TABLE 1
SUMMARY OF SEDIMENT SAMPLE CHEMICAL CHARACTERIZATION RESULTS
CAP SANTE MARINE CLEANUP
PORT OF ANACORTES

	SED-1 KW08A/KW09A/KW10A 4/23/2007	SED-2 KW08B/KW09B/KW10B 4/23/2007	SED-3 KW08C/KW09C/KW10C 4/23/2007	SED-4 KW08D/KW10D 4/23/2007	SED-5 KW08E/KW10E 4/23/2007	SED-6 KW08F/KW10F 4/23/2007
DIESEL-RANGE HYDROCARBONS						
NWTPH-Dx (mg/kg)						
Diesel Range	36	92	27	87	110	65
Motor Oil Range	100	200	67	240	260	210
GASOLINE-RANGE HYDROCARBONS						
NWTPH-G (mg/kg)						
Gasoline Range	20 U	23 U	12 U	NA	NA	NA
EXTRACTIBLE PETROLEUM HYDROCARBONS						
Method WA-EPH (µg/kg)						
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	4,100 U	4,100 U	2,900 U	5,500 U	4,600 U	5,500 U
Extractable Petroleum Hydrocarbons, >C10-C12 Aromatics	4,100 U	4,100 U	2,900 U	5,500 U	4,600 U	5,500 U
Extractable Petroleum Hydrocarbons, >C12-C16 Aromatics	4,100 U	4,100 U	2,900 U	5,500 U	4,600 U	5,500 U
Extractable Petroleum Hydrocarbons, >C16-C21 Aromatics	6,600	24,000	3,200	5,500 U	15,000	6,000
Extractable Petroleum Hydrocarbons, >C21-C34 Aromatics	17,000	37,000	11,000	18,000	32,000	18,000
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	4,100 U	4,100 U	2,900 U	5,500 U	4,600 U	5,500 U
Extractable Petroleum Hydrocarbons, >C10-C12 Aliphatics	4,100 U	4,100 U	2,900 U	5,500 U	4,600 U	5,500 U
Extractable Petroleum Hydrocarbons, >C12-C16 Aliphatics	4,100 U	14,000	2,900 U	5,500 U	15,000	5,500 U
Extractable Petroleum Hydrocarbons, >C16-C21 Aliphatics	4,100 U	39,000	2,900 U	6,100	34,000	16,000
Extractable Petroleum Hydrocarbons, >C21-C34 Aliphatics	37,000	100,000	25,000	83,000	130,000	93,000
VOLATILE PETROLEUM HYDROCARBONS						
Method WA-VPH (µg/kg)						
Benzene	2,100 UJ	1,900 UJ	1,100 U	3,100 UJ	2,500 UJ	3,100 UJ
Toluene	2,100 UJ	1,900 UJ	1,100 U	3,100 UJ	2,500 UJ	3,100 UJ
Ethylbenzene	2,100 UJ	1,900 UJ	1,100 U	3,100 UJ	2,500 UJ	3,100 UJ
m,p-Xylene	4,200 UJ	3,800 UJ	2,300 U	6,200 UJ	5,000 UJ	6,200 UJ
o-Xylene	2,100 UJ	1,900 UJ	1,100 U	3,100 UJ	2,500 UJ	3,100 UJ
Methyl tert-Butyl Ether	2,100 UJ	1,900 UJ	1,100 U	3,100 UJ	2,500 UJ	3,100 UJ
Volatile Petroleum Hydrocarbons, >C8-C10 Aromatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, >C10-C12 Aromatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, >C12-C13 Aromatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, C5-C6 Aliphatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, >C6-C8 Aliphatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, >C8-C10 Aliphatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
Volatile Petroleum Hydrocarbons, >C10-C12 Aliphatics	21,000 UJ	19,000 UJ	11,000 U	31,000 UJ	25,000 UJ	31,000 UJ
CONVENTIONAL CHEMISTRY PARAMETERS (%)						
Total Solids (EPA Method 160.3)	48.80	47.70	63.80	35.80	44.10	35.40
Total Organic Carbon (PLUMB 81 TC)	2.08	1.77	1.33	3.27	1.65	1.69

TABLE 1
SUMMARY OF SEDIMENT SAMPLE CHEMICAL CHARACTERIZATION RESULTS
CAP SANTE MARINE CLEANUP
PORT OF ANACORTES

	SED-7 KW08G/KW10G 4/23/2007	SED-8 KW08H/KW10H 4/23/2007	SED-9 KW08I/KW10I 4/24/2007	SED-10 KW08J/KW10J 4/24/2007	SED-11 KW08K/KW10K 4/24/2007	SED-12 KW08L/KW10L 4/24/2007	REF-2 KW44M 4/25/2007	REF-4 KW44N 4/25/2007
DIESEL-RANGE HYDROCARBONS								
NWTPH-Dx (mg/kg)								
Diesel Range	42	83	72	35	70	72	6.5 U	8.4 U
Motor Oil Range	110	200	220	110	370	180	13 U	17 U
GASOLINE-RANGE HYDROCARBONS								
NWTPH-G (mg/kg)								
Gasoline Range	NA	NA	NA	NA	NA	NA	NA	NA
EXTRACTIBLE PETROLEUM HYDROCARBONS								
Method WA-EPH (µg/kg)								
Extractable Petroleum Hydrocarbons, C8-C10 Aromatics	4,800 U	5,100 U	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C10-C12 Aromatics	4,800 U	5,100 U	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C12-C16 Aromatics	4,800 U	5,100 U	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C16-C21 Aromatics	4,800 U	7,100	9,100	5,200 U	6,000	12,000	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C21-C34 Aromatics	13,000	8,600	14,000	8,200	12,000	15,000	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, C8-C10 Aliphatics	4,800 U	5,100 U	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C10-C12 Aliphatics	4,800 U	5,100 U	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C12-C16 Aliphatics	4,800 U	5,300	5,000 U	5,200 U	5,200 U	5,400 U	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C16-C21 Aliphatics	9,400	19,000	19,000	15,000	20,000	6,800	2,600 U	3,400 U
Extractable Petroleum Hydrocarbons, >C21-C34 Aliphatics	50,000	89,000	110,000	84,000	110,000	94,000	3,500	3,400 U
VOLATILE PETROLEUM HYDROCARBONS								
Method WA-VPH (µg/kg)								
Benzene	2,500 UJ	2,800 UJ	2,500 UJ	2,500 UJ	2,800 UJ	3,100 UJ	930 U	1,200 U
Toluene	2,500 UJ	2,800 UJ	2,500 UJ	2,500 UJ	2,800 UJ	3,100 UJ	930 U	1,200 U
Ethylbenzene	2,500 UJ	2,800 UJ	2,500 UJ	2,500 UJ	2,800 UJ	3,100 UJ	930 U	1,200 U
m,p-Xylene	5,000 UJ	5,600 UJ	5,000 UJ	5,000 UJ	5,600 UJ	6,200 UJ	1,900 U	2,500 U
o-Xylene	2,500 UJ	2,800 UJ	2,500 UJ	2,500 UJ	2,800 UJ	3,100 UJ	930 U	1,200 U
Methyl tert-Butyl Ether	2,500 UJ	2,800 UJ	2,500 UJ	2,500 UJ	2,800 UJ	3,100 UJ	930 U	1,200 U
Volatile Petroleum Hydrocarbons, >C8-C10 Aromatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, >C10-C12 Aromatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, >C12-C13 Aromatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, C5-C6 Aliphatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, >C6-C8 Aliphatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, >C8-C10 Aliphatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
Volatile Petroleum Hydrocarbons, >C10-C12 Aliphatics	25,000 UJ	28,000 UJ	25,000 UJ	25,000 UJ	28,000 UJ	31,000 UJ	9,300 U	12,000 U
CONVENTIONAL CHEMISTRY PARAMETERS (%)								
Total Solids (EPA Method 160.3)	39.40	38.90	38.80	39.00	37.20	35.40	70.90	58.50
Total Organic Carbon (PLUMB 81 TC)	2.44	2.87	2.36	2.49	1.99	3.20	1.33	1.53

mg/kg = milligrams per kilogram (ppm).
µg/kg = micrograms per kilogram (ppb).
U = The compound was not detected at the given reporting limit
UJ = The compound was not detected; the given reporting limit is an estimate
NA = Not Analyzed.

TABLE 2
PRELIMINARY SOIL CLEANUP LEVELS FOR CONSTITUENTS OF POTENTIAL CONCERN AND OTHER DETECTED CONSTITUENTS IN SOIL
CAP SANTE MARINE
ANACORTES, WASHINGTON

Constituent	Protection of Human Health		Protection of Groundwater		Other Factors		Preliminary Cleanup Level (a)	
			Unsaturated Zone	Saturated Zone				
	MTCA Method B Soil-Direct Contact Unrestricted Land Use Carcinogen	MTCA Method B Soil-Direct Contact Unrestricted Land Use Non Carcinogen	MTCA Method B Protective of Groundwater as Marine Surface Water (b)	MTCA Method B Protective of Groundwater as Marine Surface Water (c)	MTCA Method A Unrestricted Land Use	Soil Background (d)	Unsaturated Zone	Saturated Zone
Total Metals (mg/kg)								
Chromium III	--	120,000	1,000,000	1,000,000	2,000	42 (e)	120,000	120,000
Hexavalent Chromium	--	240	19	1	19	--	19	1
Copper	--	2960	1.4	0.07	--	36	36	36
Lead	--	--	1,600	81	250	17	250	81
Zinc	--	24,000	101	5	--	86	101	86
TOTAL PETROLEUM HYDROCARBONS (mg/kg)								
Gasoline-Range	--	--	--	--	100/30 (f)		100/30 (f)	100/30 (f)
Diesel-Range	--	--	--	--	2,000	--	2,000 (f)	2,000 (f)
Motor Oil-Range	--	--	--	--	2,000	--	2,000 (f)	2,000 (f)
PAHs (µg/kg)								
Naphthalene	--	1,600,000	138,000	7,000	5	--	138,000	7,000
2-Methylnaphthalene	--	--	--	--	--	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	--	--	--	--	--	--
Acenaphthene	--	4,800,000	66,000	3,000	--	--	66,000	3,000
Fluorene	--	3,200,000	547,000	28,000	--	--	547,000	28,000
Phenanthrene	--	--	--	--	--	--	--	--
Anthracene	--	24,000,000	12,285,000	617,000	--	--	12,285,000	617,000
Fluoranthene	--	3,200,000	89,000	4,000	--	--	89,000	4,000
Pyrene	--	2,400,000	3,536,000	177,000	--	--	2,400,000	177,000
Benzo(ghi)perylene	--	--	--	--	--	--	--	--
Dibenzofuran	--	--	--	--	--	--	--	--
Benzo(a)pyrene	137	--	350	17 (g)	100	--	137	17 (g)
Benzo(a)anthracene	--	--	130	6.4 (g)	--	--	--	6.4 (g)
Benzo(b)fluoranthene	--	--	440	22 (g)	--	--	--	22 (g)
Benzo(k)fluoranthene	--	--	440	22 (g)	--	--	--	22 (g)
Chrysene	--	--	140	7.2 (g)	--	--	--	7.2 (g)
Dibenzo(a,h)anthracene	--	--	640	32 (g)	--	--	--	32 (g)
Indeno(1,2,3-cd)pyrene	--	--	1,200	62 (g)	--	--	--	62 (g)
Total cPAH - benzo(a)pyrene TEQ (h)	137	--	--	--	100	--	137	--
VOLATILES (µg/kg)								
Chloromethane	76,900	--	850	43	--	--	850	43
Methylene Chloride	133,300	4,800,000	2,570	175	20	--	2,570	175
Acetone	--	8,000,000	--	--	--	--	8,000,000	8,000,000
Carbon Disulfide	--	8,000,000	--	--	--	--	8,000,000	8,000,000
2-Butanone	--	--	--	--	--	--	--	--
Trichloroethene							100	5.7
1,2-Dichlorobenzene							15,000	865
1,3,5-Trimethylbenzene	--	4,000,000	--	--	--	--	4,000,000	4,000,000
1,2,4-Trimethylbenzene	--	4,000,000	--	--	--	--	4,000,000	4,000,000
Isopropylbenzene	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--
n-Butylbenzene	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	8,000,000	2,600	136	--	--	2,600	136
Methyl tert-butyl ether (MTBE)	--	--	--	--	100	--	100	100
1,2-Dibromoethane (EDB)	11.8	--	--	--	5	--	12	12
1,2-Dichloroethane (EDC)	11,000	--	180	12	--	--	180	12
n-Hexane	--	4,800,000	--		--	--	4,800,000	4,800,000
Benzene	18,200	240,000	290	18	30	--	290	18
Ethylbenzene	--	8,000,000	18,000	1,030	6,000	--	18,000	1,030
Toluene	--	16,000,000	109,000	6,400	7,000	--	109,000	6,400
Xylene	--	160,000,000	--	--	--	--	160,000,000	160,000,000
PCBs (µg/kg)								
Total PCBs	500	--	0.4	0.020	1,000	--	0.4	0.020

TABLE 2
PRELIMINARY SOIL CLEANUP LEVELS FOR CONSTITUENTS OF POTENTIAL CONCERN
AND OTHER DETECTED CONSTITUENTS IN SOIL
CAP SANTE MARINE
ANACORTES, WASHINGTON

(a) Preliminary cleanup level based on lowest soil criteria corrected for background, as indicated by shading. Further adjustments to those preliminary cleanup levels that are found to be lower than the practical quantitation limits may be necessary, in accordance with WAC 173-340-740(5)(c).

(b) Calculated using fixed parameter 3-phase partitioning model, WAC 173-340-747(4) and preliminary groundwater cleanup levels shown in Table 3 of this report.

(c) Calculated using fixed parameter 3-phase partitioning model, WAC 173-340-747(4)(e) and preliminary groundwater cleanup levels shown in Table 3 of this report.

(d) Natural background (statewide 90th percentile value) from Natural Background Soil Metals Concentrations in Washington State, Ecology 1994.

(e) Background concentration is for total chromium.

(f) MTCA Method A cleanup level is 100 mg/kg when benzene is not present and 30 mg/kg when benzene is present.

(g) Preliminary cleanup levels protective of groundwater as marine surface water from cPAHs in the saturated zone soil are shown for informational purposes. Concentrations of cPAHs higher than these preliminary cleanup levels are present in the saturated zone. It can be empirically demonstrated that these higher concentrations are protective of groundwater as marine surface water.

(h) Toxicity equivalency methodology in WAC 173-340-708(8).

Note: Shaded cell indicates basis for preliminary cleanup level.

TABLE 3
SUMMARY OF DETECTED CONSTITUENTS IN UNSATURATED ZONE SOIL
AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY SOIL CLEANUP LEVELS
CAP SANTE MARINE ANACORTES, WA

	Unsaturated Zone Preliminary Soil Cleanup Level	SB-1 (1-2) LA89P 5/24/2007	SB-1 (4-5) LA89Q 5/24/2007	SB-1 (5-6) LA89R 5/24/2007	SB-2 (1-2) LA89M 5/24/2007	SB-3 (0.5-1.5) LA89J 5/24/2007	SB-3 (1.5-2.5) LA89K 5/24/2007	SB4 (0-1) LB08G 5/25/2007	SB4 (5-6) LB08H 5/25/2007	SB5 (0.5-1.5) LB08M 5/25/2007	SB5 (1.5-2.5) LB08N 5/25/2007	SB5 (5-6) LB08O 5/25/2007	SB6 (0.5-1.5) LB08P 5/25/2007	SB6 (1.5-2.5) LB08Q 5/25/2007	SB6 (5-6) LB08R 5/25/2007	SB-7 (0.5-1) LA89G 5/24/2007	SB-7 (1-2) LA89H 5/24/2007	SB8 (0.5-1.5) LB08J 5/25/2007	SB-9 (0-0.5) LA89D 5/24/2007	SB-9 (1-2) LA89E 5/24/2007
DIESEL-RANGE HYDROCARBONS																				
NWTPH-Dx (mg/kg)																				
Diesel	2,000	**6.8**	**11**	7.5 U	6.5 U	5.8 U	6.7 U	5.7 U	**6,200**	**15**	6.7 U	**33**	**40**	**490**	7.3 U	**9.0**	6.1 U	6.2 U	**17**	7.0 U
Motor Oil	2,000	**92**	**120**	**23**	**15**	**12**	13 U	11 U	530	**150**	**20**	**99**	**110**	**120**	**18**	**72**	12 U	**16**	**96**	14 U
GASOLINE-RANGE HYDROCARBONS																				
NWTPH-G (mg/kg)																				
Gasoline	30	4.4 U	9.9 U	5.9 U	4.2 U	4.0 U	5.2 U	5.1 U	**1,500**	**7.5**	**7.3** U	**10**	**140**	**980**	**20**	**3.7** U	5.1 U	6.0 U	3.0 U	5.8 U
VOLATILE ORGANIC COMPOUNDS (VOCs)																				
EPA Method 8260B (µg/kg)																				
Chloromethane	850	**0.8** M	**9.0**	0.8 U	**1.0**	0.8 U	0.7 U	1.0 U	65 U	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
Methylene Chloride	2,570	**1.5**	3.7 U	1.6 U	1.6 U	1.5 U	1.4 U	1.9 U	130 U	1.6 U	2.4 U	2.3 U	1.7 U	140 U	2.3 U	1.6 U	1.5 U	2.1 U	1.2 U	2.0 U
Acetone	--	**65**	**260**	**29**	**94**	**30**	**82**	**61**	330 U	**76**	**61**	**39**	**49**	340 U	**78**	**48**	**55**	**60**	**89**	**57**
Carbon Disulfide	--	**21**	**11**	**2.3**	**1.6**	**3.7**	3.7 U	**9.7**	65 U	**2.5**	**1.3**	**1.2**	**6.8**	68 U	**6.5**	**3.8**	**2.9**	**12**	**0.9**	**3.9**
2-Butanone	8,000,000	**9.2**	**25**	**4.2**	**12**	3.8 U	**20**	**5.2**	330 U	**7.1**	6.1 U	5.8 U	**4.9**	340 U	**7.2**	**6.2**	**7.5**	**6.8**	**7.1**	**9.5**
Trichloroethene	100	0.7 U	1.8 U	0.8 U	**0.9**	0.8 U	0.7 U	1.0 U	65 U	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
Benzene	290	**1.3**	**3.4**	**2.6**	0.9 U	0.8 U	**1.6**	1.0 U	**6,900**	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	**12**	**1.8**	1.1 U	**0.9**	1.0 U
Toluene	109,000	0.7 U	1.8 U	0.8 U	0.8 U	0.8 U	**1.0**	1.0 U	**2,200**	0.8 U	1.2 U	1.2 U	**0.9**	68 U	1.2 U	**24**	0.8 U	1.1 U	**1.5**	1.0 U
Ethylbenzene	18,000	0.7 U	1.8 U	0.8 U	0.8 U	0.8 U	0.7 U	1.0 U	**52,000**	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	**2.7**	0.8 U	1.1 U	**0.7**	1.0 U
m,p-Xylene	--	0.7 U	1.8 U	0.8 U	**0.9**	0.8 U	**1.1**	1.0 U	**110,000**	0.8 U	1.2 U	1.2 U	**1.8** M	**110**	1.2 U	**18**	**1.2**	1.1 U	**3.3**	1.0 U
o-Xylene	--	0.7 U	1.8 U	0.8 U	0.8 U	0.8 U	**0.8 M**	1.0 U	**1,600**	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	**7.4**	0.8 U	1.1 U	**1.2**	1.0 U
Total Xylenes	160,000,000	ND	ND	ND	**0.9**	ND	**1.9**	ND	**111,600**	ND	ND	ND	**1.8**	**110**	ND	**25.4**	**1.2**	ND	**4.5**	ND
1,2-Dichlorobenzene	15,000	0.7 U	1.8 U	0.8 U	**0.8**	0.8 U	0.7 U	1.0 U	65 U	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
1,3,5-Trimethylbenzene	--	0.7 U	1.8 U	0.8 U	**0.8**	0.8 U	0.7 U	1.0 U	**37,000**	0.8 U	1.2 U	1.2 U	0.8 U	68 U	1.2 U	**1.8**	0.8 U	1.1 U	0.6 U	1.0 U
1,2,4-Trimethylbenzene	4,000,000	0.7 U	1.8 U	0.8 U	**1.1**	0.8 U	**0.8** M	1.0 U	**110,000**	0.8 U	1.2 U	1.2 U	**4.3** M	**190** M	1.2 U	**5.9**	0.8 U	1.1 U	**1.0**	1.0 U
Isopropylbenzene	--	0.7 U	1.8 U	0.8 U	**0.9**	0.8 U	0.7 U	1.0 U	**5,500**	0.8 U	1.2 U	1.2 U	**2.4**	68 U	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
n-Propylbenzene	--	0.7 U	1.8 U	0.8 U	0.8 U	0.8 U	0.7 U	1.0 U	**24,000**	0.8 U	1.2 U	1.2 U	**3.6** M	**150** M	1.2 U	**1.2**	0.8 U	1.1 U	0.6 U	1.0 U
sec-Butylbenzene	--	0.7 U	1.8 U	0.8 U	**0.9**	0.8 U	0.7 U	1.0 U	**3,400**	0.8 U	1.2 U	1.2 U	**9.8**	**380** M	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
4-Isopropyltoluene	--	0.7 U	1.8 U	0.8 U	**0.9**	0.8 U	**1.1**	1.0 U	**4,000**	0.8 U	1.2 U	1.2 U	**4.4**	**160** M	1.2 U	0.8 U	0.8 U	1.1 U	0.6 U	1.0 U
n-Butylbenzene	--	0.7 U	1.8 U	0.8 U	0.8 U	0.8 U	0.7 U	1.0 U	**16,000** M	0.8 U	1.2 U	1.2 U	**4.6** M	**280** M	1.2 U	1.2 U	0.8 U	1.1 U	0.6 U	1.0 U
Naphthalene	138,000	3.6 U	9.2 U	3.9 U	3.9 U	3.8 U	3.6 U	4.8 U	**50,000**	4.1 U	6.1 U	5.8 U	4.1 U	340 U	5.9 U	5.9 U	5.9 U	5.3 U	3.1 U	5.1 U
n-Hexane	4,800,000	3.6 U	9.2 U	3.9 U	**4.0**	3.8 U	**14**	4.8 U	**6,900**	4.1 U	6.1 U	5.8 U	4.1 U	340 U	5.9 U	3.9 U	3.8 U	5.3 U	3.1 U	5.1 U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)																				
EPA Method 8270D-SIM (µg/kg)																				
Naphthalene	138,000	6.4 U	**9.1**	**10**	**20**	6.4 U	**8.3**	**98**	**15,000**	**19**	**71**	**65**	**8.4**	**130**	**23**	**6.5**	6.4 U	**9.3**	6.5 U	**15**
2-Methylnaphthalene	--	6.4 U	6.5 U	6.5 U	6.6 U	6.4 U	6.4 U	**6.9**	**47,000**	**8.0**	6.1 U	**12**	**19**	**260**	6.6 U	6.5 U	6.4 U	6.2 U	**7.2**	6.6 U
1-Methylnaphthalene	--	6.4 U	6.5 U	**8.0**	6.6 U	6.4 U	6.4 U	**6.9**	**17,000**	6.1 U	6.1 U	**8.0**	**17**	**500**	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	6.6 U
Acenaphthylene	--	6.4 U	6.5 U	6.5 U	6.6 U	6.4 U	6.4 U	6.3 U	320 U	6.1 U	**6.1**	**15**	6.5 U	26 U	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	6.6 U
Acenaphthene	66,000	6.4 U	6.5 U	9.8	6.6 U	6.4 U	6.4 U	6.3 U	**1,400**	6.1 U	6.1 U	**10**	6.5 U	**31**	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	6.6 U
Fluorene	547,000	6.4 U	6.5 U	6.5 U	6.6 U	6.4 U	6.4 U	6.3 U	**2,000**	6.1 U	6.1 U	**16**	6.5 U	**63**	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	6.6 U
Phenanthrene	--	**18**	**22**	**18**	**26**	**9.0**	**12**	**28**	**6,200**	**33**	**36**	**120**	**6.5**	**86**	**21**	**7.2**	**8.9**	**18**	**18**	**31**
Anthracene	12,285,000	6.4 U	6.5 U	**6.5**	6.6 U	6.4 U	6.4 U	6.3 U	**360**	**6.8**	**6.7**	**22**	6.5 U	**14**	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	**7.3**
Fluoranthene	89,000	**15**	**22**	**31**	**53**	**17**	**15**	**28**	**140**	**61**	**56**	**260**	**9.7**	**100**	**32**	**18**	**12**	**38**	**57**	**36**
Pyrene	2,400,000	**19**	**21**	**28**	**52**	**14**	**14**	**31**	**230**	**58**	**58**	**240**	**12**	**110**	**32**	**16**	**11**	**37**	**42**	**36**
Benzo(ghi)perylene	--	**9.0**	**6.5**	6.5 U	**11**	6.4 U	6.4 U	6.3 U	32 U	**15**	**6.7**	**39**	6.5 U	**14**	6.6 U	**10**	6.4 U	**7.4**	**27**	6.6 U
Dibenzofuran	--	6.4 U	6.5 U	6.5 U	6.6 U	6.4 U	6.4 U	6.3 U	**730**	6.1 U	6.1 U	**9.8**	6.5 U	**27**	6.6 U	6.5 U	6.4 U	6.2 U	6.5 U	6.6 U
Benzo(a)anthracene	See Total cPAHs	**6.4**	**7.2**	**8.5**	**16**	6.4 U	6.4 U	**8.2**	32 U	**19**	**14**	**82**	6.5 U	**22**	**8.6**	**10**	6.4 U	**15**	**27**	**12**
Chrysene	See Total cPAHs	**24**	**18**	**10**	**20**	10	6.4 U	**11**	**36**	**24**	**15**	**100**	6.5 U	**24**	**11**	**16**	6.4 U	**17**	**44**	**14**
Benzo(b)fluoranthene	See Total cPAHs	18 U	12 U	**13**	**25**	9.6	6.4 U	**10**	32 U	**31**	**16**	**120**	**6.5**	**35**	**14**	**25**	6.4 U	**24**	**71**	**11**
Benzo(k)fluoranthene	See Total cPAHs	18 U	12 U	6.5 U	**9.8**	6.4 U	6.4 U	6.3 U	32 U	**11**	**6.7**	**49**	6.5 U	13 U	6.6 U	**7.8**	6.4 U	**8.6**	**22**	6.6 U
Benzo(a)pyrene	See Total cPAHs	**10**	**9.8**	**9.8**	**19**	**7.7**	6.4 U	**7.6**	32 U	**19**	**13**	**90**	6.5 U	**21**	**9.9**	**11**	6.4 U	**17**	**38**	**11**
Indeno(1,2,3-cd)pyrene	See Total cPAHs	6.4 U	6.5 U	6.5 U	**9.2**	6.4 U	6.4 U	6.3 U	32 U	**9.8**	6.1 U	**36**	6.5 U	13 U	6.6 U	**8.5**	6.4 U	**7.4**	**23**	6.6 U
Dibenzo(a,h)anthracene	See Total cPAHs	6.4 U	6.5 U	6.5 U	6.6 U	6.4 U	6.4 U	6.3 U	32 U	6.1 U	6.1 U	**9.2**	6.5 U	13 U	6.6 U	6.5 U	6.4 U	6.2 U	**6.5**	6.6 U
Total cPAHs - TEQ (a)	137	**10.9**	**10.7**	**12.1**	**25.2**	**8.8**	ND	**9.5**	**0.36**	**26.3**	**16.8**	**123**	ND	**26.9**	**12.3**	**16.3**	ND	**22.7**	**55.3**	**13.4**
TOTAL METALS																				
EPA Method 6010B (mg/kg)																				
Chromium	120,000 (b)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**37.0**	**15.1**	NA	NA	NA
Copper	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**61.1**	**8.6**	NA	NA	NA
Lead	250	**4**	**4**	3 U	**3**	**2**	2 U	**3**	6 U	**14**	3 U	**10**	**4**	**3**	3 U	**21**	2 U	**3**	**48**	3 U
Zinc	101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**59**	**23**	NA	NA	NA

TABLE 3
SUMMARY OF DETECTED CONSTITUENTS IN UNSATURATED ZONE SOIL
AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY SOIL CLEANUP LEVELS
CAP SANTE MARINE ANACORTES, WA

	Unsaturated Zone Preliminary Soil Cleanup Level	SB-9 (6-7) LA89F 5/24/2007	SB-10 (0-0.5) LA89A 5/24/2007	SB-10 (1-2) LA89B 5/24/2007	SB-10 (5-6) LA89C 5/24/2007	SB11 (0.5-1.5) LB08A 5/25/2007	SB11 (1.5-2.5) LB08B 5/25/2007	SB11 (5-6) LB08C 5/25/2007	SB12 (0.75-1.75) LB08D 5/25/2007	SB12 (2-3) LB08E 5/25/2007	SB12 (5-6) LB08F 5/25/2007	SB13 (0.5-1.5) LB09A 5/25/2007	SB13 (1.5-3) LB09B 5/25/2007	SB13 (5-6) LB09C 5/25/2007	SB14 (0.5-1.5) LB09D 5/25/2007
DIESEL-RANGE HYDROCARBONS															
NWTPH-Dx (mg/kg)															
Diesel	2,000	6.7 U	**8.9**	5.3 U	**24**	5.2 U	8.7	**6.9**	5.4 U	6.2 U	**12**	**21**	5.4 U	**100**	5.3 U
Motor Oil	2,000	14 U	**160**	**17**	**220**	**22**	**150**	**34**	**19**	12 U	**120**	**170**	11 U	**230**	**11**
GASOLINE-RANGE HYDROCARBONS															
NWTPH-G (mg/kg)															
Gasoline	30	5.6 U	3.0 U	3.1 U	3.4 U	**6.5**	4.8 U	5.5 U	5.0 U	5.6 U	**75**	4.3 U	4.2 U	**23**	5.1 U
VOLATILE ORGANIC COMPOUNDS (VOCs)															
EPA Method 8260B (µg/kg)															
Chloromethane	850	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	0.8 U	0.8 U	1.9 U	1.2 U
Methylene Chloride	2,570	2.3 U	1.1 U	1.2 U	1.3 U	2.0 U	**22**	**14**	**15**	**56**	2.2 U	**13**	**13**	3.9 U	**4.0**
Acetone	--	**140**	**31**	**14**	**44**	**33**	**35**	**64**	**56**	**100**	5.6 U	**36**	**30**	**96**	**41**
Carbon Disulfide	--	1.2 U	0.5 U	0.6 U	2.1	1.0 U	1.0 U	**3.0**	**16**	**22**	**20**	0.8 U	**2.9**	**3.6**	**3.8**
2-Butanone	8,000,000	**33**	2.7 U	2.9 U	**5.0**	5.0 U	5.0 U	5.5 U	5.5 U	**9.5**	**38** M	**4.9**	4.1 U	9.7 U	5.9 U
Trichloroethene	100	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	0.8 U	0.8 U	1.9 U	1.2 U
Benzene	290	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	**4.2**	**14**	0.8 U	0.8 U	1.9 U	1.2 U
Toluene	109,000	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**3.7**	0.8 U	0.8 U	1.9 U	1.2 U
Ethylbenzene	18,000	1.8 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**3.2** M	0.8 U	0.8 U	1.9 U	1.2 U
m,p-Xylene	--	1.3 U	0.5 U	0.6 U	**1.2**	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**5.4** M	0.8 U	0.8 U	1.9 U	1.2 U
o-Xylene	--	1.3 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**1.5** M	0.8 U	0.8 U	1.9 U	1.2 U
Total Xylenes	160,000,000	ND	ND	ND	**1.2**	ND	ND	ND	ND	ND	**6.9**	ND	ND	ND	ND
1,2-Dichlorobenzene	15,000	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	0.8 U	0.8 U	1.9 U	1.2 U
1,3,5-Trimethylbenzene	--	1.2 U	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**1.6** M	0.8 U	0.8 U	1.9 U	1.2 U
1,2,4-Trimethylbenzene	4,000,000	1.2 U	0.5 U	0.6 U	**0.9**	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**7.8** M	0.8 U	0.8 U	1.9 U	1.2 U
Isopropylbenzene	--	**18**	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**2.9** M	0.8 U	0.8 U	1.9 U	1.2 U
n-Propylbenzene	--	**65**	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**3.8** M	0.8 U	0.8 U	1.9 U	1.2 U
sec-Butylbenzene	--	**68**	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**20**	0.8 U	0.8 U	1.9 U	1.2 U
4-Isopropyltoluene	--	1.2 U	0.5 U	0.6 U	**5.9**	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	1.1 U	0.8 U	0.8 U	1.9 U	1.2 U
n-Butylbenzene	--	**70** M	0.5 U	0.6 U	0.7 U	1.0 U	1.0 U	1.1 U	1.1 U	1.1 U	**5.6** M	0.8 U	0.8 U	1.9 U	1.2 U
Naphthalene	138,000	19 U	2.7 U	2.9 U	3.3 U	5.0 U	5.0 U	5.5 U	5.5 U	5.7 U	5.6 U	3.9 U	4.1 U	9.7 U	5.9 U
n-Hexane	4,800,000	**18**	2.7 U	2.9 U	3.3 U	5.0 U	5.0 U	5.5 U	5.5 U	**8.7**	**7.1**	3.9 U	4.1 U	9.7 U	5.9 U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)															
EPA Method 8270D-SIM (µg/kg)															
Naphthalene	138,000	**8.3**	6.2 U	6.6 U	**10**	6.5 U	6.5 U	**12**	6.0 U	6.2 U	**29**	**9.2**	6.4 U	**69**	6.6 U
2-Methylnaphthalene	--	6.4 U	6.2 U	6.6 U	**12**	6.5 U	6.5 U	**7.4**	6.0 U	6.2 U	**45**	**12**	6.4 U	**24**	6.6 U
1-Methylnaphthalene	--	6.4 U	6.2 U	6.6 U	**12**	6.5 U	6.5 U	6.2 U	6.0 U	6.2 U	**40**	6.6 U	6.4 U	**15**	6.6 U
Acenaphthylene	--	6.4 U	6.2 U	6.6 U	6.4 U	6.5 U	6.5 U	**9.3**	6.0 U	6.2 U	6.2 U	6.6 U	6.4 U	**23**	6.6 U
Acenaphthene	66,000	6.4 U	6.2 U	6.6 U	**14**	6.5 U	6.5 U	6.2 U	6.0 U	6.2 U	6.2 U	6.6 U	6.4 U	**31**	6.6 U
Fluorene	547,000	6.4 U	6.2 U	6.6 U	**12**	6.5 U	6.5 U	6.2 U	6.0 U	6.2 U	6.2 U	6.6 U	6.4 U	**43**	6.6 U
Phenanthrene	--	**24**	**11**	6.6 U	**28**	6.5 U	6.5 U	**65**	**6.0**	**11**	**32**	**42**	6.4 U	**170**	6.6 U
Anthracene	12,285,000	6.4 U	6.2 U	6.6 U	6.4 U	6.5 U	6.5 U	**14**	6.0 U	6.2 U	6.2 U	**7.2**	6.4 U	**44**	6.6 U
Fluoranthene	89,000	**27**	6.2 U	6.6 U	**52**	6.5 U	6.5 U	**89**	**8.3**	**21**	**13**	**110**	6.4 U	**480**	6.6 U
Pyrene	2,400,000	**32**	**13**	6.6 U	**48**	6.5 U	6.5 U	**100**	**8.9**	**21**	**23**	**170**	6.4 U	**420**	6.6 U
Benzo(ghi)perylene	--	6.4 U	**19**	6.6 U	**16**	6.5 U	6.5 U	**61**	6.0 U	**6.8**	**8.0**	**36**	6.4 U	**87**	6.6 U
Dibenzofuran	--	6.4 U	6.2 U	6.6 U	**7.1**	6.5 U	6.5 U	6.2 U	6.0 U	6.2 U	6.2 U	6.6 U	6.4 U	**25**	6.6 U
Benzo(a)anthracene	See Total cPAHs	**10**	**9.4**	6.6 U	**19**	6.5 U	6.5 U	**43**	6.0 U	**6.8**	**8.7**	**73**	6.4 U	**140**	6.6 U
Chrysene	See Total cPAHs	**9.6**	**39**	6.6 U	**39**	6.5 U	6.5 U	**68**	**6.6**	**9.3**	**40**	**110**	6.4 U	**160**	6.6 U
Benzo(b)fluoranthene	See Total cPAHs	**6.4**	**18**	6.6 U	**27**	6.5 U	6.5 U	**53**	6.0 U	**11**	32 U	**160**	6.4 U	**170**	6.6 U
Benzo(k)fluoranthene	See Total cPAHs	**6.4**	6.2 U	6.6 U	**7.1**	6.5 U	6.5 U	**53**	6.0 U	6.2 U	32 U	**57**	6.4 U	**69**	6.6 U
Benzo(a)pyrene	See Total cPAHs	**9.6**	**14**	6.6 U	**18**	6.5 U	6.5 U	**63**	6.0 U	**8.0**	**9.9**	**82**	6.4 U	**120**	6.6 U
Indeno(1,2,3-cd)pyrene	See Total cPAHs	6.4 U	6.2 U	6.6 U	**7.1**	6.5 U	6.5 U	**46**	6.0 U	6.2 U	6.2 U	**29**	6.4 U	**66**	6.6 U
Dibenzo(a,h)anthracene	See Total cPAHs	6.4 U	6.2 U	6.6 U	6.4 U	6.5 U	6.5 U	**14**	6.0 U	6.2 U	6.2 U	**7.2**	6.4 U	**17**	6.6 U
Total cPAHs - TEQ (a)	137	**12.0**	**17.1**	ND	**24.4**	ND	ND	**88.8**	**0.07**	**9.9**	**11.2**	**117.9**	ND	**173**	ND
TOTAL METALS															
EPA Method 6010B (mg/kg)															
Chromium	120,000 (b)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Lead	250	3 U	**2**	2 U	**7**	**3**	**2**	**4,410**	**3**	2 U	2 U	**9**	5 U	**26**	**2**
Zinc	101	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

mg/kg = milligrams per kilogram (ppm).
µg/kg = micrograms per kilogram (ppb).
U = The compound was not detected at the given reporting limit.
M = Estimated value detected and confirmed by analyst, but with low spectral match parameters.
ND = Not detected.
NA = Not analyzed.

(a) Toxicity equivalency methodology is WAC 173-340-708(8).
(b) Listed value is for chromium (III). Hexavalent chromium was analyzed for and not detected.

Notes:
Bold indicates a detected compound.
Boxed values exceed preliminary cleanup levels.

TABLE 4
SUMMARY OF DETECTED CONSTITUENTS IN SATURATED ZONE SOIL
AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY SOIL CLEANUP LEVELS
CAP SANTE MARINE ANACORTES, WA

	Preliminary Soil Cleanup Level	MW-3D (6.5-7) KW69C 4/25/2007	MW-3D (8-8.5) KW69A 4/25/2007	MW-3D (9.5-10) KW69B 4/25/2007	SB-2 (8-9) LA89N 5/24/2007	SB-2 (9-10) LA89O 5/24/2007	SB-3 (6-7) LA89L 5/24/2007	SB4 (7-8) LB08I 5/25/2007	SB-7 (5-6) LA89I 5/24/2007	SB8 (7-8) LB08K 5/25/2007	SB8 (8.5-9.5) LB08L 5/25/2007	SB-9 (6-7) LA89F 5/24/2007	SB14 (8-9) LB09E 5/25/2007	SB14 (9-10) LB09F 5/25/2007
DIESEL-RANGE HYDROCARBONS														
NWTPH-Dx (mg/kg)														
Diesel	2,000	**3,800** J	**6.3** J	**260** J	**190**	7.3 U	**460**	**32**	6.4 U	**910**	**66**	6.7 U	**48**	**11**
Motor Oil	2,000	**49** J	12 UJ	12 UJ	13 U	15 U	**14**	12 U	13 U	67 U	16 U	14 U	**120**	**60**
GASOLINE-RANGE HYDROCARBONS														
NWTPH-G (mg/kg)														
Gasoline	30	**1,000**	**17**	**260**	**58**	5.7 U	**58**	**43**	5.2 U	**1,800**	**170**	5.6 U	**650**	11 U
BTEX														
EPA Method 8021BMod (µg/kg)														
Benzene	18	**1,200**	19 U	20 U	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	6,400	**740**	19 U	**73**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	1,030	**8,900**	19 U	**550**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
m,p-Xylene	--	**27,000**	39 U	**1,200**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
o-Xylene	--	**990**	19 U	**110**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Xylenes	160,000,000	**27,990**	ND	**1,310**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE ORGANIC COMPOUNDS (VOCs)														
EPA Method 8260B (µg/kg)														
Chloromethane	43	NA	NA	NA	0.7 U	0.9 U	0.7 U	1.2 U	1.0 U	73 U	81 U	1.2 U	74 U	1.3 U
Methylene Chloride	175	NA	NA	NA	1.4 U	1.7 U	1.3 U	2.3 U	2.0 U	200 U	160 U	2.3 U	290 U	2.6 U
Acetone	--	NA	NA	NA	**100**	**37**	**44**	5.7 U	**84**	370 U	400 U	**140**	370 U	**58**
Carbon Disulfide	8,000,000	NA	NA	NA	**4.0**	**3.5**	**1.2** M	**5.2** M	**12**	73 U	81 U	1.2 U	74 U	**1.8**
2-Butanone	--	NA	NA	NA	**19**	**5.3**	**7.0**	5.7 U	**10**	370 U	400 U	**33**	370 U	6.4 U
Benzene	18	NA	NA	NA	**1.6**	0.9 U	**1.1**	**3.8**	1.0 U	**230**	**86**	1.2 U	74 U	1.3 U
Toluene	6,400	NA	NA	NA	**1.8**	0.9 U	**0.7**	**1.4**	1.0 U	**2,500**	**520**	1.2 U	74 U	1.3 U
Ethylbenzene	1,030	NA	NA	NA	**1.6** M	0.9 U	0.7 U	**13**	1.0 U	**12,000**	**2,000**	1.8 U	74 U	1.3 U
m,p-Xylene	--	NA	NA	NA	**4.3**	**1.1**	**0.8**	**19**	1.0 U	**43,000**	**6,700**	1.3 U	74 U	1.3 U
o-Xylene	--	NA	NA	NA	**1.4**	0.9 U	0.7 U	**1.2**	1.0 U	**23,000**	**3,300**	1.3 U	74 U	1.3 U
Total Xylenes	160,000,000	NA	NA	NA	**5.7**	**1.1**	**0.8**	**20.2**	ND	**66,000**	**10,000**	ND	ND	ND
1,3,5-Trimethylbenzene	4,000,000	NA	NA	NA	0.7 U	0.9 U	0.7 U	**20**	1.0 U	**8,000**	**1,700**	1.2 U	74 U	1.3 U
1,2,4-Trimethylbenzene	4,000,000	NA	NA	NA	2.2 U	0.9 U	0.7 U	**98**	1.0 U	**43,000**	**6,300**	1.2 U	74 U	1.3 U
Isopropylbenzene	--	NA	NA	NA	**55**	**13**	0.7 U	**11**	1.0 U	**1,600**	**350**	**18**	74 U	1.3 U
n-Propylbenzene	--	NA	NA	NA	**69**	**9.5**	0.7 U	**50**	1.0 U	**4,500**	**990**	**65**	74 U	1.3 U
sec-Butylbenzene	--	NA	NA	NA	**46**	**6.4**	0.7 U	**15**	1.0 U	73 U	81 U	**68**	**86**	1.3 U
4-Isopropyltoluene	--	NA	NA	NA	0.7 U	0.9 U	0.7 U	**9.3**	1.0 U	**1,400**	**160**	1.2 U	74 U	1.3 U
n-Butylbenzene	--	NA	NA	NA	**49**	**1.3**	0.7 U	**49** M	1.0 U	**5,700** M	**710** M	**70** M	**220**	1.3 U
1,2,4-Trichlorobenzene	--	NA	NA	NA	3.4 U	4.4 U	3.3 U	5.7 U	5.0 U	370 U	400 U	5.8 U	370 U	6.4 U
Naphthalene	7,000	NA	NA	NA	9.2 U	4.4 U	3.3 U	**110**	5.0 U	**11,000**	**1,300**	19 U	370 U	6.4 U
Hexane	4,800,000	NA	NA	NA	**160** J	**4.8**	3.3 U	**190**	5.0 U	**6,900**	**3,900**	**18**	370 U	6.4 U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)														
EPA Method 8270D-SIM (µg/kg)														
Naphthalene	7,000	**5,200** J	**21** J	**330** J	**26** M	**11**	**18** M	**52**	**9.6**	**9,100**	**510**	**8.3**	**16**	**29**
2-Methylnaphthalene	--	**26,000** J	**33** J	**1,200** J	**1,500**	**72**	**16**	**720**	6.4 U	**20,000**	**1,300**	6.4 U	**7.2**	6.5 U
1-Methylnaphthalene	--	**19,000** J	**600** J	**1,700** J	**1,400**	**190**	**200**	**630**	6.4 U	**11,000**	**750**	6.4 U	**46**	6.5 U
Acenaphthylene	--	320 UJ	**16** M,J	32 UJ	27 U	6.4 U	22 U	10 U	6.4 U	140 U	10 U	6.4 U	6.5 U	**7.8**
Acenaphthene	3,000	**1,300** J	**43** J	**150** J	**110**	**9.6**	**83**	**65**	6.4 U	**360**	**28**	6.4 U	**7.8**	**12**
Fluorene	28,000	**1,800** J	**15** J	**130** J	**180**	**9.0**	**160**	**91**	6.4 U	**730**	**55**	6.4 U	6.5 U	**21**
Phenanthrene	--	**4,200** J	**66** J	**360** J	**380**	**16**	**280**	**90**	**9.6**	**1,300**	**110**	**24**	**14**	**130**
Anthracene	617,000	**320** J	**13** J	**34** J	**18**	6.4 U	**13** M	6.2 U	6.4 U	**54**	**6.8**	6.4 U	6.5 U	**25**
Fluoranthene	4,000	**91** J	**11** J	**8.2** J	**21**	**13**	**28**	**9.3**	**13**	**58**	**16**	**27**	**30**	**260**

TABLE 4
SUMMARY OF DETECTED CONSTITUENTS IN SATURATED ZONE SOIL
AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY SOIL CLEANUP LEVELS
CAP SANTE MARINE ANACORTES, WA

	Preliminary Soil Cleanup Level	MW-3D (6.5-7) KW69C 4/25/2007	MW-3D (8-8.5) KW69A 4/25/2007	MW-3D (9.5-10) KW69B 4/25/2007	SB-2 (8-9) LA89N 5/24/2007	SB-2 (9-10) LA89O 5/24/2007	SB-3 (6-7) LA89L 5/24/2007	SB4 (7-8) LB08I 5/25/2007	SB-7 (5-6) LA89I 5/24/2007	SB8 (7-8) LB08K 5/25/2007	SB8 (8.5-9.5) LB08L 5/25/2007	SB-9 (6-7) LA89F 5/24/2007	SB14 (8-9) LB09E 5/25/2007	SB14 (9-10) LB09F 5/25/2007
Pyrene	177,000	**160** J	**11** J	**13** J	**22**	**9.6**	**36**	**9.9**	**12**	**87**	**18**	**32**	**26**	**200**
Benzo(a)anthracene	6.4	65 UJ	**11** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	**15**	6.2 U	**10**	**7.2**	**60**
Chrysene	7	65 UJ	**9.9** J	6.4 UJ	**6.6**	6.4 U	**7.2**	6.2 U	6.4 U	**15**	6.2 U	**9.6**	**10**	**73**
Benzo(b)fluoranthene	22	65 UJ	**9.9** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	**13**	6.2 U	**6.4**	**9.1**	**72**
Benzo(k)fluoranthene	22	65 UJ	**9.9** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	13 U	6.2 U	**6.4**	6.5 U	**38**
Benzo(a)pyrene	17	65 UJ	**9.3** J	**7** J	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	13 U	6.2 U	**9.6**	**6.5**	**62**
Indeno(1,2,3-cd)pyrene	62	65 UJ	**9.3** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	13 U	6.2 U	6.4 U	6.5 U	**34**
Dibenzo(a,h)anthracene	32	65 UJ	**8.6** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	13 U	6.2 U	6.4 U	6.5 U	**7.8**
Benzo(ghi)perylene	--	65 UJ	**8.6** J	6.4 UJ	6.6 U	6.4 U	6.6 U	6.2 U	6.4 U	13 U	6.2 U	6.4 U	**6.5**	**44**
Dibenzofuran	--	**680** J	**36** J	**79** J	**54**	6.4 U	**43**	**44**	6.4 U	**280**	**26**	6.4 U	6.5 U	**9.8**
TOTAL METALS														
EPA Method 6010B (mg/kg)														
Total Chromium	120,000 (a)	NA	NA	NA	NA	NA	NA	NA	**16.9**	NA	NA	NA	NA	NA
Copper	36	NA	NA	NA	NA	NA	NA	NA	**6.9**	NA	NA	NA	NA	NA
Lead	81	2 U	2 U	6 U	3 U	3 U	2 U	2 U	3 U	3 U	3 U	3 U	**3**	**6**
Zinc	86	NA	NA	NA	NA	NA	NA	NA	**20**	NA	NA	NA	NA	NA

ND = Not Detected
NA = Not Analyzed
U = The compound was not detected at the given reporting limit.
UJ = The compound was not detected; the given reporting limit is an estimate.
J = The compound was detected; the given concentration is an estimate.
M = Estimated value detected and confirmed by analyst, but with low spectral match parameters.

(a) Listed value is for chromium(III). Hexavalent chromium was anlyzed for and not detected.

Notes:
Bolded value indicates a detected result.
Solid-lined boxed values exceed preliminary cleanup levels.
Dashed-lined boxed values exceed preliminary cleanup levels protective of groundwater as marine surface water, but an empirical demonstration shows these values are protective of groundwater as marine surface water. Values are less than preliminary cleanp levels protective of direct human contact.

TABLE 5
SUMMARY OF SURVEYED ELEVATIONS AND CALCULATED GROUNDWATER ELEVATIONS
CAP SANTE MARINE
ANACORTES, WASHINGTON

Well	Ground Surface Elevation (ft, MLLW)	Reference Elevation (a) (ft, MLLW)	5/3/2007 Calculated Groundwater Elevation (ft, MLLW)	5/3/2007 Measured Depth to Groundwater (ft)
MW-01	11.87	11.59	8.06	3.53
MW-02	12.74	12.30	6.76	5.54
MW-03	11.39	11.04	6.45	4.59
MW-04	11.32	11.02	6.64	4.38
Surface Water, Cap Sante Waterway			1.47 (b)	

(a) Top of PVC well casing.
(b) Based on staff gauge located at Cap Sante Marina.

TABLE 6
SUMMARY OF ESTIMATED HYDRAULIC CONDUCTIVITIES FOR SHALLOW SATURATED SOIL
CAP SANTE MARINE
ANACORTES, WASHINGTON

Monitoring Well	Estimated Hydraulic Conductivity (cm/sec)
MW-01	1.37E-02
MW-02	6.08E-02
MW-03	6.33E-02
MW-04	7.32E-02

cm/sec = Centimeters per second.

TABLE 7
PRELIMINARY GROUNDWATER CLEANUP LEVELS FOR CONSTITUENTS OF CONCERN AND OTHER DETECTED CONSTITUENTS
CAP SANTE MARINE
ANACORTES, WASHINGTON

Constituent	AWQC for Protection of Aquatic Life - Acute (b)	AWQC for Protection of Aquatic Life - Chronic (b)	AWQC for Protection of Human Health - Organisms Only (c)	National Recommended Water Quality Criteria (a)			MTCA Method B Standard Formula Surface Water Values Carcinogen	MTCA Method B Standard Formula Surface Water Values Non Carcinogen	Concentration Associated with 10^{-5} Risk (if carcinogen)	MTCA Method A	Background (d)	Preliminary Cleanup Level (e)
				Protection of Aquatic Life - Acute	Protection of Aquatic Life - Chronic	Protection of Human Health - Organisms Only						
TOTAL METALS (mg/L)												
Chromium (III)	--	--	--	--	--	--	--	240	--	0.05 (f)	0.01 (g)	240
Chromium (VI)	1.1	0.05	--	1.1	0.05	--	--	0.49		0.05 (f)	--	0.05
Copper	0.005	0.003	--	0.0048	0.003	--	--	2.7	--		0.020	0.02
Lead	0.21	0.01	--	0.21	0.0081	--	--	--	--		--	0.0081
Zinc	0.090	0.081	--	0.09	0.081	26	--	16.5	--		0.16	0.16
TOTAL DIESEL RANGE PETROLEUM HYDROCARBONS (µg/L)												
Gasoline-Range	--	--	--	--	--	--	--	--	--	800/1,000 (h,i)	--	800/1,000 (i)
Diesel-Range	--	--	--	--	--	--	--	--	--	500 (h)	--	500
Motor Oil-Range	--	--	--	--	--	--	--	--	--	500 (h)	--	500
VOLATILES (µg/L)												
Acetone	--	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	--	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	--	--	--	--	--	--	--	--	--	--	--	--
4-Isopropyltoluene	--	--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	--	--	--	--	--	--	--	--	--	20	--	20
1,2-Dibromoethane (EDB)	--	--	--	--	--	--	--	--	--	0.01	--	0.01
1,2-Dichloroethane (EDC)	--	--	99	--	--	37	59.4	--	594	5	--	37
n-Hexane			--	--	--	--	--	--	--	--	--	--
Benzene	--	--	71	--	--	51	22.7	1,496	227	5	--	51
Ethylbenzene	--	--	2900	--	--	2100	--	6,914	--	700	--	2100
Toluene	--	--	200,000	--	--	15,000	--	19,000	--	1,000	--	15,000
Xylene	--	--	--	--	--	--	--	--	--	1000 (j)	--	1000 (j)
PAHs (µg/L)												
Acenaphthylene	--	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	--	--	--	990	--	643	--	--	--	643
Fluorene	--	--	14,000	--	--	5300	--	3,460	--	--	--	3,460
Phenanthrene	--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	110,000	--	--	40,000	--	25,900	--	--	--	25,900
Fluoranthene	--	--	370	--	--	140	--	90.2	--	--	--	90
Pyrene	--	--	11,000	--	--	4,000	--	2,590	--	--	--	2,590
Dibenzofuran	--	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	--	--	--	--	--	4,940	--	160 (k)	--	4940
2-Methylnaphthalene			--	--	--	--	--	--	--	-- (k)	--	--
1-Methylnaphthalene			--	--	--	--	--	--	--	-- (k)	--	--
Benzo(a)pyrene	--	--	0.031	--	--	0.018	0.0296	--	0.296	0.1	--	0.018
Benzo(a)anthracene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
Benzo(b)fluoranthene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
Benzo(k)fluoranthene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
Chrysene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
Dibenzo(a,h)anthracene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
Indeno(1,2,3-cd)pyrene	--	--	0.031	--	--	0.018	0.0296	--	0.296	--	--	0.018
cPAH TEQ	--	--	0.031	--	--	--	--	--	--	0.1	--	0.1
PCBs (µg/L)												
Total PCBs	10	0.03	0.00017	--	0.03	0.000064	--	--	--	0.1	--	0.000064

TABLE 7
PRELIMINARY GROUNDWATER CLEANUP LEVELS FOR CONSTITUENTS OF CONCERN
AND OTHER DETECTED CONSTITUENTS
CAP SANTE MARINE
ANACORTES, WASHINGTON

(a) National Recommmended Water Quality Criteria (EPA 2006).

(b) Ambient water quality criteria for protection of aquatic life from WAC 173-201A-040 and 40 C.F.R. Part 131.

(c) Ambient water quality criteria for protection of human health from 40 C.F.R. Part 131d (National Toxics Rule).

(d) Natural background based on "Draft Report, Sections 1-7 Background Concentrations of Selected Chemicals in Water, Soil, Sediments, or Air of Washington State (PTI 1989).

(e) Preliminary cleanup level based on lowest groundwater criteria corrected for background, as indicated by shading. Further adjustments to those preliminary cleanup levels that are found to be lower than the practical quantitation limits may be necessary, in accordance with WAC 173-340-720(7)(c).

(f) MTCA Method a cleanup level is for total chromium.

(g) Background concentration is for total chromium.

(h) Preliminary cleanup level based on MTCA Method A groundwater cleanup level in accordance with WAC 173-340-730(a)(b)(iii)(c).

(i) MTCA Method A cleanup level is 800 µg/L when benzene is present and 1,000 µg/L when benzene is not present.

(j) MTCA Method A cleanup level is for total xylenes.

(k) MTCA Method A cleanup level is a total value for naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene.

Note: Shaded cell indicates basis for preliminary cleanup level.

TABLE 8
SUMMARY OF DETECTED CONSITITUENTS IN GROUNDWATER AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY CLEANUP LEVELS
CAP SANTE MARINE
ANACORTES, WAHSINGTON

	Preliminary Groundwater Cleanup Levels	MW-01 KX91C/H 5/3/2007	MW-02 KX91A/F 5/3/2007	MW-03S KX91B/G 5/3/2007	MW-04 KX91D/I 5/3/2007	SBW-1 LA86A,C / LD18A 5/24/2007	SBW-1b LA86B,D / LD18B 5/24/2007
GASOLINE-RANGE HYDROCARBONS							
NWTPH-G (mg/L)							
Gasoline	0.8	0.25 U	0.25 U	**2.8**	0.25 U	0.25 U	0.25 U
VOLATILE ORGANIC COMPOUNDS (VOCs)							
EPA Method 8260 (µg/L)							
Acetone	--	15 U	15 U	**290**	3.0 U	3.0 U	3.0 U
Carbon Disulfide	--	1.0 U	1.0 U	**0.6**	**0.3**	0.2 U	0.2 U
Benzene	51	1.0 U	1.0 U	**610**	0.2 U	0.2 U	**1.0**
Toluene	15,000	1.0 U	1.0 U	**39**	0.2 U	0.2 U	0.2 U
Ethylbenzene	2,100	1.0 U	1.0 U	**85**	0.2 U	0.2 U	0.2 U
m,p-Xylene	1,000	2.0 U	2.0 U	**290**	0.4 U	0.4 U	0.4 U
o-Xylene	1,000	1.0 U	1.0 U	**37**	0.2 U	0.2 U	0.2 U
1,3,5-Trimethylbenzene	--	1.0 U	1.0 U	**26**	0.2 U	0.2 U	0.2 U
Isopropylbenzene	--	1.0 U	1.0 U	**12**	0.2 U	0.2 U	0.2 U
n-Propylbenzene	--	1.0 U	1.0 U	**12**	0.2 U	0.2 U	0.2 U
sec-Butylbenzene	--	1.0 U	1.0 U	**1.8**	0.2 U	0.2 U	0.2 U
4-Isopropyltoluene	--	1.0 U	1.0 U	**1.7**	0.2 U	0.2 U	0.2 U
Naphthalene	--	2.5 U	2.5 U	**25 J**	0.5 U	0.5 U	0.5 U
Methyl tert-Butyl Ether	20	**1.6**	1.0 U	0.2 U	0.2 U	0.2 U	0.2 U
Hexane	--	0.2 U	0.2 U	**16**	0.2 U	0.2 U	0.2 U
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)							
EPA Method 8270 (µg/L)							
Acenaphthene	643	0.10 U	**0.27**	**1.6**	0.10 U	0.10 U	0.10 U
Fluorene	3,460	0.10 U	**0.15**	**0.79**	0.10 U	0.10 U	0.10 U
Phenanthrene	--	0.10 U	**0.24**	**0.80**	0.10 U	0.10 U	0.10 U
Anthracene	25,900	0.10 U	0.10 U	**0.11**	0.10 U	0.10 U	0.10 U
Dibenzofuran	32	0.10 U	0.10 U	**0.39**	0.10 U	0.10 U	0.10 U
Naphthalene	4,940	0.10 U	0.10 U	**30**	0.10 U	0.10 U	0.10 U
2-Methylnaphthalene	--	0.10 U	0.10 U	**26**	0.10 U	0.10 U	0.10 U
1-Methylnaphthalene	--	0.10 U	0.10 U	**19**	0.10 U	0.10 U	0.10 U
Total Napthalenes	160	0.10 U	0.10 U	**75**	0.10 U	0.10 U	0.10 U
METALS							
EPA Method 6010 (µg/L)							
Total Lead	8.1	1 U	**4**	1 U	1 U	1 U	2 U
Dissolved Lead	8.1	1 U	1 U	1 U	2 U	2 U	2 U

TABLE 8
SUMMARY OF DETECTED CONSITITUENTS IN GROUNDWATER AND COMPARISON OF ANALYTICAL RESULTS TO PRELIMINARY CLEANUP LEVELS
CAP SANTE MARINE
ANACORTES, WAHSINGTON

	Preliminary Groundwater Cleanup Levels	MW-01 KX91C/H 5/3/2007	MW-02 KX91A/F 5/3/2007	MW-03S KX91B/G 5/3/2007	MW-04 KX91D/I 5/3/2007	SBW-1 LA86A,C / LD18A 5/24/2007	SBW-1b LA86B,D / LD18B 5/24/2007
HEXAVALENT CHROMIUM							
EPA Method 3500CRD (mg/L)							
Hexavalent chromium	0.05	0.010 UJ	0.010 UJ	**0.012** J	0.010 UJ	0.011 UJ	0.011 U
CONVENTIONAL CHEMISTRY PARAMETERS							
Conductivity (umhos/cm)		2600	12900	14800	23800	21800	21000
Total Dissolved Solids (mg/L)		1460	7770	9030	15500	14800	14400
Salinity (ppt)		1.30	7.20	8.50	14.2	12.9	12.5
Chloride (mg/L)		495	3950	4950	8940	8130	7900
FIELD PARAMETERS							
pH (Standard Units)		7.65	7.42	7.42	7.92	7.41	7.41
Conductivity (µS/cm)		1,926	12,375	11,284	22,800	17,973	17,973
Turbidity (NTU)		low	999	low	361	4.5	4.5
Dissolved Oxygen (mg/L)		0.00	-0.05	0.00	-0.06	1.75	1.75
Temperature (°C)		13.2	10.7	11.3	11.9	17.0	17.0
Ferrous Iron (mg/L)		0.8	0.9	0.4	0.6	1.8	1.8

mg/L = milligrams per liter (ppm).
µg/L = micrograms per liter (ppb).
U = The compound was not detected at the given reporting limit
UJ = The compound was not detected; the given reporting limit is an estimate
J = The compound was detected; the given concentration is an estimate

Notes:
Box indicates concentration greater than the preliminary cleanup level
Bold indicates detected concentration.