11	NA	NA	NA	NA	NA	NA	NA	NA	5.00	8.70	8.70	*	T	NA	NT	
44024.0	Ballona Creek	624	11	49.00	12.40	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44024.0	Ballona Creek Rep3	1085	26	42.00	11.51	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44024.0	Ballona Creek-Rep 1	1083	26	54.00	14.75	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44024.0	Ballona Creek-Rep 2	1084	26	60.00	16.83	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
48017.0	East Mugu Lagoon- C1 (X1)	1707	48	NA	NA	NA	NA	NA	NA	NA	NA	78.00	9.00	9.00	*	NT	NA	NT	
48015.0	Central Mugu Lagoon- B1 (X4)	1705	48	NA	NA	NA	NA	NA	NA	NA	NA	17.00	13.00	13.00	*	T	NA	NT	
48016.0	Central Mugu Lagoon- B2 (X3)	1706	48	NA	NA	NA	NA	NA	NA	NA	NA	85.00	8.00	8.00	*	NT	NA	NT	
48018.0	East Mugu Lagoon- C2 (X2)	1708	48	NA	NA	NA	NA	NA	NA	NA	NA	84.00	4.00	4.00	*	NT	NA	NT	
48014.0	West Mugu Lagoon- A2 (X3)	1704	48	NA	NA	NA	NA	NA	NA	NA	NA	89.00	7.00	7.00	*	NT	NA	NT	
48013.0	West Mugu Lagoon- A1 (X2)	1703	48	NA	NA	NA	NA	NA	NA	NA	NA	87.00	10.00	10.00	*	NT	NA	NT	
44054.0	Mugu/Entrance-Rep 1	1629	45	NA	NA	NA	NA	NA	NA	NA	NA	99.00	2.00	2.00	ns	NA	NA	NT	
44054.0	Mugu/Entrance-Rep 1	1213	30	51.00	5.48	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44054.0	Mugu/Entrance-Rep 2	1214	30	69.00	6.52	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44054.0	Mugu/Entrance-Rep 3	1215	30	78.00	9.08	*	NT	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44054.0	Mugu/Entrance	655	11	14.00	17.80	*	T	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
44016.0	Mugu Lagoon	616	11	NA	NA	NA	NA	NA	NA	NA	NA	66.00	11.40	11.40	*	T	NA	NT	
44018.0	Malibu Lagoon	618	11	NA	NA	NA	NA	NA	NA	NA	NA	87.00	9.10	9.10	*	NT	NA	NT	
44026.0	Sim's Pond	626	11	NA	NA	NA	NA	NA	NA	NA	NA	91.00	12.40	12.40	ns	NA	NA	NT	

Table 31 continued. Survival of Amphipods *Rhepoxynius abronius* (RA) or *Eohaustorius estuarius* (EE) in Marina Station Sediments. MN and SD = mean survival and standard deviation. \* = significantly toxic using a t-test. ns = not significant. T = toxic using a t-test and relative to the MSD value for these protocols. NT = Not Toxic. NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	MARINA STATION																				
				RA	MN	RA	SD	RA	t-test	RA	MSD	EE	MN	EE	SD	EE	t-test	EE	MSD					
44050.0	Callegus/Oxnard Ditch #3	651	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	T	
44051.0	Mugu/Main Lagoon	652	11	68.00	16.00	16.00	16.00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44052.0	Mugu/Western Arm	653	11	64.00	9.60	9.60	9.60	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44053.0	Mugu/Oxnard Ditch #1	654	11	35.00	15.00	15.00	15.00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 1	1216	30	61.00	14.32	14.32	14.32	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 2	1217	30	61.00	18.17	18.17	18.17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 3	1218	30	47.00	13.04	13.04	13.04	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	NA
44022.0	Ventura River Estuary	622	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT
44025.0	Santa Clara River Estuary	625	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NT

Table 32. Spearman Rank Correlation Coefficients for selected chemicals significantly correlated with amphipod survival at Lagoon stations. \* indicates significance at  $p \leq 0.05$ ; \*\* indicates significance at  $p \leq 0.01$ ; \*\*\* indicates significance at  $p \leq 0.001$ ; N = 12 or 14 depending on chemical.

Chemical	Spearman rho	Significance
<b>Metals</b>		
Antimony	-0.543	*
Copper	-0.574	*
Mercury	-0.552	*
Silver	-0.495	*
Zinc	-0.673	*
Tin	-0.745	**
<b>Pesticides</b>		
Total Chlordane	-0.780	***
Total DDT	-0.490	*
Dieldrin	-0.833	***
<b>PCBs</b>		
PCB18	-0.487	*
PCB52	-0.482	*
PCB66	-0.474	*
PCB105	-0.501	*
PCB138	-0.490	*
<b>PAHs</b>		
Benzo(a)pyrene	-0.735	**
Benzo(e)pyrene	-0.767	**
Chrysene	-0.732	**
Fluoranthene	-0.697	**
1-Methylphenanthrene	-0.794	***
Phenanthrene	-0.771	***
LMW PAH	-0.692	**
HMW PAH	-0.670	**
Total PAHs	-0.675	**
Fines	-0.345	NS
TOC	-0.420	NS
ERM Quotient	-0.763	**
# ERM Exceedances	-0.783	***

Table 33. Relative Benthic Index values for Lagoon stations. Station categories were D = Degraded (RBI $\leq$ 0.30); T = Transitional (RBI $>$ 0.31 $\leq$ 0.60); U = Undegraded (RBI  $>$ 0.61). NA = Not Analyzed.

STANUM	STATION	IDORG	LEG	Benthic Index	Category
44027.0	McGrath Lake Estuary	1628	45	NA	NA
44027.0	McGrath Lake Estuary	627	11	NA	NA
44027.0	McGrath Lake Estuary - Rep 1	1210	30	NA	NA
44027.0	McGrath Lake Estuary - Rep 2	1211	30	NA	NA
44027.0	McGrath Lake Estuary - Rep 3	1212	30	NA	NA
44017.0	Colorado Lagoon	617	11	NA	NA
44024.0	Ballona Creek	624	11	NA	NA
44024.0	Ballona Creek - Rep3	1085	26	NA	NA
44024.0	Ballona Creek - Rep 1	1083	26	NA	NA
44024.0	Ballona Creek - Rep 2	1084	26	NA	NA
48017.0	East Mugu Lagoon - C1 (X1)	1707	48	0.01	D
48015.0	Central Mugu Lagoon - B1 (X4)	1705	48	0.14	D
48016.0	Central Mugu Lagoon - B2 (X3)	1706	48	0.03	D
48018.0	East Mugu Lagoon - C2 (X2)	1708	48	0.03	D
48014.0	West Mugu Lagoon - A2 (X3)	1704	48	0	D
48013.0	West Mugu Lagoon - A1 (X2)	1703	48	0.13	D
44054.0	Mugu/Entrance - Rep 1	1629	45	NA	NA
44054.0	Mugu/Entrance - Rep 1	1213	30	NA	NA
44054.0	Mugu/Entrance - Rep 2	1214	30	NA	NA
44054.0	Mugu/Entrance - Rep 3	1215	30	NA	NA
44054.0	Mugu/Entrance	655	11	NA	NA
44016.0	Mugu Lagoon	616	11	NA	NA
44018.0	Malibu Lagoon	618	11	NA	NA
44026.0	Sim's Pond	626	11	NA	NA
44050.0	Callegus/Oxnard Ditch #3	651	11	NA	NA
44051.0	Mugu/Main Lagoon	652	11	NA	NA
44052.0	Mugu/Western Arm	653	11	NA	NA
44053.0	Mugu/Oxnard Ditch #1	654	11	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 1	1216	30	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 2	1217	30	NA	NA
44053.0	Mugu/Oxnard Ditch #1 - Rep 3	1218	30	NA	NA
44022.0	Ventura River Estuary	622	13	NA	NA
44025.0	Santa Clara River Estuary	625	13	NA	NA

Table 34. Results of tissue analyses of fish collected from Mugu Lagoon. Tissue concentrations are shown for those chemicals that were elevated relative to the US EPA screening values (Total DDT and Total PCBs only, as ng/g wet weight).

Station Number	Station Name	IDORG	Fish Species	TTL DDT (ng/g)	TTL DDT Quot.	TTL PCB (ng/g)	TTL PCB Quot.	EPA Exceeds	% Lipid
44016.0	Mugu Lagoon	283	Topsmelt	15.98	0.053	5.024	0.502	0	0.52
44016.0	Mugu Lagoon	284	Shiner Surfperch	133.53	0.445	17.126	1.713	1	1.08
NAS	Wildlife Guideline (whole fish)			50		500			
USEPA	Screening Value (edible portion)			300		10			



Table 35. Categorization of Los Angeles Region Lagoon stations based on chemistry, toxicity and benthic analysis. Shading indicates significant toxicity or benthic degradation. NA = Not Analyzed; N = ammonia concentrations greater than threshold effect value; PW = Pore Water; SSW = Subsurface Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected chemicals and factors by which the exceed ERM values		% TOC	% Fines	Amphipod		Urch. Dev		Ab. Dev		Mussel Dev		Urchin		Benthic Index	
				ERMQ	ERM values			%	%	NH <sub>3</sub> Surv	H <sub>2</sub> S	100% NH <sub>3</sub> PW	NH <sub>3</sub> H <sub>2</sub> S	100% NH <sub>3</sub> PW	NH <sub>3</sub> H <sub>2</sub> S	100% NH <sub>3</sub> PW	NH <sub>3</sub> H <sub>2</sub> S		100% NH <sub>3</sub> SSW
<b>Category 4 - Stations with elevated chemistry and biological impacts measured by either toxicity or benthos.</b>																			
44017.0	Colorado Lagoon	617	2.271	TTL PCB (1), TTL Chlr (22), Dieldrin (3), p'pDDE (3), Pb, Zn (2), Phen (1)	1.90	30	5	na	na	na	na	na	0	N	77	na	na	na	
44024.0	Ballona Creek	624	1.799	TTL Chlor (18)	3.00	65	49	N	0	N	na	na	na	na	59	na	na	na	na
44024.0	Ballona Creek- R1	1083	1.327	p'pDDE (4)	5.06	52	54	na	na	na	na	na	na	na	na	na	na	na	na
44024.0	Ballona Creek- R2	1084	1.169	TTL DDT, Dieldrin (3)	5.30	66	60	na	na	na	na	na	na	na	na	na	na	na	na
44024.0	Ballona Creek- R3	1085	1.607	Chlorpyr (>95th)	5.67	74	42	na	na	na	na	na	na	na	na	na	na	na	na
44027.0	McGrath Lake Estuary	627	2.196	TTL Chlor (25)	1.00	97	16	na	na	na	na	na	4	N	73	na	na	na	na
44027.0	McGrath Lake Estuary- R1	1210	na	p'p DDE (57)	0.81	20	72	na	na	na	na	na	na	na	na	na	na	na	na
44027.0	McGrath Lake Estuary- R2	1211	na	Dieldrin, TTL DDT (3)	0.54	12	75	na	na	na	na	na	na	na	na	na	na	na	na
44027.0	McGrath Lake Estuary- R3	1212	na	Toxaphen. (>90th)	1.81	51	62	na	na	na	na	na	na	na	na	na	na	na	na
44027.0	McGrath Lake Estuary	1628	2.916	Endosulf. (95th)	2.46	90	81	90	90	90	na	na	na	na	na	na	na	na	na
<b>Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.</b>																			
44016.0	Mugu Lagoon	616	na		0.73	64	66	na	na	na	na	na	100	74	na	na	na	na	na
44018.0	Malibu Laboon	618	na		0.93	98	87	na	na	na	na	na	100	42	na	na	na	na	na
44026.0	Sim's Pond	626	na		2.40	83	91	na	na	na	na	na	47	72	na	na	na	na	na
44050.0	Callegus/Oxnard Ditch 3	651	na		0.45	63	71	na	na	na	na	na	na	na	na	na	na	na	na
44051.0	Mugu- Main Lagoon	652	na		0.76	92	68	75	75	75	12	na	na	na	na	na	na	na	na
44052.0	Mugu- Western Arm	653	na		0.66	99	64	10	10	10	na	na	na	na	na	na	na	na	na

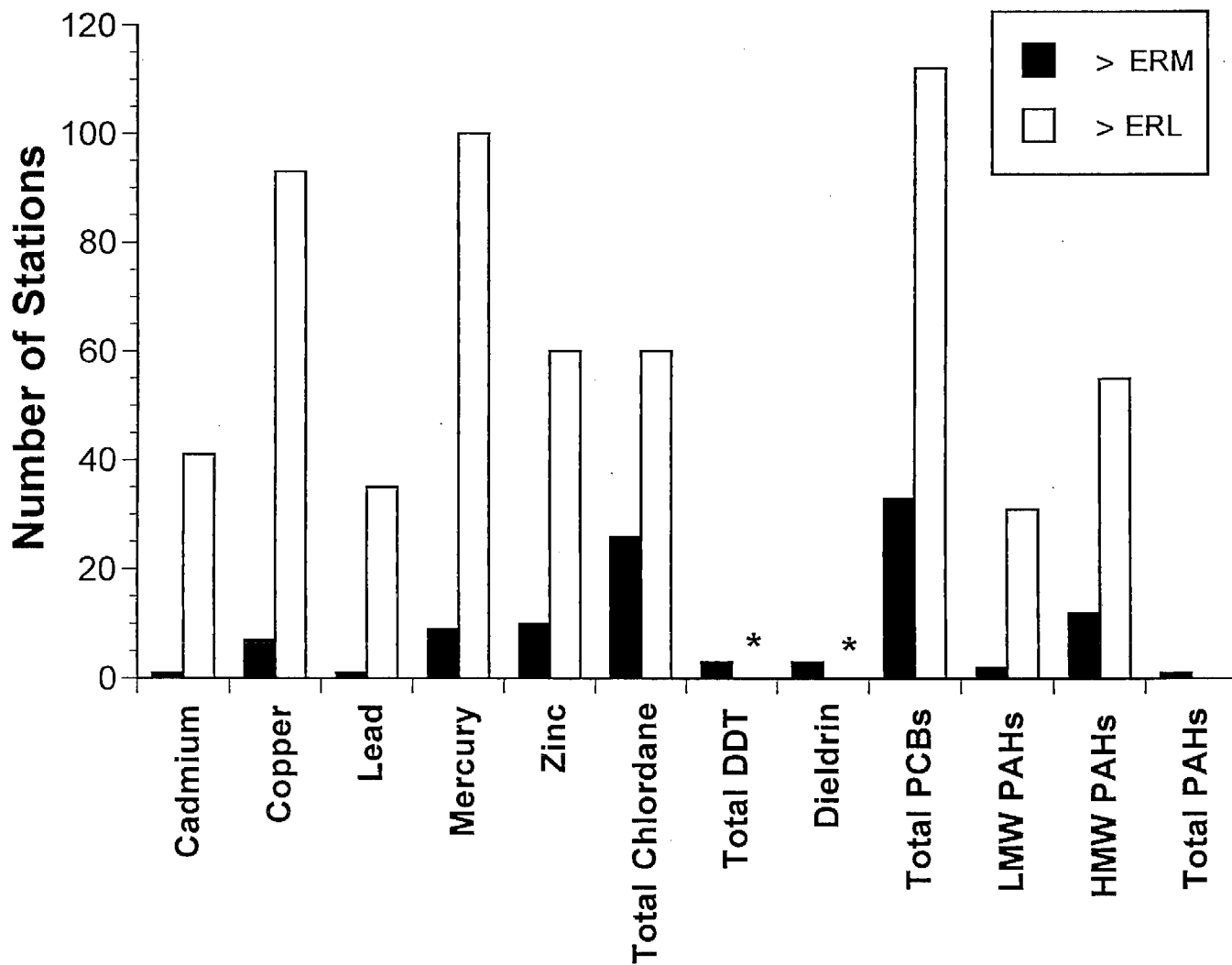
Table 35 continued. Categorization of Los Angeles Region Lagoon stations based on chemistry, toxicity and benthic analysis. Shading indicates significant toxicity or benthic degradation. NA = Not Analyzed; N = ammonia concentrations greater than threshold effect value; PW = Pore Water; SSW = Subsurface Water; SWI = Sediment-Water Interface.

Station Number	Station Name	IDOrg	ERMQ	Selected chemicals and factors by which the exceed ERM values			% TOC	% Fines	Amphipod % Surv	Urch. Dev 100% PW	NH <sub>3</sub> H <sub>2</sub> S	Ab. Dev 100% PW	NH <sub>3</sub> H <sub>2</sub> S	Mussel Dev			Urchin SWI	NH <sub>3</sub> H <sub>2</sub> S	Benthic Index	
				ERMQ	ERMQ	ERMQ								100% NH <sub>3</sub> PW	100% NH <sub>3</sub> H <sub>2</sub> S	100% SSW				
Category 6 - Stations with measured biological impact but chemistry values below thresholds or not measured.																				
44053.0	Mugu/Oxnard Ditch 1	654	na	na	na	1.10	91	35	0	na	na	na	na	na	na	na	na	na	na	
44053.0	Mugu/Oxnard Ditch 1-R1	1216	na	na	na	2.79	84	61	na	na	na	na	na	na	na	na	na	na	na	
44053.0	Mugu/Oxnard Ditch 1-R2	1217	na	na	na	2.96	85	61	na	na	na	na	na	na	na	na	na	na	na	
44053.0	Mugu/Oxnard Ditch 1-R3	1218	na	na	na	2.71	93	47	na	na	na	na	na	na	na	na	na	na	na	
44054.0	Mugu- Entrance	655	na	na	na	0.70	80	14	0	na	na	na	na	na	na	na	na	na	na	
44054.0	Mugu- Entrance- R1	1213	na	na	na	0.76	45	51	na	na	na	na	na	na	na	na	na	na	na	
44054.0	Mugu- Entrance- R2	1214	na	na	na	0.38	21	69	na	na	na	na	na	na	na	na	na	na	na	
44054.0	Mugu- Entrance- R3	1215	na	na	na	0.33	21	78	na	na	na	na	na	na	na	na	na	na	na	
44054.0	Mugu- Entrance- R1	1629	0.068	p/p DDE (1)	na	0.50	19	99	0	na	na	na	na	na	na	na	na	na	na	
48013.0	West Mugu Lagoon- A1 (X2)	1703	0.120	p/p DDE (1)	na	0.65	38	87	na	na	na	na	na	na	na	97	na	0.13	na	
48014.0	West Mugu Lagoon- A2 (X2)	1704	0.142	p/p DDE (2)	na	0.91	37	89	na	na	na	na	na	na	na	82	na	0.00	na	
48015.0	Central Mugu Lagoon- B1 (X4)	1705	0.280	TTL Chlr (2), p/pDDE (5) Chlorpyr. (90th)	na	0.56	82	17	na	na	na	na	na	na	na	98	na	0.14	na	
48016.0	Central Mugu Lagoon- B2 (X3)	1706	0.252	TTL Chlr (2), p/pDDE (4)	na	1.16	77	85	na	na	na	na	na	na	na	89	na	0.03	na	
48017.0	East Mugu Lagoon- C1 (X1)	1707	0.307	TTL Chlr (2), p/pDDE (6)	na	1.74	100	78	na	na	na	na	na	na	na	13	na	0.01	na	
48018.0	East Mugu Lagoon- C2 (X2)	1708	0.221	TTL Chlr (1), p/pDDE (5)	na	1.10	61	84	na	na	na	na	na	na	na	22	N	0.03	na	
Category 9 - Reference Stations																				
44022.0	Ventura River Estuary	622	na	na	na	1.80	83	97	na	na	na	na	na	na	na	na	na	na	na	na
44025.0	Santa Clara River Estuary	625	na	na	na	0.05	79	99	na	na	na	na	na	na	na	na	na	na	na	na

Table 35 continued. Categorization of Los Angeles Region Lagoon stations based on tissue chemistry analysis of field collected fish. Quotient value are derived from ratio of measured concentrations to US EPA screening values for Total DDT and PCBs (refer to Table 34).

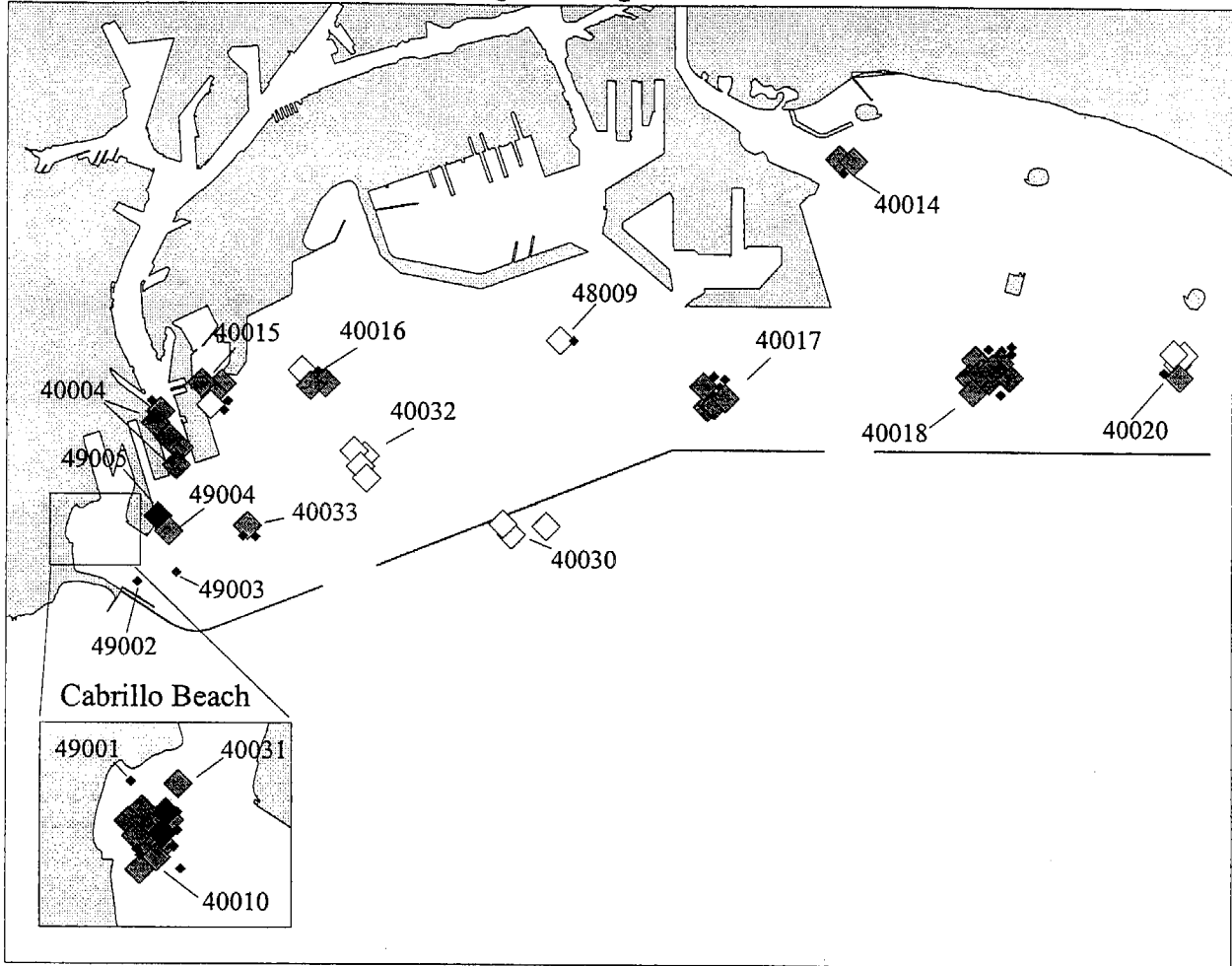
Station Number	Station Name	IDORG	Fish Species	TTL DDT	TTL DDT Quot.	TTL PCB	TTL PCB Quot.	EPA Exceeds
44016.0	Mugu Lagoon	283	Topsmelt	15.98	0.053	5.024	0.502	0
44016.0	Mugu Lagoon	284	Shiner Surfperch	133.53	0.445	17.126	1.713	1

Category 3 - Stations where field collected animals had elevated tissue concentrations

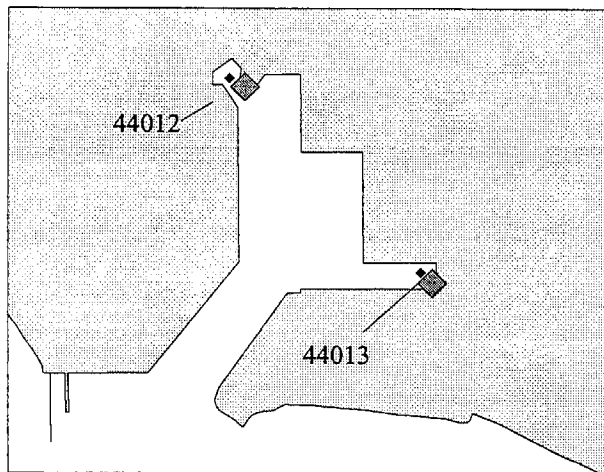


**Figure 10 .** Number of Industrial Harbor station samples exceeding either the ERM or ERL sediment quality guidelines. (Total DDT was compared to the Swartz *et al.* sediment effect concentration, 100 ug/g OC. \* no ERL exceedances were calculated for Total DDT or Dieldrin; see text for details).

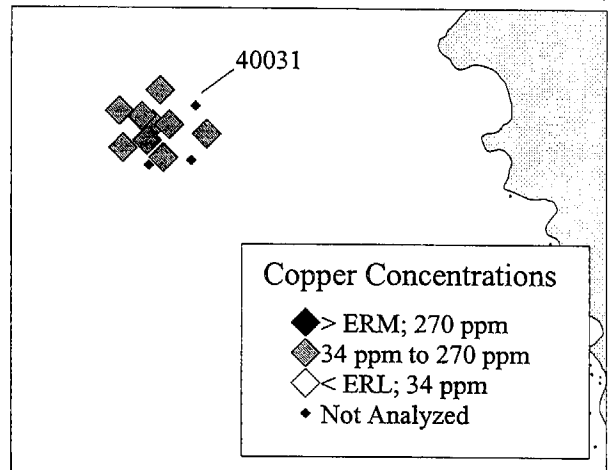
Outer Los Angeles/Long Beach Harbor Stations



Port Hueneme

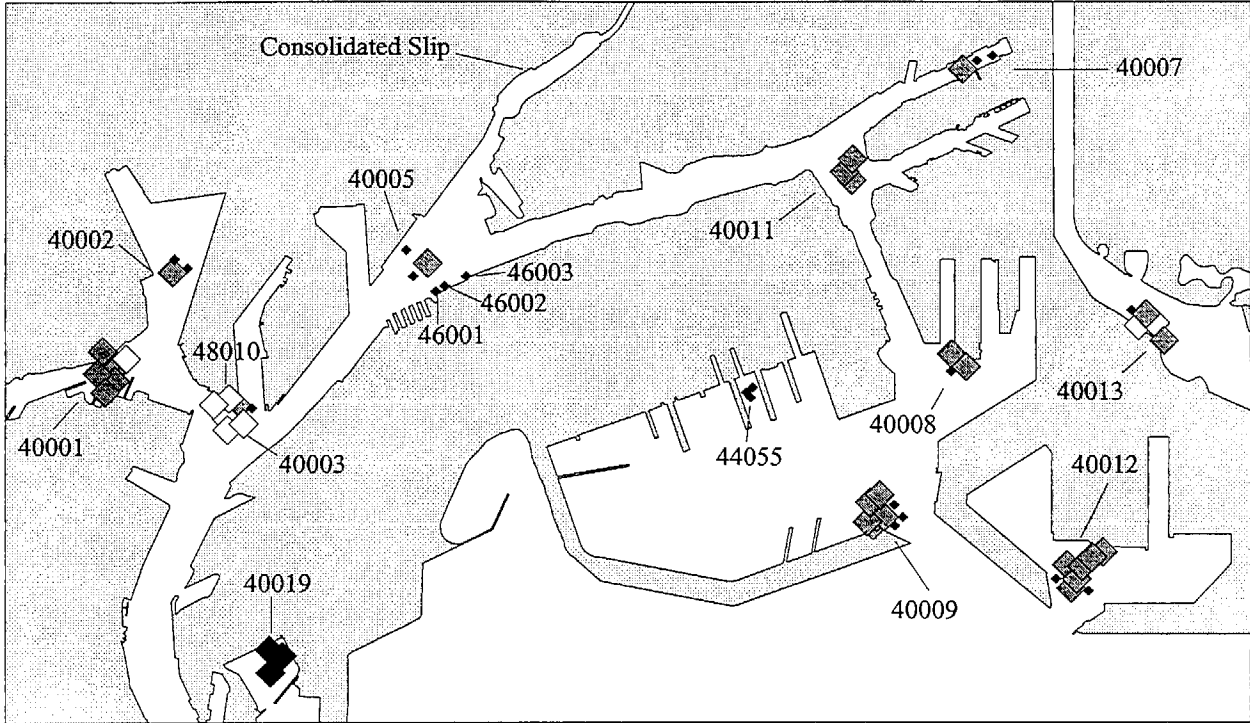


Palos Verdes

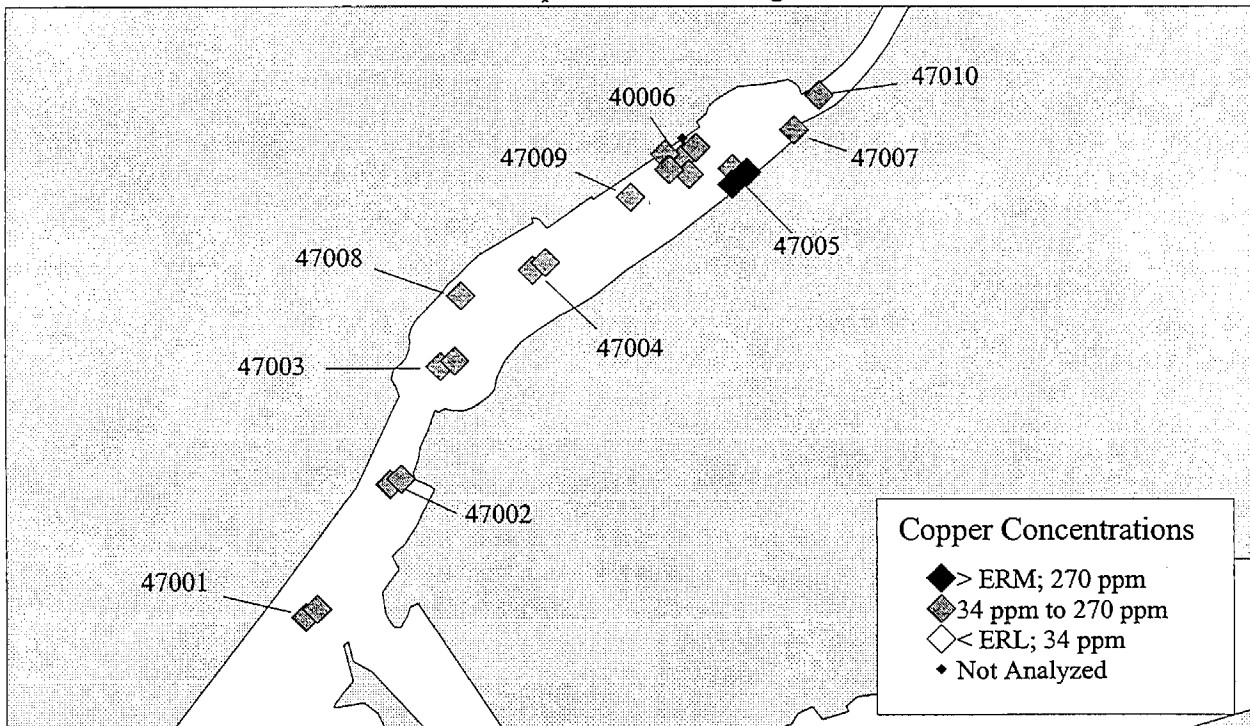


Figures 11a, 11b, and 11c. Distribution of sediment samples in Outer Los Angeles and Long Beach Harbor (a), Port Hueneme (b), and Palos Verdes (c) exceeding the ERM for Copper.

Inner Los Angeles/Long Beach Harbor Stations

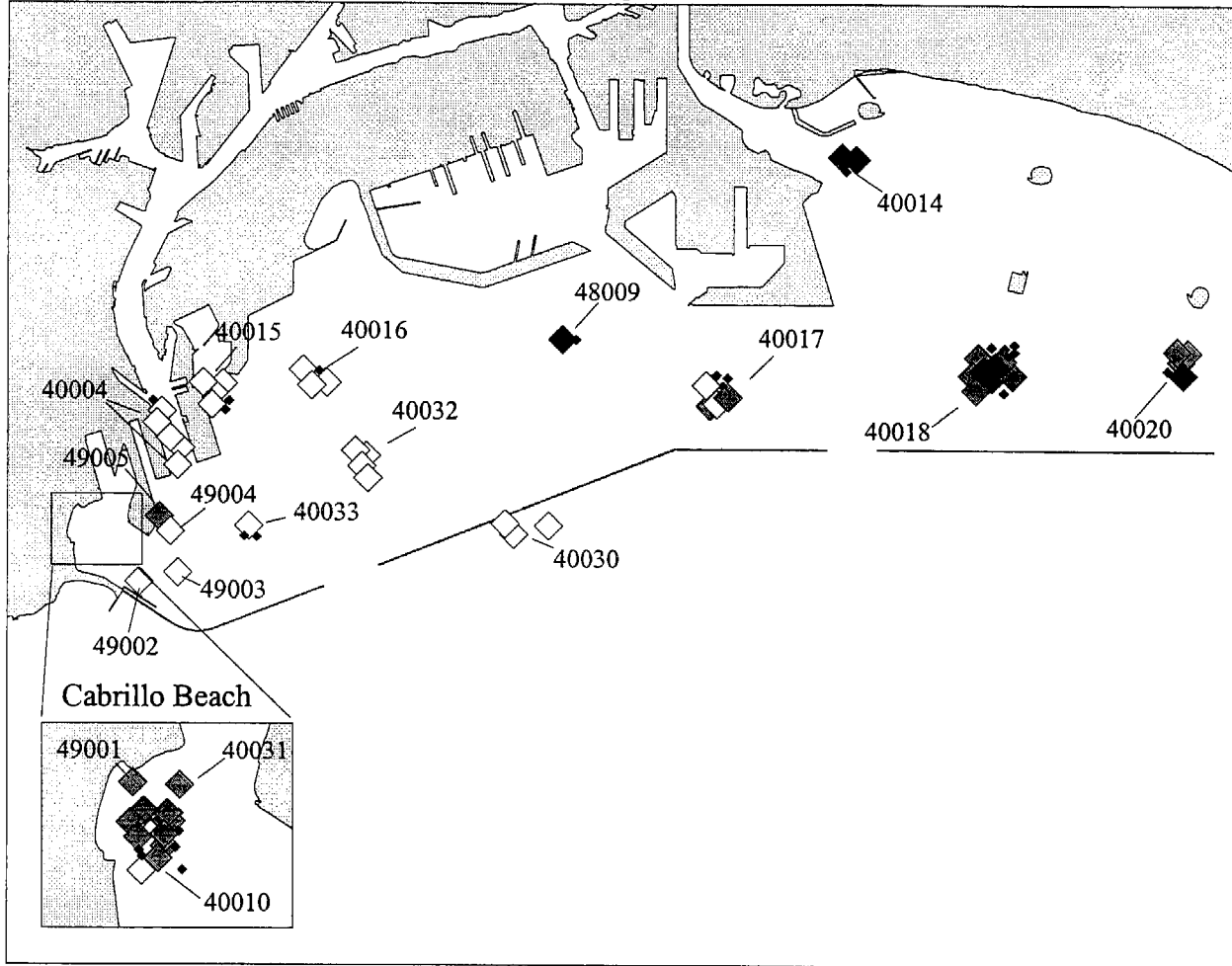


Consolidated Slip of Inner Los Angeles Harbor

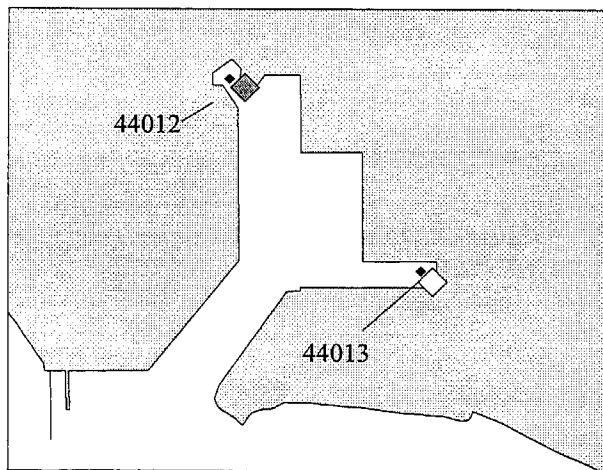


Figures 12a and 12b. Distribution of sediment samples in Inner Los Angeles and Long Beach Harbor (a) and Consolidated Slip (b) exceeding the ERM for Copper.

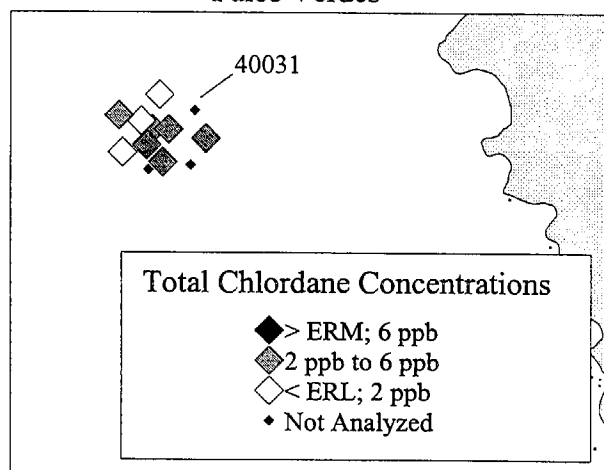
Outer Los Angeles/Long Beach Harbor Stations



Port Hueneme

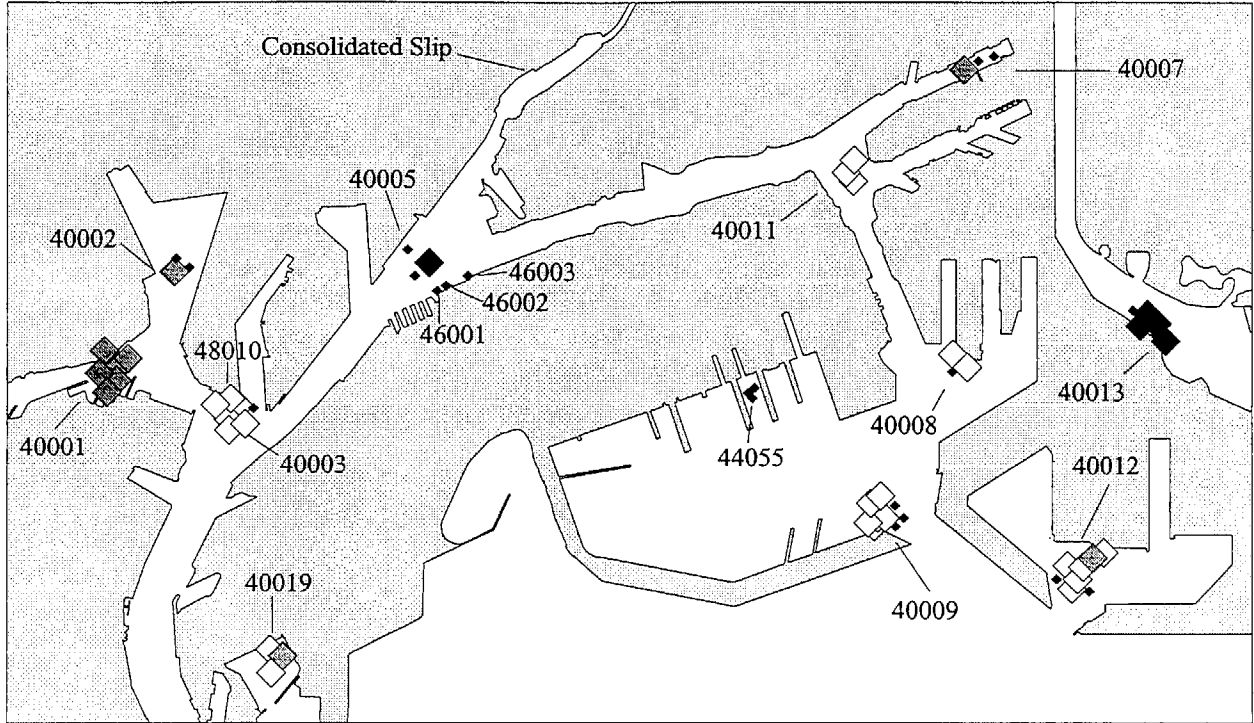


Palos Verdes

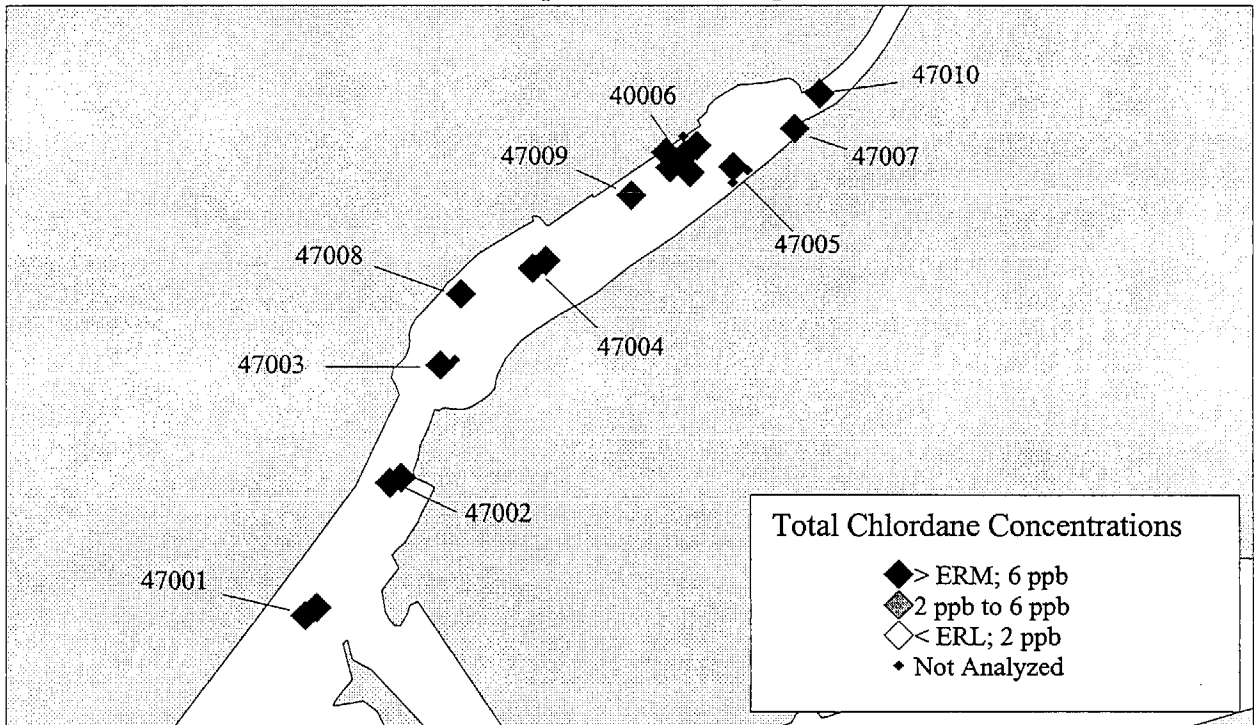


Figures 13a, 13b, and 13c. Distribution of sediment samples in Outer Los Angeles and Long Beach Harbor (a), Port Hueneme (b), and Palos Verdes (c) exceeding the ERM for Total Chlordane.

Inner Los Angeles/Long Beach Harbor Stations



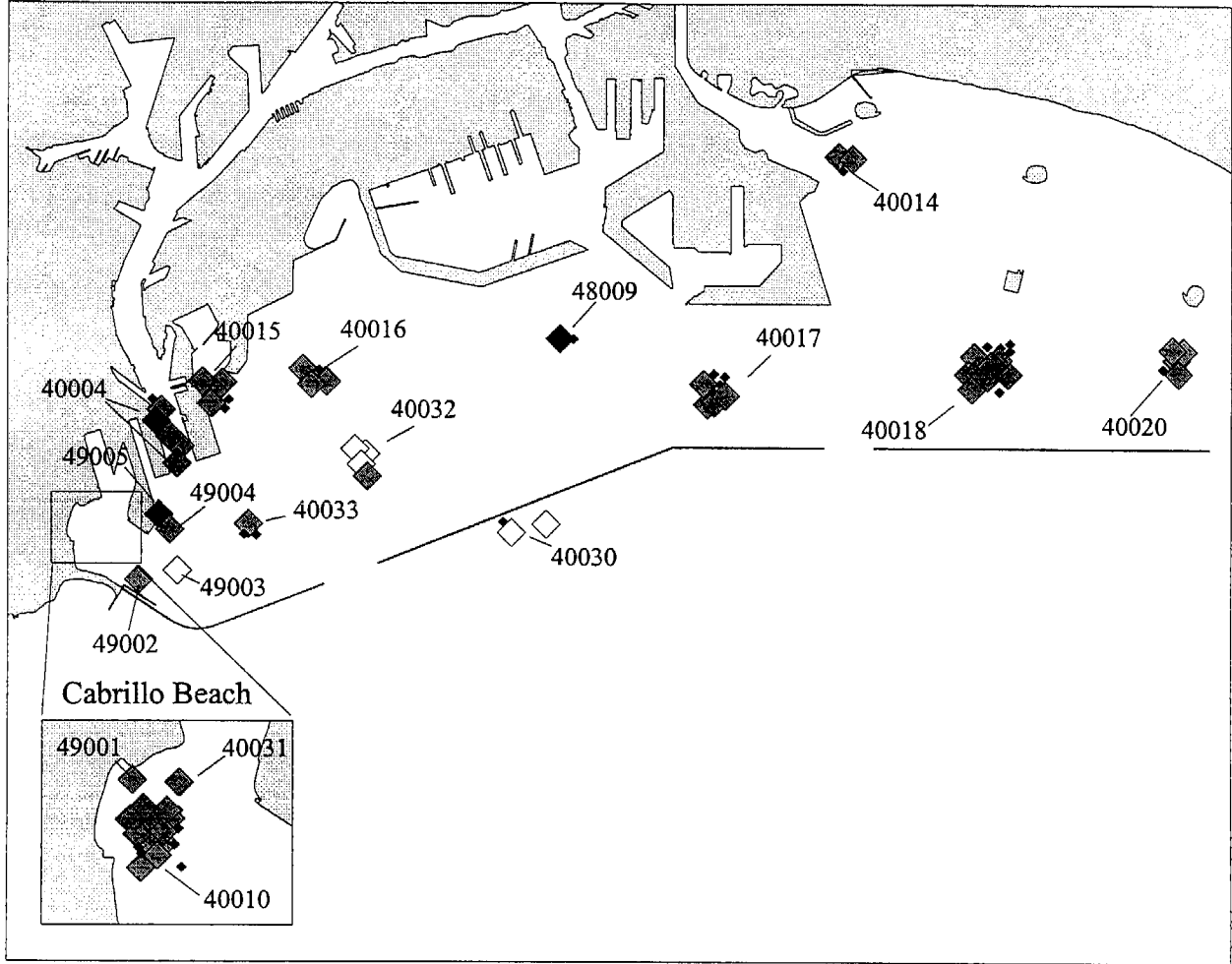
Consolidated Slip of Inner Los Angeles Harbor



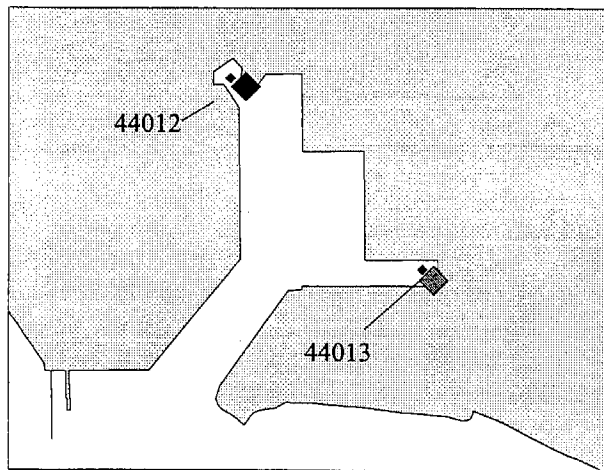
Figures 14a and 14b. Distribution of sediment samples in Inner Los Angeles and Long Beach Harbor (a), and Consolidated Slip (b), exceeding the ERM for Total Chlordane.



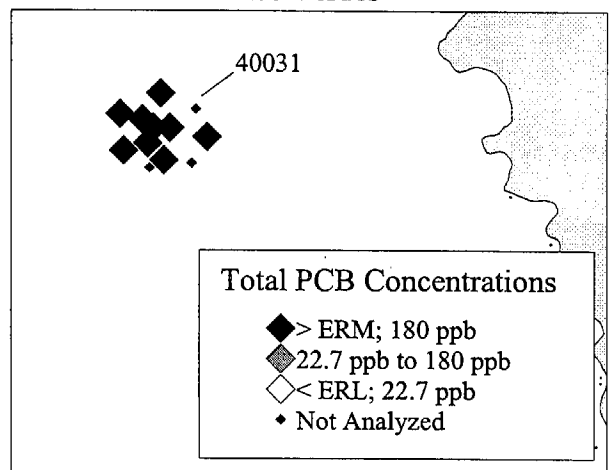
Outer Los Angeles/Long Beach Harbor Stations



Port Hueneme

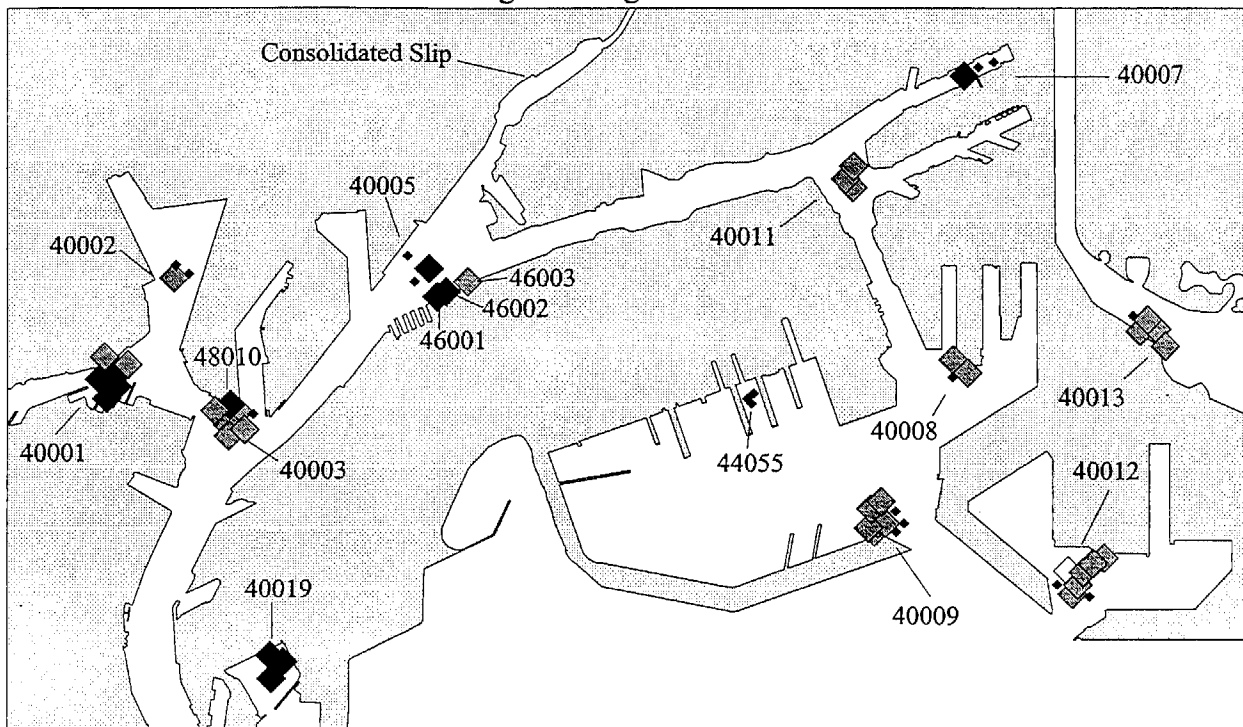


Palos Verdes

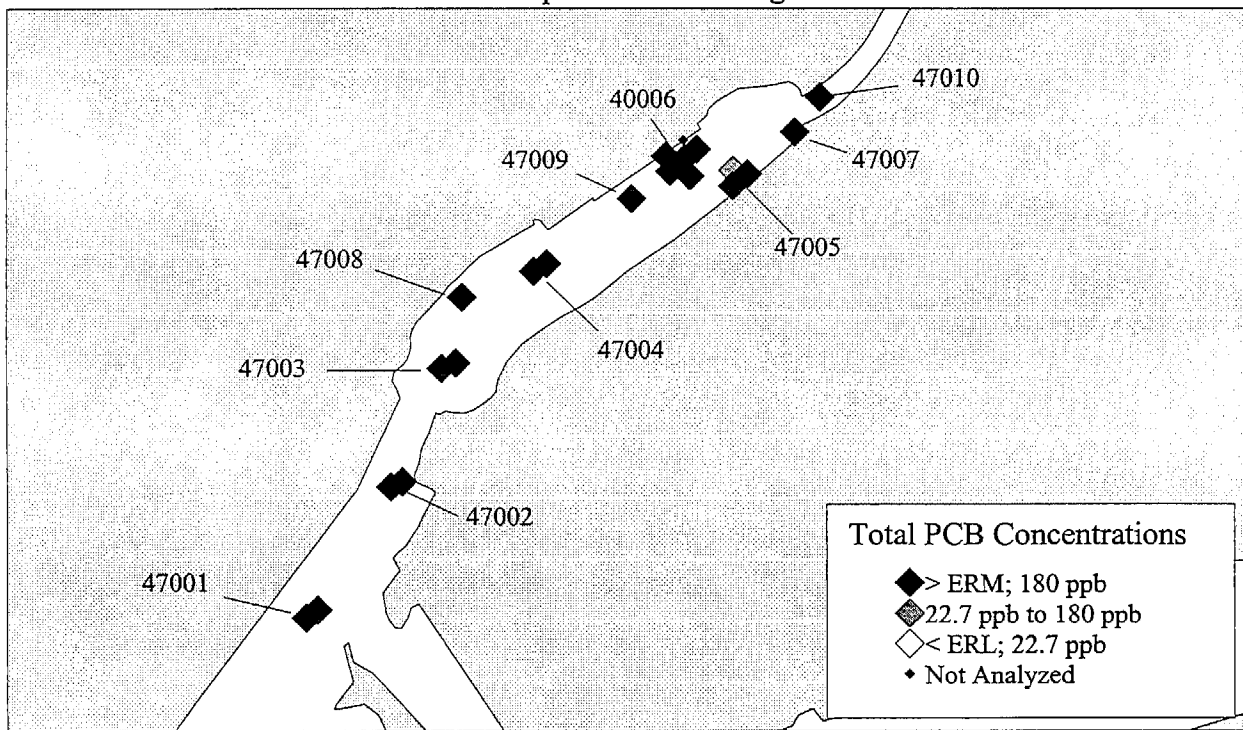


Figures 15a, 15b, and 15c. Distribution of sediment samples in Outer Los Angeles and Long Beach Harbor (a), Port Hueneme (b), and Palos Verdes (c) exceeding the ERM for Total PCB.

### Inner Los Angeles/Long Beach Harbor Stations

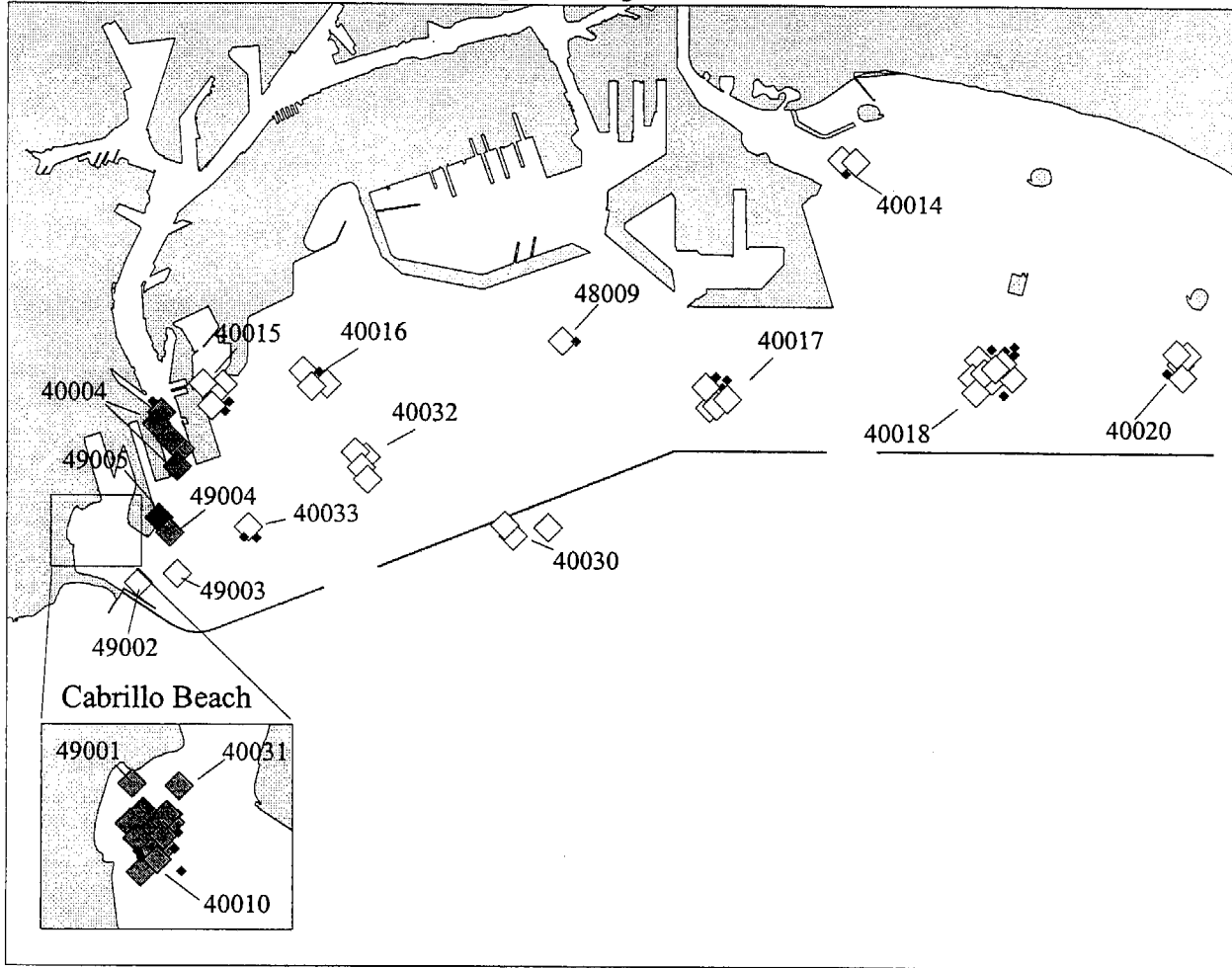


### Consolidated Slip of Inner Los Angeles Harbor

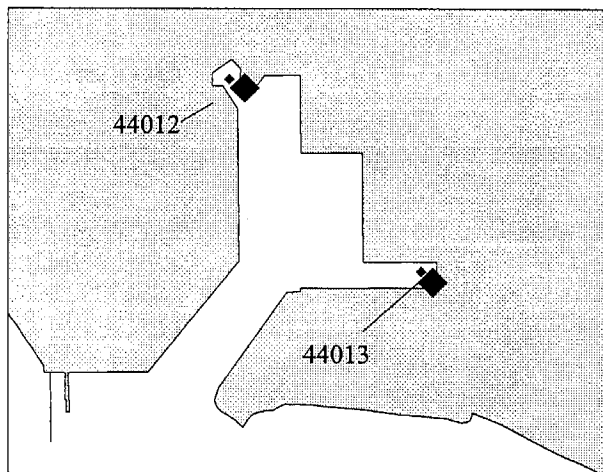


Figures 16a and 16b. Distribution of sediment samples in Inner Los Angeles and Long Beach Harbor (a), and Consolidated Slip (b), exceeding the ERM for Total PCB.

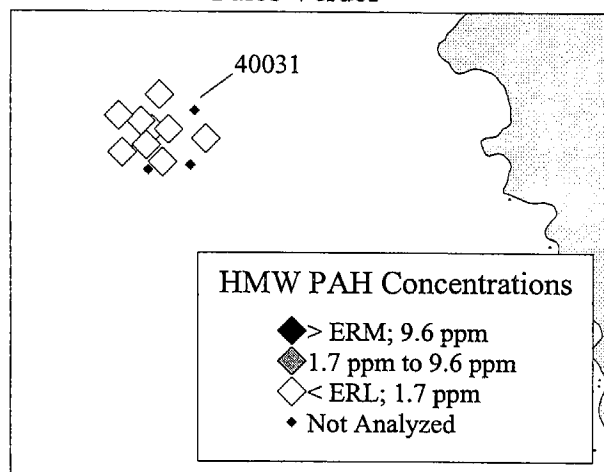
Outer Los Angeles/Long Beach Harbor Stations



Port Hueneme

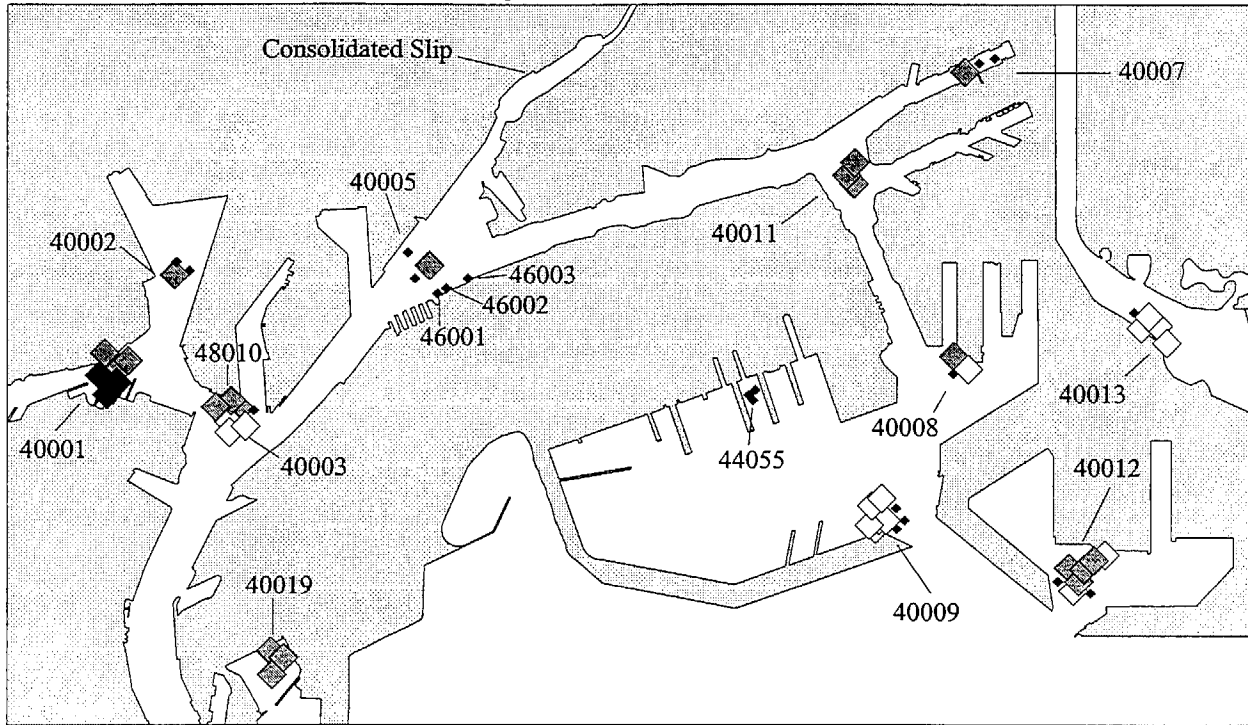


Palos Verdes

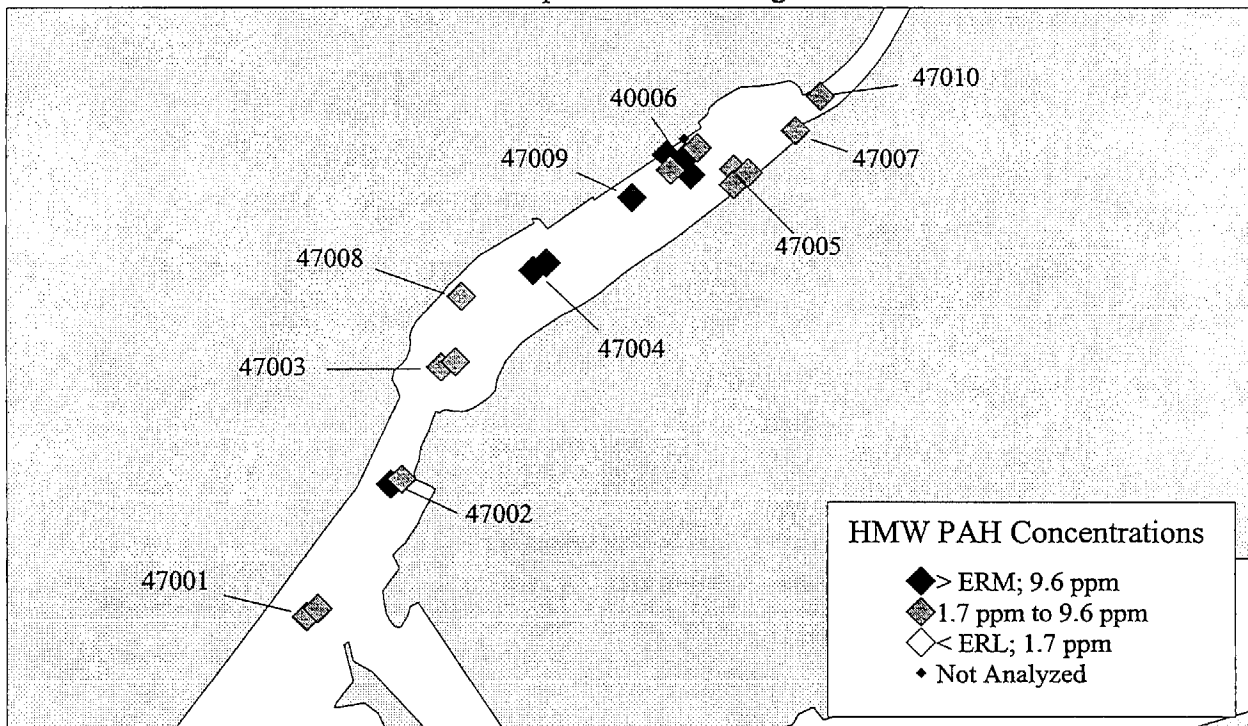


Figures 17a, 17b, and 17c. Distribution of sediment samples in Outer Los Angeles and Long Beach Harbor (a), Port Hueneme (b), and Palos Verdes (c) exceeding the ERM for High Molecular Weight PAH.

### Inner Los Angeles/Long Beach Harbor Stations

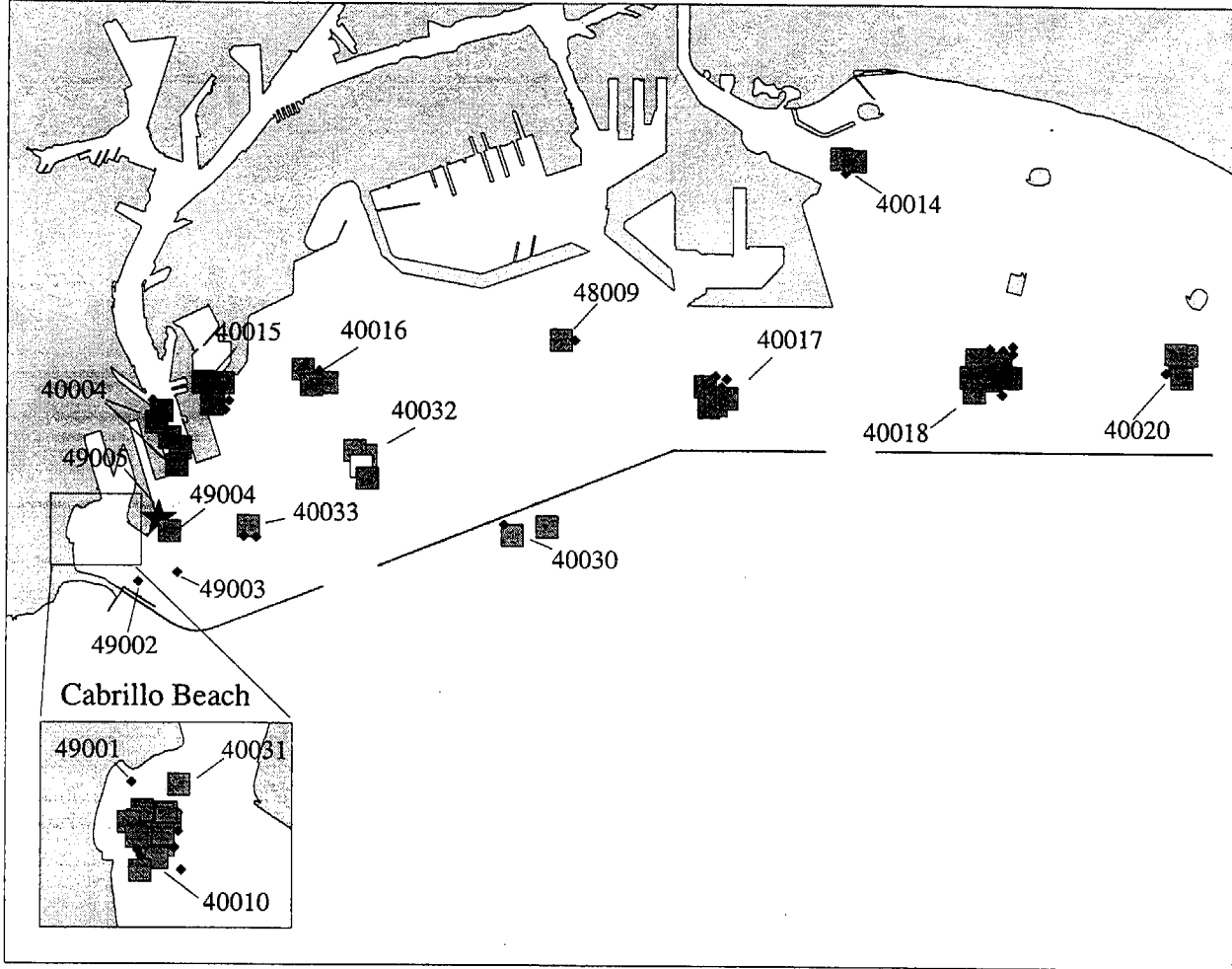


### Consolidated Slip of Inner Los Angeles Harbor

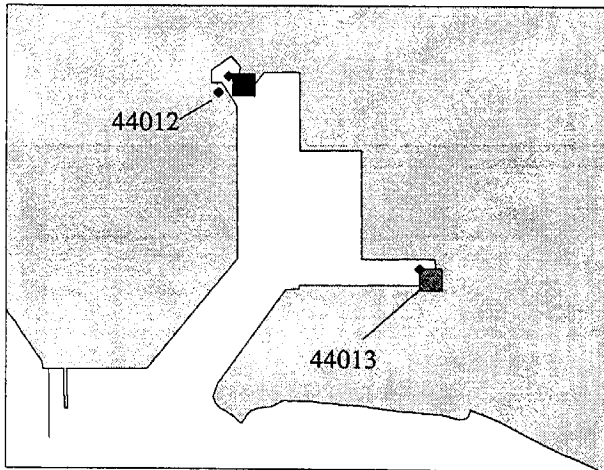


Figures 18a and 18b. Distribution of sediment samples in Inner Los Angeles and Long Beach Harbor (a), and Consolidated Slip (b), exceeding the ERM for High Molecular Weight PAH.

Outer Los Angeles/Long Beach Harbor Stations



Port Hueneme



Palos Verdes

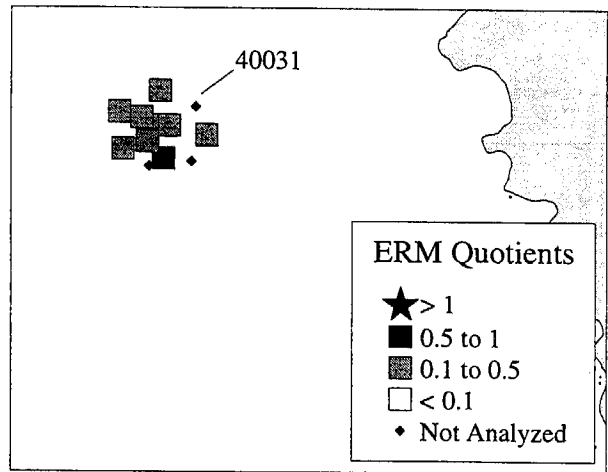
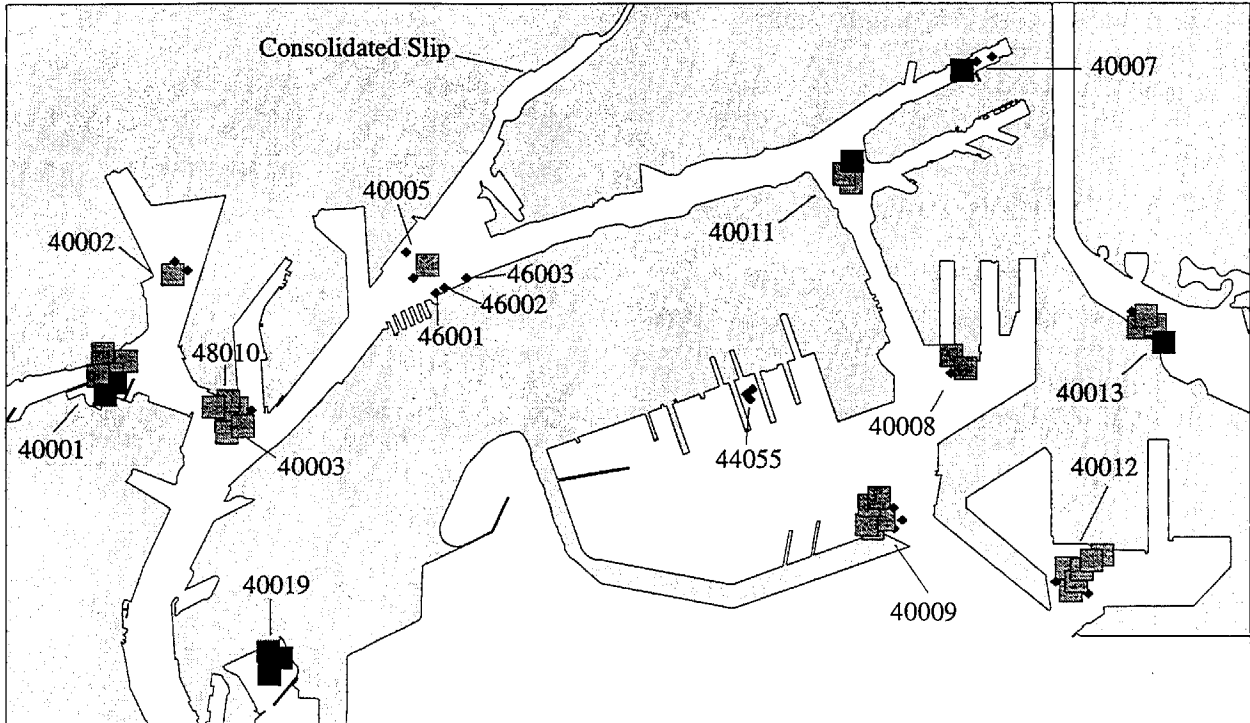
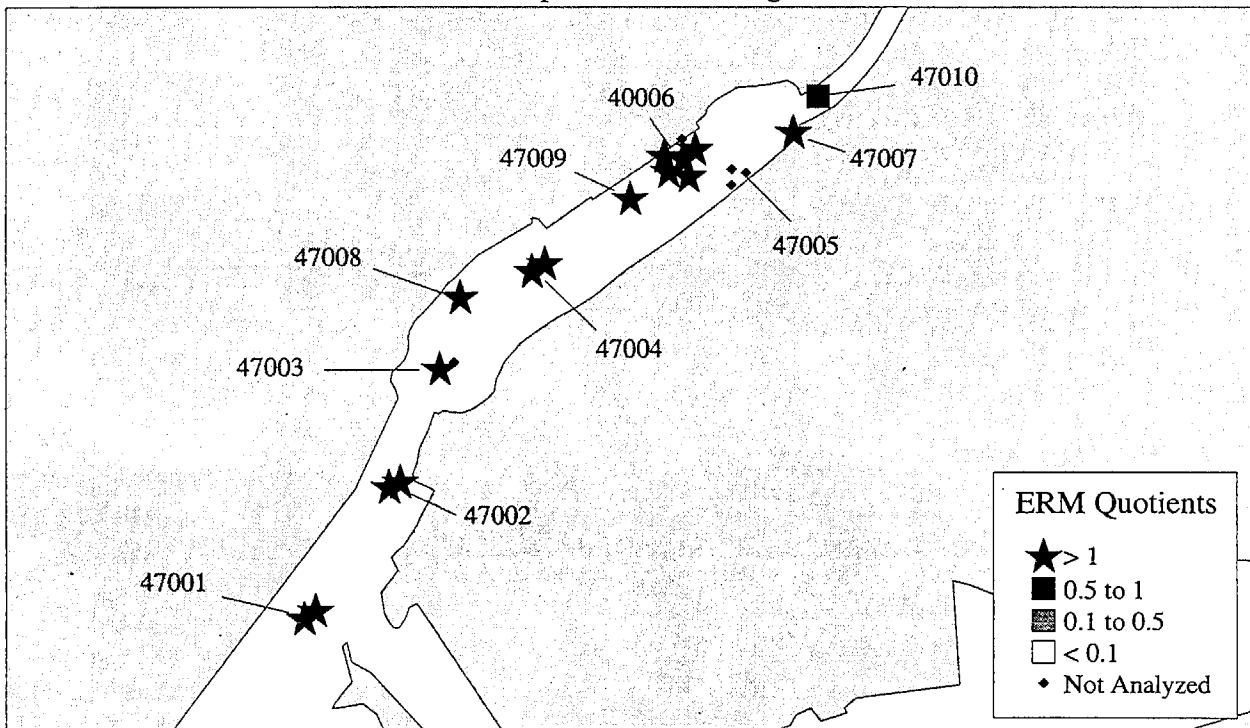


Figure 19a, 19b, and 19c. ERM Quotient values at Outer Los Angeles and Long Beach Harbor (a), Port Hueneme (b), and Palos Verdes (c), Sampling Stations.

Inner Los Angeles/Long Beach Harbor Stations



Consolidated Slip of Inner Los Angeles Harbor



Figures 20a and 20b. ERM Quotient values at Inner Los Angeles and Long Beach Harbor (a), and Consolidated Slip (b), Sampling Stations.