

Draft Technical Report
for
Tentative Cleanup and Abatement
Order No. ~~R9-2011-0001~~R9-2012-0024

APPENDIX FOR SECTION 33

PROPOSED REMEDIAL FOOTPRINT AND
PRELIMINARY REMEDIAL DESIGN

~~September 15, 2010~~March 14, 2012

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Table A33-1 Supporting Calculations for Table 33-1

Station	Composite Ranking Score	Overall Ranking
SW04	46.6	1
SW08	33.0	2
SW02	31.8	3
SW24	23.1	4
SW09	17.4	5
SW28	15.1	6
SW13	15.1	7
SW01	14.9	8
SW21	14.8	9
NA17	14.5	10
SW16	13.2	11
SW20	12.0	12
SW05	11.1	13
SW23	10.5	14
SW22	10.3	15
SW17	10.0	16
NA07	9.9	17
NA19	9.9	18
NA06	9.7	19
SW10	9.7	20
SW14	9.2	21
NA15	8.7	22
SW27	7.6	23
SW29	7.5	24
SW06	7.2	25
SW25	7.1	26
SW15	6.9	27
NA01	6.8	28
SW18	6.7	29
NA16	6.7	30
NA23	6.7	31
NA03	6.7	32
SW30	6.6	33

Station	Composite Ranking Score	Overall Ranking
NA04	6.4	34
SW03	6.2	35
NA27	5.7	36
SW11	5.7	37
NA09	5.4	38
NA18	5.3	39
NA08	5.2	40
NA21	5.1	41
NA28	4.8	42
SW36	4.4	43
SW19	4.2	44
NA24	4.2	45
NA02	3.8	46
NA05	3.8	47
SW34	3.7	48
NA11	3.7	49
NA20	3.7	50
NA22	3.6	51
SW07	3.4	52
NA13	3.3	53
NA10	3.2	54
NA12	3.2	55
SW12	2.9	56
SW26	2.9	57
NA29	2.8	58
NA30	2.4	59
NA14	2.4	60
NA26	2.1	61
SW32	2.1	62
SW33	2.0	63
NA25	1.7	64
SW31	1.4	65
NA31	1.3	66

Table A33-2 Supporting Calculations for Table 33-1

Station	Composite Ranking Score	Overall Ranking
SW04	46.6	1
SW08	33.0	2
SW02	31.8	3
SW24	23.1	4
SW09	17.4	5
SW28	15.1	6
SW13	15.1	7
SW01	14.9	8
SW21	14.8	9
NA17	14.5	10
SW16	13.2	11
SW20	12.0	12
SW05	11.1	13
SW23	10.5	14
SW22	10.3	15
SW17	10.0	16
NA19	9.9	18
NA06	9.7	19
SW10	9.7	20
SW14	9.2	21
NA15	8.7	22
SW27	7.6	23
NA09	5.4	38

Table A33-3 Supporting Data for Table A33-2

Pre-Remedy Average Surface Sediment Concentration																					
Station	As	Cr	Cr	Cl	Pb	Hg	Ni	Se	Ag	Zn	Total HPAH (half DL)	TPAH	Fairey 13 TPAH (half DL)	TOC	Total PCB Congeners (half DL)	Total PCB Homologs (half DL)	Fairey 15 of 18 PCB Congeners (half DL)	Fairey estimate 18 PCB Congeners (*1.21)	Fairey estimate Total PCBs (*2)	TBT	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	%	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
NA01	10.2	0.24	69.75	252.5	84	1.06	14.75	1.08	1.33	298	6575	7050	5580	2.18	375	533	240	290	580	157	
NA02	10.0	0.21	67.00	170	76	0.70	18.00	1.00	1.00	240	2800	3000	2422	2.00	208	299	134	162	324	82	
NA03	11.0	0.29	69.00	220	94	1.10	18.00	1.10	1.40	260	6100	6600	5244	2.33	370	520	237	287	574	180	
NA04	12.0	0.27	73.00	260	93	1.10	19.00	1.10	1.20	310	3500	3700	2819	2.04	250	350	158	191	381	300	
NA05	9.5	0.17	57.00	170	65	0.61	15.00	0.43	0.89	210	2800	3000	2277	1.60	180	250	116	140	280	110	
NA06	10.5	0.27	61.50	395	130	2.35	14.50	1.05	1.02	335	3800	4050	3235	2.14	640	935	400	484	969	225	
NA07	13.5	0.27	60.50	225	100	1.45	16.00	0.90	1.15	255	15850	16500	13734	2.02	495	710	310	375	749	111	
NA08	18.0	0.31	79.00	270	96	0.82	21.00	1.20	1.00	330	3500	3800	2928	2.18	310	430	197	238	476	110	
NA09	13.0	0.40	75.00	260	97	1.20	20.00	1.20	1.10	330	2800	3000	2248	2.26	290	410	188	228	455	120	
NA10	6.9	0.22	52.00	160	59	0.58	14.00	1.00	0.78	190	1800	1900	1438	1.18	160	230	100	120	241	91	
NA11	9.3	0.28	59.00	180	73	0.85	15.00	1.00	1.10	230	2800	3000	2391	1.69	190	270	121	147	294	38	
NA12	9.5	0.18	54.00	150	59	0.62	15.00	1.10	0.79	210	2000	2200	1700	1.48	150	220	97	118	235	80	
NA13	10.8	0.24	59.00	185	75	0.65	15.50	1.00	0.94	295	1800	1950	1511	1.92	173	265	113	137	273	68	
NA14	9.0	0.25	56.00	130	66	0.55	15.00	1.10	0.78	200	1100	1200	963	1.82	128	183	82	99	199	45	
NA15	12.0	0.25	62.00	250	83	0.98	16.00	1.00	1.30	310	3300	3600	2714	1.95	340	480	214	259	517	670	
NA16	10.5	0.36	70.25	252.5	90	1.09	15.75	1.03	1.35	313	3200	3500	2676	2.00	590	665	368	445	890	175	
NA17	14.5	0.41	74.00	510	115	0.85	17.50	1.10	1.30	620	2950	3200	2496	2.03	550	620	339	410	821	1350	
NA18	14.0	0.36	67.00	230	97	0.79	17.00	1.00	1.00	380	2400	2600	1957	2.04	350	490	221	268	536	210	
NA19	14.0	0.37	65.00	270	100	0.78	17.00	1.00	1.10	450	3000	3200	2415	1.84	990	1400	607	734	1469	570	
NA20	6.6	0.44	26.00	96	53	0.24	8.40	1.00	0.53	190	2900	3200	2639	1.42	120	170	74	89	178	280	
NA21	11.0	0.39	51.00	150	83	0.51	14.00	1.10	0.88	250	2100	2200	1829	2.15	177	257	114	137	275	410	
NA22	8.5	0.46	39	150	95	0.38	12.00	1.10	0.91	230	3600	4000	3317	1.65	180	250	112	135	270	120	
NA23	12.0	0.26	77.00	350	120	1.10	18.00	1.30	1.30	430	3400	3700	2988	2.21	510	730	320	387	774	120	
NA24	9.6	0.20	60.00	200	88	0.90	11.00	1.10	0.90	280	2100	2300	1812	2.12	290	410	183	222	443	59	
NA25	6.0	0.11	33.00	85	41	0.42	8.50	1.10	0.72	130	1100	1100	906	1.24	83	120	55	66	133	25	
NA26	6.2	0.11	32.00	80	41	0.48	8.00	1.00	0.66	140	850	910	707	1.22	180	250	115	139	278	37	
NA27	13.0	0.29	100.00	390	110	1.20	27.00	1.30	1.50	500	2800	3000	2465	2.01	210	290	137	166	332	100	
NA28	10.0	0.31	86.00	290	84	0.89	23.00	1.20	1.40	390	3400	3700	2993	1.87	180	260	118	143	286	90	
NA29	6.9	0.14	39.00	110	56	0.55	11.00	1.10	0.86	170	1900	2000	1559	1.70	190	260	119	144	289	58	
NA30	7.5	0.22	37.00	140	59	0.71	9.30	1.00	1.00	170	1000	1100	835	1.38	100	150	70	84	168	22	
NA31	5.3	0.13	29.00	71	34	0.35	7.50	1.10	0.57	110	530	580	447	0.92	68	96	44	53	107	20	
SW01	13.5	0.71	78.50	560	145	1.45	98.00	0.88	1.07	520	7525	8725	7351	2.24	1600	2400	950	1150	2300	450	
SW02	13.8	3.18	118.75	580	170	4.45	106.00	1.26	3.90	585	14500	21250	19460	5.98	5450	8325	3312	4008	8015	167	

Table A33-3 Supporting Data for Table A33-2, Continued

Station	Pre-Remedy Average Surface Sediment Concentration													TBT						
	As	Cd	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn	Total HPAH (half DL)	TPAH	Fairey 13 TPAH (half DL)		TOC	Total PCB Congeners (half DL)	Total PCB Homologs (half DL)	Fairey 15 of 18 PCB Congeners (half DL)	Fairey estimated 18 PCB Congeners (**1.21)	Fairey estimate Total PCBs (*2)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	%	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
SW03	11.0	0.70	52.00	190	79	1.20	18.00	0.80	1.20	230	6800	7500	6134	3.11	410	580	257	310	621	53
SW04	73.0	1.95	87.50	1500	430	1.75	18.00	1.50	1.60	3450	14000	16000	14109	2.28	4000	5200	2476	2996	5992	3250
SW05	11.0	0.86	53.00	230	120	0.96	19.00	0.75	1.20	280	13000	17000	15067	1.55	1200	1800	769	930	1861	170
SW06	15.0	0.85	56.00	170	81	0.75	20.00	0.83	1.10	280	12000	14000	12641	1.82	380	580	235	284	567	100
SW07	8.1	0.19	43.00	150	57	0.52	13.00	0.81	0.74	170	3800	4100	3450	1.73	170	230	107	129	258	44
SW08	24.0	0.73	82.50	920	225	2.25	21.00	1.20	1.45	830	25500	28500	24759	3.80	2100	2700	1308	1583	3166	1850
SW09	27.0	1.10	56.00	660	220	0.96	18.00	0.84	1.30	1200	17000	20000	17383	1.94	710	1100	446	540	1079	910
SW10	13.0	0.87	45.00	160	79	0.58	17.00	0.84	0.82	360	16000	25000	23410	1.21	610	930	380	459	918	250
SW11	9.6	0.24	62.00	170	74	0.75	17.00	0.39	1.10	240	8000	8500	7001	1.81	200	280	127	153	307	140
SW12	7.4	0.14	39.00	119.5	52	0.53	10.80	0.90	0.76	160	3000	3300	2742	1.47	155	231	100	121	243	36
SW13	15.0	0.42	72.00	800	93	0.86	24.00	1.10	1.40	580	12000	14000	12507	2.33	490	710	312	377	754	790
SW14	10.0	0.31	63.00	280	88	1.00	17.00	1.00	1.20	300	8400	9100	7659	2.13	400	570	257	310	621	450
SW15	11.0	0.45	67.00	230	90	0.90	19.00	1.10	1.30	290	7700	8400	7137	2.31	380	540	237	287	573	170
SW16	12.0	0.66	68.00	430	97	1.00	16.00	1.10	1.90	370	5700	6100	4847	2.24	430	610	273	330	661	1100
SW17	12.0	0.37	73.00	270	93	0.98	20.00	0.44	1.50	310	10000	11000	9199	2.53	540	880	333	403	805	440
SW18	11.0	0.33	74.00	220	86	0.75	20.00	0.44	1.30	280	8100	8800	7471	2.19	440	660	276	334	668	130
SW19	7.1	0.15	42.00	110	51	2.10	12.00	0.70	0.78	150	1100	1200	938	1.15	94	135	61	74	148	37
SW20	14.0	0.41	68.00	290	110	0.99	18.00	1.10	1.10	390	11000	12000	9736	2.14	1600	2600	1023	1238	2476	130
SW21	11.0	0.51	70.00	260	120	1.40	14.00	1.00	1.30	330	9700	10000	8480	2.10	2400	3600	1491	1804	3608	170
SW22	13.0	0.35	70.00	260	110	1.10	21.00	1.10	1.30	310	12000	13000	10684	2.46	900	1400	577	698	1396	190
SW23	15.0	0.37	89.00	280	110	1.00	25.00	1.10	1.30	330	11000	12000	9880	2.52	1000	1500	640	775	1550	210
SW24	10.0	0.33	52.50	300	88	1.90	16.00	0.95	1.15	300	52000	57000	50225	1.75	950	1500	588	711	1423	165
SW25	11.5	0.36	64.50	230	86	0.78	16.50	1.00	1.20	345	8150	8800	7505	2.15	350	500	221	268	535	231
SW26	9.0	0.14	45.00	120	58	0.43	12.00	0.90	0.46	160	1600	1700	1345	1.31	293	418	184	222	444	49
SW27	10.0	0.27	63.00	210	80	0.68	18.00	0.42	1.10	250	12000	14000	12055	2.08	200	320	128	155	311	250
SW28	14.0	0.32	65.50	265	100	0.88	15.00	1.20	1.10	330	17000	19000	16165	2.52	2100	2600	1388	1679	3359	150
SW29	8.3	0.49	44.00	220	72	0.93	37.00	1.10	1.20	230	4600	4900	4142	1.34	820	1200	504	610	1220	190
SW30	8.9	0.23	72.00	240	72	1.10	13.00	1.00	1.20	300	4900	5200	4311	2.05	380	540	240	291	581	200
SW31	4.0	0.06	18.00	54	21	0.23	4.90	1.20	0.36	80	1200	1300	1031	0.66	66	93	42	51	101	36
SW32	9.4	0.06	43.00	92	57	0.51	11.00	1.10	0.33	160	820	900	719	1.56	160	230	101	122	245	30
SW33	10.0	0.07	41.00	100	58	0.53	11.00	1.20	0.24	170	1000	1100	826	2.09	100	150	68	82	164	19
SW34	8.3	0.21	53.00	320	99	0.75	11.00	1.10	0.95	310	1400	1500	1155	1.68	130	180	82	99	198	38
SW36	9.9	0.21	70.00	240	79	0.75	13.00	1.00	1.20	300	4000	4300	3607	2.23	200	282	131	159	318	49

Table A33-4 Supporting Calculations for Table 33-7

NORTH SHIPYARD AREA

Polygon/Sample Station/SMU	Apparent Depth of Contaminant Exceedances (ft)	Estimated Required Neatline Dredging Depth (ft)	Dredging Area (sq.ft.)	Underpier Remedial Area (sq.ft.)	Total Remedial Area (sq.ft.)	Estimated Volume of Dredging to Neatline Elevation (cy)	Estimated Volume of 1 ft Additional Dredging (cy)	Total Estimated Dredging Volume (cy)
SW01	4.0	4	42,886	0	42,886	6,400	1,600	7,400
SW02	4.9	5	46,657	0	46,657	8,600	1,700	9,900
SW04	4.1	5	16,282	6,639	22,921	3,000	600	3,600
SW05	surface sample ¹	5	18,892	6,510	25,402	3,500	700	4,200
SW08	6.0	6	9,066	6,355	15,421	2,000	300	2,400
SW09	surface sample	3	19,598	4,791	24,389	2,200	700	2,900
SW10	2.0	3	18,389	3,237	21,626	2,000	700	2,700
SW13	surface sample ¹	5	19,937	17,204	37,141	3,700	700	4,400
SW14	surface sample	3	16,208	539	16,747	1,800	600	2,400
SW16	surface sample ¹	5	18,223	51	18,273	3,400	700	4,000
SW17	6.2	7	46,963	9,155	56,117	12,200	1,700	13,900
SW20	2.4	3	7,966	19,635	27,601	900	300	1,200
SW21	surface sample	3	13,641	0	13,641	1,500	500	2,000
SW22	surface sample	3	4,440	0	4,440	500	200	700
SW23	surface sample	3	16,950	9,892	26,842	1,900	600	2,500
SW24	3.0	3	20,006	5,934	25,940	2,200	700	3,000
SW27	4.25	5	77,488	39	77,527	14,300	2,900	17,200
SW28	5.3	6	24,723	0	24,723	5,500	900	6,400
TOTALS			438,300	89,980	528,295	77,700	16,800	90,800

surface sample¹

Dredge depth estimated considering adjacent polygon core(s)

Table A33-5 Supporting Calculations for Table 33-7

SOUTH SHIPYARD AREA

Polygon/Sample Station/SMU	Apparent Depth of Contaminant Exceedances (ft)	Estimated Required Neatline Dredging Depth (ft)	Dredging Area (sq. ft.)	Underpier Remedial Area (sq. ft.)	Total Remedial Area (sq. ft.)	Estimated Volume of Dredging to Neatline Elevation (cy)	Estimated Volume of 1 ft Additional Dredging (cy)	Total Estimated Dredging Volume (cy)
SW28	5.3	6	21,920	3,370	25,290	4,900	800	5,700
NA06	3.9	5	50,190	10,355	60,545	9,300	1,900	11,200
NA09	8.0	9	29,520		29,520	9,800	1,100	10,900
NA15	surface sample	3	47,630		47,630	5,300	1,800	7,100
NA17	4.0	5	36,470		36,470	6,800	1,400	8,200
NA19	5.8	7	32,040		32,040	8,300	1,200	9,500
TOTALS			217,800	13,725	231,495	44,400	8,200	52,600

Table A33-6 Supporting Calculations for Table 33-8

Pre-Remediation SWAC Calculations for Secondary COPCs

Station	Area (ft2)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Concentration x Area Product			
						Arsenic (mg*ft2/kg)	Cadmium (mg*ft2/kg)	Lead (mg*ft2/kg)	Zinc (mg*ft2/kg)
NA01	99788.14	10.2	0.24	84	298	1,017,839	23,700	8,382,204	29,686,972
NA02	164015.27	10.0	0.21	76	240	1,640,153	34,443	12,465,161	39,363,665
NA03	118384.16	11.0	0.29	94	260	1,302,226	34,331	11,128,111	30,779,882
NA04	72669.16	12.0	0.27	93	310	872,030	19,621	6,758,232	22,527,440
NA05	112824.21	9.5	0.17	65	210	1,071,830	19,180	7,333,574	23,693,084
NA06	61035.38	10.5	0.27	130	335	640,871	16,174	7,934,599	20,446,852
NA07	30297.53	13.5	0.27	100	255	409,017	8,180	3,029,753	7,725,870
NA08	20352.06	18.0	0.31	96	330	366,337	6,309	1,953,798	6,716,180
NA09	29520.76	13.0	0.40	97	330	383,770	11,808	2,863,514	9,741,851
NA10	29135.97	6.9	0.22	59	190	201,038	6,410	1,719,022	5,535,834
NA11	37813.37	9.3	0.28	73	230	351,664	10,588	2,760,376	8,697,075
NA12	91095.58	9.5	0.18	59	210	865,408	16,397	5,374,639	19,130,072
NA13	255727.1	10.8	0.24	75	295	2,749,066	60,096	19,179,533	75,439,495
NA14	208687.42	9.0	0.25	66	200	1,878,187	52,172	13,773,370	41,737,484
NA15	47632.64	12.0	0.25	83	310	571,592	11,908	3,953,509	14,766,118
NA16	38254.43	10.5	0.36	90	313	401,672	13,867	3,433,335	11,954,509
NA17	36471.38	14.5	0.41	115	620	528,835	14,771	4,194,209	22,612,256
NA18	40452.33	14.0	0.36	97	380	566,333	14,563	3,923,876	15,371,885
NA19	32043.3	14.0	0.37	100	450	448,606	11,856	3,204,330	14,419,485
NA20	311465.2	6.6	0.44	53	190	2,055,670	137,045	16,507,656	59,178,388
NA21	476121.97	11.0	0.39	83	250	5,237,342	185,688	39,518,124	119,030,493
NA22	54670.01	8.5	0.46	95	230	464,695	25,148	5,193,651	12,574,102
NA23	67999.54	12.0	0.26	120	430	815,994	17,680	8,159,945	29,239,802
NA24	65314.32	9.6	0.20	88	280	627,017	13,063	5,747,660	18,288,010
NA25	521663.86	6.0	0.11	41	130	3,129,983	57,383	21,388,218	67,816,302
NA26	302543.59	6.2	0.11	41	140	1,875,770	33,280	12,404,287	42,356,103
NA27	53889.29	13.0	0.29	110	500	700,561	15,628	5,927,822	26,944,645
NA28	54261.96	10.0	0.31	84	390	542,620	16,821	4,558,005	21,162,164
NA29	202963.84	6.9	0.14	56	170	1,400,450	28,415	11,365,975	34,503,853
NA30	240837.72	7.5	0.22	59	170	1,806,283	52,984	14,209,425	40,942,412
NA31	229185.41	5.3	0.13	34	110	1,214,683	29,794	7,792,304	25,210,395
SW01	33393.71	13.5	0.71	145	520	450,815	23,710	4,842,088	17,364,729
SW02	39161.81	13.8	3.18	170	585	538,475	124,339	6,657,508	22,909,659
SW03	48810.9	11.0	0.70	79	230	536,920	34,168	3,856,061	11,226,507
SW04	22681.7	73.0	1.95	430	3450	1,655,764	44,229	9,753,131	78,251,865
SW05	24162.5	11.0	0.86	120	280	265,788	20,780	2,899,500	6,765,500
SW06	25750.8	15.0	0.85	81	280	386,262	21,888	2,085,815	7,210,224
SW07	40947.48	8.1	0.19	57	170	331,675	7,780	2,334,006	6,961,072
SW08	16828.59	24.0	0.73	225	830	403,886	12,285	3,786,433	13,967,730
SW09	24478.67	27.0	1.10	220	1200	660,924	26,927	5,385,307	29,374,404
SW10	21608.22	13.0	0.87	79	360	280,907	18,799	1,707,049	7,778,959
SW11	36689.34	9.6	0.24	74	240	352,218	8,805	2,715,011	8,805,442
SW12	112941.81	7.4	0.14	52	160	835,769	15,812	5,872,974	18,070,690

Table A33-6 Supporting Calculations for Table 33-8, Continued

Station	Area (ft ²)	Concentration x Area Product							
		Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Arsenic (mg*ft ² /kg)	Cadmium (mg*ft ² /kg)	Lead (mg*ft ² /kg)	Zinc (mg*ft ² /kg)
SW13	38256.61	15.0	0.42	93	580	573,849	16,068	3,557,865	22,188,834
SW14	16731.93	10.0	0.31	88	300	167,319	5,187	1,472,410	5,019,579
SW15	55765.87	11.0	0.45	90	290	613,425	25,095	5,018,928	16,172,102
SW16	17834.72	12.0	0.66	97	370	214,017	11,771	1,729,968	6,598,846
SW17	55898.31	12.0	0.37	93	310	670,780	20,682	5,198,543	17,328,476
SW18	52601.48	11.0	0.33	86	280	578,616	17,358	4,523,727	14,728,414
SW19	214746.55	7.1	0.15	51	150	1,524,701	32,212	10,952,074	32,211,983
SW20	28174.86	14.0	0.41	110	390	394,448	11,552	3,099,235	10,988,195
SW21	11896.32	11.0	0.51	120	330	130,860	6,067	1,427,558	3,925,786
SW22	3761.78	13.0	0.35	110	310	48,903	1,317	413,796	1,166,152
SW23	30077.25	15.0	0.37	110	330	451,159	11,129	3,308,498	9,925,493
SW24	21179.22	10.0	0.33	88	300	211,792	6,883	1,863,771	6,353,766
SW25	69689.81	11.5	0.36	86	345	801,433	24,740	5,958,479	24,042,984
SW26	86923.41	9.0	0.14	58	160	782,311	12,169	5,041,558	13,907,746
SW27	78888.57	10.0	0.27	80	250	788,886	21,300	6,311,086	19,722,143
SW28	51553.93	14.0	0.32	100	330	721,755	16,239	5,155,393	17,012,797
SW29	62496.99	8.3	0.49	72	230	518,725	30,624	4,499,783	14,374,308
SW30	72230.96	8.9	0.23	72	300	642,856	16,613	5,200,629	21,669,288
SW31	83498.32	4.0	0.06	21	80	333,993	5,344	1,753,465	6,679,866
SW32	78476.82	9.4	0.06	57	160	737,682	5,023	4,473,179	12,556,291
SW33	151872.14	10.0	0.07	58	170	1,518,721	9,872	8,808,584	25,818,264
SW34	304572.02	8.3	0.21	99	310	2,527,948	63,960	30,152,630	94,417,326
SW36	90729.61	9.9	0.21	79	300	898,223	19,053	7,167,639	27,218,883
Total	6,232,430					58,689,345	1,749,081	455,121,895	1,570,306,977

						Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)
SWAC						9.4	0.28	73	252.0
Max						73.0	3.2	430.0	3,450.0

Table A33-7

Supporting Data for Table A33-6

Station	Pre-Remedy Average Surface Sediment Concentration														Fairley 15 of 18 PCB Congeners (half DL) ug/kg	Fairley estimated 18 PCB Congeners (*1.21) ug/kg	Fairley estimate Total PCBs (*2) ug/kg	TBT ug/kg		
	As	Ca	Cr	Cu	Pb	Hg	Ni	Se	Ag	Zn	Total HPAH (half DL) ug/kg	TPAH ug/kg	Fairley 13 TPAH (half DL) ug/kg	TOC %					Total PCB Congeners (half DL) ug/kg	Total PCB Homologs (half DL) ug/kg
NA01	10.2	0.24	69.75	252.5	84	1.06	14.75	1.08	1.33	298	6575	7050	5580	2.18	375	533	240	290	580	157
NA02	10.0	0.21	67.00	170	76	0.70	18.00	1.00	1.00	240	2800	3000	2422	2.00	208	299	134	162	324	82
NA03	11.0	0.29	69.00	220	94	1.10	18.00	1.10	1.40	260	6100	6600	5244	2.33	370	520	237	287	574	180
NA04	12.0	0.27	73.00	260	93	1.10	19.00	1.10	1.20	310	3500	3700	2819	2.04	250	350	158	191	381	300
NA05	9.5	0.17	57.00	170	65	0.61	15.00	0.43	0.89	210	2800	3000	2277	1.60	180	250	116	140	280	110
NA06	10.5	0.27	61.50	395	130	2.35	14.50	1.05	1.02	335	3800	4050	3235	2.14	640	935	400	484	969	225
NA07	13.5	0.27	60.50	225	100	1.45	16.00	0.90	1.15	255	15850	16500	13734	2.02	495	710	310	375	749	111
NA08	18.0	0.31	79.00	270	96	0.82	21.00	1.20	1.00	330	3500	3800	2928	2.18	310	430	197	238	476	110
NA09	13.0	0.40	75.00	260	97	1.20	20.00	1.20	1.10	330	2800	3000	2248	2.26	290	410	188	228	455	120
NA10	6.9	0.22	52.00	160	59	0.58	14.00	1.00	0.78	190	1800	1900	1438	1.18	160	230	100	120	241	91
NA11	9.3	0.28	59.00	180	73	0.85	15.00	1.00	1.10	230	2800	3000	2391	1.69	190	270	121	147	294	38
NA12	9.5	0.18	54.00	150	59	0.62	15.00	1.10	0.79	210	2000	2200	1700	1.48	150	220	97	118	235	80
NA13	10.8	0.24	59.00	185	75	0.65	15.50	1.00	0.94	295	1800	1950	1511	1.92	173	265	113	137	273	68
NA14	9.0	0.25	56.00	130	66	0.55	15.00	1.10	0.78	200	1100	1200	963	1.82	128	183	82	99	199	45
NA15	12.0	0.25	62.00	250	83	0.98	16.00	1.00	1.30	310	3300	3600	2714	1.95	340	480	214	259	517	670
NA16	10.5	0.36	70.25	252.5	90	1.09	15.75	1.03	1.35	313	3200	3500	2676	2.00	590	665	368	445	890	175
NA17	14.5	0.41	74.00	510	115	0.85	17.50	1.10	1.30	620	2950	3200	2496	2.03	550	620	339	410	821	1350
NA18	14.0	0.36	67.00	230	97	0.79	17.00	1.00	1.00	380	2400	2600	1957	2.04	350	490	221	268	536	210
NA19	14.0	0.37	65.00	270	100	0.78	17.00	1.00	1.10	450	3000	3200	2415	1.84	990	1400	607	734	1469	570
NA20	6.6	0.44	26.00	96	53	0.24	8.40	1.00	0.53	190	2900	3200	2639	1.42	120	170	74	89	178	280
NA21	11.0	0.39	51.00	150	83	0.51	14.00	1.10	0.88	250	2100	2200	1829	2.15	177	257	114	137	275	410
NA22	8.5	0.46	39	150	95	0.38	12.00	1.10	0.88	230	3600	4000	3317	1.65	180	250	112	135	270	120
NA23	12.0	0.26	77.00	350	120	1.10	18.00	1.30	1.30	430	3400	3700	2988	2.21	510	730	320	387	774	120
NA24	9.6	0.20	60.00	200	88	0.90	11.00	1.10	0.90	280	2100	2300	1812	2.12	290	410	183	222	443	59
NA25	6.0	0.11	33.00	85	41	0.42	8.50	1.10	0.72	130	1100	1100	906	1.24	83	120	55	66	133	25
NA26	6.2	0.11	32.00	80	41	0.48	8.00	1.00	0.66	140	850	910	707	1.22	180	250	115	139	278	37
NA27	13.0	0.29	100.00	390	110	1.20	27.00	1.30	1.50	500	2800	3000	2465	2.01	210	290	137	166	332	100
NA28	10.0	0.31	86.00	290	84	0.89	23.00	1.20	1.40	390	3400	3700	2993	1.87	180	260	118	143	286	90
NA29	6.9	0.14	39.00	110	56	0.55	11.00	1.10	0.86	170	1900	2000	1559	1.70	190	260	119	144	289	58
NA30	7.5	0.22	37.00	140	59	0.71	9.30	1.00	1.00	170	1000	1100	835	1.38	100	150	70	84	168	22
NA31	5.3	0.13	29.00	71	34	0.35	7.50	1.10	0.57	110	530	580	447	0.92	68	96	44	53	107	20
SW01	13.5	0.71	78.50	560	145	1.45	98.00	0.88	1.07	520	7525	8725	7351	2.24	1600	2400	950	1150	2300	450
SW02	13.8	3.18	118.75	580	170	4.45	106.00	1.26	3.90	585	14500	21250	19460	5.98	5450	8325	3312	4008	8015	167

Table A33-7

Supporting Data for Table A33-6, Continued

Station	Pre-Remedy Average Surface Sediment Concentration																			
	As mg/kg	Cd mg/kg	Cr mg/kg	Cu mg/kg	Pb mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Zn mg/kg	Total HPAH (half DL) ug/kg	TPAH ug/kg	Fairey 13 TPAH (half DL) ug/kg	TOC %	Total PCB Congeners (half DL) ug/kg	Total PCB Homologs (half DL) ug/kg	Fairey 15 of 18 PCB Congeners (half DL) ug/kg	Fairey estimated 18 PCB Congeners (*1.21) ug/kg	Fairey estimate Total PCBs (*2) ug/kg	TBT ug/kg
SW03	11.0	0.70	52.00	190	79	1.20	18.00	0.80	1.20	230	6800	7500	6134	3.11	410	580	257	310	621	53
SW04	73.0	1.95	87.50	1500	430	1.75	18.00	1.50	1.60	3450	14000	16000	14109	2.28	4000	5200	2476	2996	5992	3250
SW05	11.0	0.86	53.00	230	120	0.96	19.00	0.75	1.20	280	13000	17000	15067	1.55	1200	1800	769	930	1861	170
SW06	15.0	0.85	56.00	170	81	0.75	20.00	0.83	1.10	280	12000	14000	12641	1.82	380	580	235	284	567	100
SW07	8.1	0.19	43.00	150	57	0.52	13.00	0.81	0.74	170	3800	4100	3450	1.73	170	230	107	129	258	44
SW08	24.0	0.73	82.50	920	225	2.25	21.00	1.20	1.45	830	25500	28500	24759	3.80	2100	2700	1308	1583	3166	1850
SW09	27.0	1.10	56.00	660	220	0.96	18.00	0.84	1.30	1200	17000	20000	17383	1.94	710	1100	446	540	1079	910
SW10	13.0	0.87	45.00	160	79	0.58	17.00	0.84	0.82	360	16000	25000	23410	1.21	610	930	380	459	918	250
SW11	9.6	0.24	62.00	170	74	0.75	17.00	0.39	1.10	240	8000	8500	7001	1.81	200	280	127	153	307	140
SW12	7.4	0.14	39.00	119.5	52	0.53	10.80	0.90	0.76	160	3000	3300	2742	1.47	155	231	100	121	243	36
SW13	15.0	0.42	72.00	800	93	0.86	24.00	1.10	1.40	580	12000	14000	12507	2.33	490	710	312	377	754	790
SW14	10.0	0.31	63.00	280	88	1.00	17.00	1.00	1.20	300	8400	9100	7659	2.13	400	570	257	310	621	450
SW15	11.0	0.45	67.00	230	90	0.90	19.00	1.10	1.30	290	7700	8400	7137	2.31	380	540	237	287	573	170
SW16	12.0	0.66	68.00	430	97	1.00	16.00	1.10	1.90	370	5700	6100	4847	2.24	430	610	273	330	661	1100
SW17	12.0	0.37	73.00	270	93	0.98	20.00	0.44	1.50	310	10000	11000	9199	2.53	540	880	333	403	805	440
SW18	11.0	0.33	74.00	220	86	0.75	20.00	0.44	1.30	280	8100	8800	7471	2.19	440	660	276	334	668	130
SW19	7.1	0.15	42.00	110	51	2.10	12.00	0.70	0.78	150	1100	1200	938	1.15	94	135	61	74	148	37
SW20	14.0	0.41	68.00	290	110	0.99	18.00	1.10	1.10	390	11000	12000	9736	2.14	1600	2600	1023	1238	2476	130
SW21	11.0	0.51	70.00	260	120	1.40	14.00	1.00	1.30	330	9700	10000	8480	2.10	2400	3600	1491	1804	3608	170
SW22	13.0	0.35	70.00	260	110	1.10	21.00	1.10	1.30	310	12000	13000	10684	2.46	900	1400	577	698	1396	190
SW23	15.0	0.37	89.00	280	110	1.00	25.00	1.10	1.30	330	11000	12000	9880	2.52	1000	1500	640	775	1550	210
SW24	10.0	0.33	52.50	300	88	1.90	16.00	0.95	1.15	300	52000	57000	50225	1.75	950	1500	588	711	1423	165
SW25	11.5	0.36	64.50	230	86	0.78	16.50	1.00	1.20	345	8150	8800	7505	2.15	350	500	221	268	535	231
SW26	9.0	0.14	45.00	120	58	0.43	12.00	0.90	0.46	160	1600	1700	1345	1.31	293	418	184	222	444	49
SW27	10.0	0.27	63.00	210	80	0.68	18.00	0.42	1.10	250	12000	14000	12055	2.08	200	320	128	155	311	250
SW28	14.0	0.32	65.50	265	100	0.88	15.00	1.20	1.10	330	17000	19000	16165	2.52	2100	2600	1388	1679	3359	150
SW29	8.3	0.49	44.00	220	72	0.93	37.00	1.10	1.20	230	4600	4900	4142	1.34	820	1200	504	610	1220	190
SW30	8.9	0.23	72.00	240	72	1.10	13.00	1.00	1.20	300	4900	5200	4311	2.05	380	540	240	291	581	200
SW31	4.0	0.06	18.00	54	21	0.23	4.90	1.20	0.36	80	1200	1300	1031	0.66	66	93	42	51	101	36
SW32	9.4	0.06	43.00	92	57	0.51	11.00	1.10	0.33	160	820	900	719	1.56	160	230	101	122	245	30
SW33	10.0	0.07	41.00	100	58	0.53	11.00	1.20	0.24	170	1000	1100	826	2.09	100	150	68	82	164	19
SW34	8.3	0.21	53.00	320	99	0.75	11.00	1.10	0.95	310	1400	1500	1155	1.68	130	180	82	99	198	38
SW36	9.9	0.21	70.00	240	79	0.75	13.00	1.00	1.20	300	4000	4300	3607	2.23	200	282	131	159	318	49

Table A33-8 Supporting Calculations for Table 33-8

Predicted Post-Remediation SWAC Calculations for Secondary COPCs

Station	Area (ft ²)	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Concentration x Area Product				
						Arsenic (mg*ft ² /kg)	Cadmium (mg*ft ² /kg)	Lead (mg*ft ² /kg)	Zinc (mg*ft ² /kg)	
Areas to be Remediated^a										
NA01	^d 7450.46	7.5	0.33	53	192	55878.45	2458.652	394874.4	1430488.3	
NA06	^d 41011.66	7.5	0.33	53	192	307587.5	13533.85	2173618	7874238.7	
NA09	^d 27339.07	7.5	0.33	53	192	205043	9021.893	1448971	5249101.4	
NA12	^d 4925.27	7.5	0.33	53	192	36939.53	1625.339	261039.3	945651.84	
NA15	^d 46308.55	7.5	0.33	53	192	347314.1	15281.82	2454353	8891241.6	
NA16	^d 436.18	7.5	0.33	53	192	3271.35	143.9394	23117.54	83746.56	
NA17	^d 34490.11	7.5	0.33	53	192	258675.8	11381.74	1827976	6622101.1	
NA18	^d 8706.93	7.5	0.33	53	192	65301.98	2873.287	461467.3	1671730.6	
NA19	^d 27443.69	7.5	0.33	53	192	205827.7	9056.418	1454516	5269188.5	
NA23	^d 4229.31	7.5	0.33	53	192	31719.83	1395.672	224153.4	812027.52	
NA27	^d 175.35	7.5	0.33	53	192	1315.125	57.8655	9293.55	33667.2	
SW01	33393.71	7.5	0.33	53	192	250452.8	11019.92	1769867	6411592.3	
SW02	^d 39161.57	7.5	0.33	53	192	293711.8	12923.32	2075563	7519021.4	
SW03	^d 197.35	7.5	0.33	53	192	1480.125	65.1255	10459.55	37891.2	
SW04	^d 15943.17	7.5	0.33	53	192	119573.8	5261.246	844988	3061088.6	
SW05	^d 16583.75	7.5	0.33	53	192	124378.1	5472.638	878938.8	3184080	
SW06	^d 3444.97	7.5	0.33	53	192	25837.28	1136.84	182583.4	661434.24	
SW08	^d 12302.76	7.5	0.33	53	192	92270.7	4059.911	652046.3	2362129.9	
SW09	^d 21043.82	7.5	0.33	53	192	157828.7	6944.461	1115322	4040413.4	
SW10	^d 19662.59	7.5	0.33	53	192	147469.4	6488.655	1042117	3775217.3	
SW13	^d 21648.86	7.5	0.33	53	192	162366.5	7144.124	1147390	4156581.1	
SW14	16731.93	7.5	0.33	53	192	125489.5	5521.537	886792.3	3212530.6	
SW15	^d 6892.1	7.5	0.33	53	192	51690.75	2274.393	365281.3	1323283.2	
SW16	^d 17459.12	7.5	0.33	53	192	130943.4	5761.51	925333.4	3352151	
SW17	^d 48027.07	7.5	0.33	53	192	360203	15848.93	2545435	9221197.4	
SW20	^d 9224.04	7.5	0.33	53	192	69180.3	3043.933	488874.1	1771015.7	
SW21	11896.32	7.5	0.33	53	192	89222.4	3925.786	630505	2284093.4	
SW22	3761.78	7.5	0.33	53	192	28213.35	1241.387	199374.3	722261.76	
SW23	^d 22032	7.5	0.33	53	192	165240	7270.56	1167696	4230144	
SW24	^d 16399.18	7.5	0.33	53	192	122993.9	5411.729	869156.5	3148642.6	
SW25	^d 7242.97	7.5	0.33	53	192	54322.28	2390.18	383877.4	1390650.2	
SW27	^d 71021.23	7.5	0.33	53	192	532659.2	23437.01	3764125	13636076	
SW28	^d 41115.65	7.5	0.33	53	192	308367.4	13568.16	2179129	7894204.8	
SW29	^d 18649.41	7.5	0.33	53	192	139870.6	6154.305	988418.7	3580686.7	
SW31	^d 5048.81	7.5	0.33	53	192	37866.08	1666.107	267586.9	969371.52	
Areas Outside of Remediation Footprint										
NA01	92337.68	10.2	0.2375	84	297.5	941844.3	21930.2	7756365	27470460	
NA02	164015.3	10	0.21	76	240	1640153	34443.21	12465161	39363665	
NA03	118384.2	11	0.29	94	260	1302226	34331.41	11128111	30779882	
NA04	72669.16	12	0.27	93	310	872029.9	19620.67	6758232	22527440	
NA05	112824.2	9.5	0.17	65	210	1071830	19180.12	7333574	23693084	

Table A33-8 Supporting Calculations for Table 33-8, Continued

Station	Area (ft ²)	Concentration x Area Product							
		Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Arsenic (mg*ft ² /kg)	Cadmium (mg*ft ² /kg)	Lead (mg*ft ² /kg)	Zinc (mg*ft ² /kg)
NA06	20023.72	10.5	0.265	130	335	210249.1	5306.286	2603084	6707946.2
NA07	30297.53	13.5	0.27	100	255	409016.7	8180.333	3029753	7725870.2
NA08	20352.06	18	0.31	96	330	366337.1	6309.139	1953798	6716179.8
NA09	2181.69	13	0.4	97	330	28361.97	872.676	211623.9	719957.7
NA10	29135.97	6.9	0.22	59	190	201038.2	6409.913	1719022	5535834.3
NA11	37813.37	9.3	0.28	73	230	351664.3	10587.74	2760376	8697075.1
NA12	86170.31	9.5	0.18	59	210	818617.9	15510.66	5084048	18095765
NA13	255727.1	10.75	0.235	75	295	2749066	60095.87	19179533	75439495
NA14	208687.4	9	0.25	66	200	1878187	52171.86	13773370	41737484
NA15	1324.09	12	0.25	83	310	15889.08	331.0225	109899.5	410467.9
NA16	37818.25	10.5	0.3625	89.75	312.5	397091.6	13709.12	3394188	11818203
NA17	1981.27	14.5	0.405	115	620	28728.42	802.4144	227846.1	1228387.4
NA18	31745.4	14	0.36	97	380	444435.6	11428.34	3079304	12063252
NA19	4599.61	14	0.37	100	450	64394.54	1701.856	459961	2069824.5
NA20	311465.2	6.6	0.44	53	190	2055670	137044.7	16507656	59178388
NA21	476122	11	0.39	83	250	5237342	185687.6	39518124	119030493
NA22	54670.01	8.5	0.46	95	230	464695.1	25148.2	5193651	12574102
NA23	63770.23	12	0.26	120	430	765242.8	16580.26	7652428	27421199
NA24	65314.32	9.6	0.2	88	280	627017.5	13062.86	5747660	18288010
NA25	521663.9	6	0.11	41	130	3129983	57383.02	21388218	67816302
NA26	302543.6	6.2	0.11	41	140	1875770	33279.79	12404287	42356103
NA27	53713.94	13	0.29	110	500	698281.2	15577.04	5908533	26856970
NA28	54261.96	10	0.31	84	390	542619.6	16821.21	4558005	21162164
NA29	202963.8	6.9	0.14	56	170	1400450	28414.94	11365975	34503853
NA30	240837.7	7.5	0.22	59	170	1806283	52984.3	14209425	40942412
NA31	229185.4	5.3	0.13	34	110	1214683	29794.1	7792304	25210395
SW02	0.24	13.75	3.175	170	585	3.3	0.762	40.8	140.4
SW03	48613.55	11	0.7	79	230	534749.1	34029.49	3840470	11181117
SW04	6738.53	73	1.95	430	3450	491912.7	13140.13	2897568	23247929
SW05	7578.75	11	0.86	120	280	83366.25	6517.725	909450	2122050
SW06	22305.83	15	0.85	81	280	334587.5	18959.96	1806772	6245632.4
SW07	40947.48	8.1	0.19	57	170	331674.6	7780.021	2334006	6961071.6
SW08	4525.83	24	0.73	225	830	108619.9	3303.856	1018312	3756438.9
SW09	3434.85	27	1.1	220	1200	92740.95	3778.335	755667	4121820
SW10	1945.63	13	0.87	79	360	25293.19	1692.698	153704.8	700426.8
SW11	36689.34	9.6	0.24	74	240	352217.7	8805.442	2715011	8805441.6
SW12	112941.8	7.4	0.14	52	160	835769.4	15811.85	5872974	18070690
SW13	16607.75	15	0.42	93	580	249116.3	6975.255	1544521	9632495
SW15	48873.77	11	0.45	90	290	537611.5	21993.2	4398639	14173393
SW16	375.6	12	0.66	97	370	4507.2	247.896	36433.2	138972
SW17	7871.24	12	0.37	93	310	94454.88	2912.359	732025.3	2440084.4
SW18	52601.48	11	0.33	86	280	578616.3	17358.49	4523727	14728414
SW19	214746.6	7.1	0.15	51	150	1524701	32211.98	10952074	32211983
SW20	18950.82	14	0.41	110	390	265311.5	7769.836	2084590	7390819.8
SW23	8045.25	15	0.37	110	330	120678.8	2976.743	884977.5	2654932.5

Table A33-8 Supporting Calculations for Table 33-8, Continued

Station	Area (ft ²)	Concentration x Area Product							
		Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)	Arsenic (mg*ft ² /kg)	Cadmium (mg*ft ² /kg)	Lead (mg*ft ² /kg)	Zinc (mg*ft ² /kg)
SW24	4780.04	10	0.325	88	300	47800.4	1553.513	420643.5	1434012
SW25	62446.84	11.5	0.355	85.5	345	718138.7	22168.63	5339205	21544160
SW26	86923.41	9	0.14	58	160	782310.7	12169.28	5041558	13907746
SW27	7867.34	10	0.27	80	250	78673.4	2124.182	629387.2	1966835
SW28	10438.28	14	0.315	100	330	146135.9	3288.058	1043828	3444632.4
SW29	43847.58	8.3	0.49	72	230	363934.9	21485.31	3157026	10084943
SW30	72230.96	8.9	0.23	72	300	642855.5	16613.12	5200629	21669288
SW31	78449.51	4	0.064	21	80	313798	5020.769	1647440	6275960.8
SW32	78476.82	9.4	0.064	57	160	737682.1	5022.516	4473179	12556291
SW33	151872.1	10	0.065	58	170	1518721	9871.689	8808584	25818264
SW34	304572	8.3	0.21	99	310	2527948	63960.12	30152630	94417326
SW36	90729.61	9.9	0.21	79	300	898223.1	19053.22	7167639	27218883
Total	6232430					54061857	1548159	4.12E+08	1.378E+09

							Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)
SWAC							8.67	0.2	66.09	221.08
Max							18	0.46	100	390

- a Concentration in areas to be remediated is set to background for SWAC calculations.
- b Only portion of the polygon to be remediated.

Table A33-9

Supporting Data for Table A33-8

Station	Pre-Remedy Average Surface Sediment Concentration																			
	As mg/kg	Cd mg/kg	Cr mg/kg	Cu mg/kg	Pb mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Zn mg/kg	Total HPAH (half DL) ug/kg	TPAH ug/kg	Fairey 13 TPAH (half DL) ug/kg	TOC %	Total PCB Congeners (half DL) ug/kg	Total PCB Homologs (half DL) ug/kg	Fairey 15 of 18 PCB Congeners (half DL) ug/kg	Fairey estimated 18 PCB Congeners (*1.21) ug/kg	Fairey estimate Total PCBs (*2) ug/kg	TBT ug/kg
NA01	10.2	0.24	69.75	252.5	84	1.06	14.75	1.08	1.33	298	6575	7050	5580	2.18	375	533	240	290	580	157
NA02	10.0	0.21	67.00	170	76	0.70	18.00	1.00	1.00	240	2800	3000	2422	2.00	208	299	134	162	324	82
NA03	11.0	0.29	69.00	220	94	1.10	18.00	1.10	1.40	260	6100	6600	5244	2.33	370	520	237	287	574	180
NA04	12.0	0.27	73.00	260	93	1.10	19.00	1.10	1.20	310	3500	3700	2819	2.04	250	350	158	191	381	300
NA05	9.5	0.17	57.00	170	65	0.61	15.00	0.43	0.89	210	2800	3000	2277	1.60	180	250	116	140	280	110
NA06	10.5	0.27	61.50	395	130	2.35	14.50	1.05	1.02	335	3800	4050	3235	2.14	640	935	400	484	969	225
NA07	13.5	0.27	60.50	225	100	1.45	16.00	0.90	1.15	255	15850	16500	13734	2.02	495	710	310	375	749	111
NA08	18.0	0.31	79.00	270	96	0.82	21.00	1.20	1.00	330	3500	3800	2928	2.18	310	430	197	238	476	110
NA09	13.0	0.40	75.00	260	97	1.20	20.00	1.20	1.10	330	2800	3000	2248	2.26	290	410	188	228	455	120
NA10	6.9	0.22	52.00	160	59	0.58	14.00	1.00	0.78	190	1800	1900	1438	1.18	160	230	100	120	241	91
NA11	9.3	0.28	59.00	180	73	0.85	15.00	1.00	1.10	230	2800	3000	2391	1.69	190	270	121	147	294	38
NA12	9.5	0.18	54.00	150	59	0.62	15.00	1.10	0.79	210	2000	2200	1700	1.48	150	220	97	118	235	80
NA13	10.8	0.24	59.00	185	75	0.65	15.50	1.00	0.94	295	1800	1950	1511	1.92	173	265	113	137	273	68
NA14	9.0	0.25	56.00	130	66	0.55	15.00	1.10	0.78	200	1100	1200	963	1.82	128	183	82	99	199	45
NA15	12.0	0.25	62.00	250	83	0.98	16.00	1.00	1.30	310	3300	3600	2714	1.95	340	480	214	259	517	670
NA16	10.5	0.36	70.25	252.5	90	1.09	15.75	1.03	1.35	313	3200	3500	2676	2.00	590	665	368	445	890	175
NA17	14.5	0.41	74.00	510	115	0.85	17.50	1.10	1.30	620	2950	3200	2496	2.03	550	620	339	410	821	1350
NA18	14.0	0.36	67.00	230	97	0.79	17.00	1.00	1.00	380	2400	2600	1957	2.04	350	490	221	268	536	210
NA19	14.0	0.37	65.00	270	100	0.78	17.00	1.00	1.10	450	3000	3200	2415	1.84	990	1400	607	734	1469	570
NA20	6.6	0.44	26.00	96	53	0.24	8.40	1.00	0.53	190	2900	3200	2639	1.42	120	170	74	89	178	280
NA21	11.0	0.39	51.00	150	83	0.51	14.00	1.10	0.88	250	2100	2200	1829	2.15	177	257	114	137	275	410
NA22	8.5	0.46	39	150	95	0.38	12.00	1.10	0.91	230	3600	4000	3317	1.65	180	250	112	135	270	120
NA23	12.0	0.26	77.00	350	120	1.10	18.00	1.30	1.30	430	3400	3700	2988	2.21	510	730	320	387	774	120
NA24	9.6	0.20	60.00	200	88	0.90	11.00	1.10	0.90	280	2100	2300	1812	2.12	290	410	183	222	443	59
NA25	6.0	0.11	33.00	85	41	0.42	8.50	1.10	0.72	130	1100	1100	906	1.24	83	120	55	66	133	25
NA26	6.2	0.11	32.00	80	41	0.48	8.00	1.00	0.66	140	850	910	707	1.22	180	250	115	139	278	37
NA27	13.0	0.29	100.00	390	110	1.20	27.00	1.30	1.50	500	2800	3000	2465	2.01	210	290	137	166	332	100
NA28	10.0	0.31	86.00	290	84	0.89	23.00	1.20	1.40	390	3400	3700	2993	1.87	180	260	118	143	286	90
NA29	6.9	0.14	39.00	110	56	0.55	11.00	1.10	0.86	170	1900	2000	1559	1.70	190	260	119	144	289	58
NA30	7.5	0.22	37.00	140	59	0.71	9.30	1.00	1.00	170	1000	1100	835	1.38	100	150	70	84	168	22

Table A33-9

Supporting Data for Table A33-8, Continued

Station	Pre-Remedy Average Surface Sediment Concentration																			
	As mg/kg	Cd mg/kg	Cr mg/kg	Cu mg/kg	Pb mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Zn mg/kg	Total HPAH (half DL) ug/kg	TPAH ug/kg	Fairey 13 TPAH (half DL) ug/kg	TOC %	Total PCB Congeners (half DL) ug/kg	Total PCB Homologs (half DL) ug/kg	Fairey 15 of 18 PCB Congeners (half DL) ug/kg	Fairey estimated 18 PCB Congeners (*1.21) ug/kg	Fairey estimate Total PCBs (*2) ug/kg	TBT ug/kg
NA31	5.3	0.13	29.00	71	34	0.35	7.50	1.10	0.57	110	530	580	447	0.92	68	96	44	53	107	20
SW01	13.5	0.71	78.50	560	145	1.45	98.00	0.88	1.07	520	7525	8725	7351	2.24	1600	2400	950	1150	2300	450
SW02	13.8	3.18	118.75	580	170	4.45	106.00	1.26	3.90	585	14500	21250	19460	5.98	5450	8325	3312	4008	8015	167
SW03	11.0	0.70	52.00	190	79	1.20	18.00	0.80	1.20	230	6800	7500	6134	3.11	410	580	257	310	621	53
SW04	73.0	1.95	87.50	1500	430	1.75	18.00	1.50	1.60	3450	14000	16000	14109	2.28	4000	5200	2476	2996	5992	3250
SW05	11.0	0.86	53.00	230	120	0.96	19.00	0.75	1.20	280	13000	17000	15067	1.55	1200	1800	769	930	1861	170
SW06	15.0	0.85	56.00	170	81	0.75	20.00	0.83	1.10	280	12000	14000	12641	1.82	380	580	235	284	567	100
SW07	8.1	0.19	43.00	150	57	0.52	13.00	0.81	0.74	170	3800	4100	3450	1.73	170	230	107	129	258	44
SW08	24.0	0.73	82.50	920	225	2.25	21.00	1.20	1.45	830	25500	28500	24759	3.80	2100	2700	1308	1583	3166	1850
SW09	27.0	1.10	56.00	660	220	0.96	18.00	0.84	1.30	1200	17000	20000	17383	1.94	710	1100	446	540	1079	910
SW10	13.0	0.87	45.00	160	79	0.58	17.00	0.84	0.82	360	16000	25000	23410	1.21	610	930	380	459	918	250
SW11	9.6	0.24	62.00	170	74	0.75	17.00	0.39	1.10	240	8000	8500	7001	1.81	200	280	127	153	307	140
SW12	7.4	0.14	39.00	119.5	52	0.53	10.80	0.90	0.76	160	3000	3300	2742	1.47	155	231	100	121	243	36
SW13	15.0	0.42	72.00	800	93	0.86	24.00	1.10	1.40	580	12000	14000	12507	2.33	490	710	312	377	754	790
SW14	10.0	0.31	63.00	280	88	1.00	17.00	1.00	1.20	300	8400	9100	7659	2.13	400	570	257	310	621	450
SW15	11.0	0.45	67.00	230	90	0.90	19.00	1.10	1.30	290	7700	8400	7137	2.31	380	540	237	287	573	170
SW16	12.0	0.66	68.00	430	97	1.00	16.00	1.10	1.90	370	5700	6100	4847	2.24	430	610	273	330	661	1100
SW17	12.0	0.37	73.00	270	93	0.98	20.00	0.44	1.50	310	10000	11000	9199	2.53	540	880	333	403	805	440
SW18	11.0	0.33	74.00	220	86	0.75	20.00	0.44	1.30	280	8100	8800	7471	2.19	440	660	276	334	668	130
SW19	7.1	0.15	42.00	110	51	2.10	12.00	0.70	0.78	150	1100	1200	938	1.15	94	135	61	74	148	37
SW20	14.0	0.41	68.00	290	110	0.99	18.00	1.10	1.10	390	11000	12000	9736	2.14	1600	2600	1023	1238	2476	130
SW21	11.0	0.51	70.00	260	120	1.40	14.00	1.00	1.30	330	9700	10000	8480	2.10	2400	3600	1491	1804	3608	170
SW22	13.0	0.35	70.00	260	110	1.10	21.00	1.10	1.30	310	12000	13000	10684	2.46	900	1400	577	698	1396	190
SW23	15.0	0.37	89.00	280	110	1.00	25.00	1.10	1.30	330	11000	12000	9880	2.52	1000	1500	640	775	1550	210
SW24	10.0	0.33	52.50	300	88	1.90	16.00	0.95	1.15	300	52000	57000	50225	1.75	950	1500	588	711	1423	165
SW25	11.5	0.36	64.50	230	86	0.78	16.50	1.00	1.20	345	8150	8800	7505	2.15	350	500	221	268	535	231
SW26	9.0	0.14	45.00	120	58	0.43	12.00	0.90	0.46	160	1600	1700	1345	1.31	293	418	184	222	444	49
SW27	10.0	0.27	63.00	210	80	0.68	18.00	0.42	1.10	250	12000	14000	12055	2.08	200	320	128	155	311	250
SW28	14.0	0.32	65.50	265	100	0.88	15.00	1.20	1.10	330	17000	19000	16165	2.52	2100	2600	1388	1679	3359	150
SW29	8.3	0.49	44.00	220	72	0.93	37.00	1.10	1.20	230	4600	4900	4142	1.34	820	1200	504	610	1220	190
SW30	8.9	0.23	72.00	240	72	1.10	13.00	1.00	1.20	300	4900	5200	4311	2.05	380	540	240	291	581	200

Table A33-9

Supporting Data for Table A33-8, Continued

Station	Pre-Remedy Average Surface Sediment Concentration																			
	As mg/kg	Cd mg/kg	Cr mg/kg	Cu mg/kg	Pb mg/kg	Hg mg/kg	Ni mg/kg	Se mg/kg	Ag mg/kg	Zn mg/kg	Total HPAH (half DL) ug/kg	TPAH ug/kg	Fairey 13 TPAH (half DL) ug/kg	TOC %	Total PCB Congeners (half DL) ug/kg	Total PCB Homologs (half DL) ug/kg	Fairey 15 of 18 PCB Congeners (half DL) ug/kg	Fairey estimated 18 PCB Congeners (*1.21) ug/kg	Fairey estimate Total PCBs (*2) ug/kg	TBT ug/kg
SW31	4.0	0.06	18.00	54	21	0.23	4.90	1.20	0.36	80	1200	1300	1031	0.66	66	93	42	51	101	36
SW32	9.4	0.06	43.00	92	57	0.51	11.00	1.10	0.33	160	820	900	719	1.56	160	230	101	122	245	30
SW33	10.0	0.07	41.00	100	58	0.53	11.00	1.20	0.24	170	1000	1100	826	2.09	100	150	68	82	164	19
SW34	8.3	0.21	53.00	320	99	0.75	11.00	1.10	0.95	310	1400	1500	1155	1.68	130	180	82	99	198	38
SW36	9.9	0.21	70.00	240	79	0.75	13.00	1.00	1.20	300	4000	4300	3607	2.23	200	282	131	159	318	49