TABLE B-22
PREVALENCE OF DETECTED CHEMICALS IN SOIL - RISBON-59 AREA
CASMALIA RESOURCES SUPERFUND SITE REMEDIAL INVESTIGATION

		All Depth Ranges					0 to 6 Inches					0 to 5 Feet					0 to 10 Feet					Greater than 10 Feet					Screening Levels			
Compound	CAS Number	Number of Detects	Number of Samples Collected	FOD[1]	Range of Detected Concentrations[2]	Average Detected Value	Number of Detects	Number of Samples Collected	FOD[1]	Range of Detected Concentrations[2]	Average Detected Value	Number of Detects	Number of Samples Collected	FOD[1]	Range of Detected Concentrations[2]	Average Detected Value	Number of Detects	Number of Samples Collected	FOD[1]	Range of Detected Concentrations[2]	Average Detected Value	Number of Detects	Number of Samples Collected	FOD[1]	Range of Detected Concentrations[2]	Average Detected Value	Industrial PRG	Industrial PRG (CA)	Lowest Ecological Screening Level	UTL[3]
Metals and Cyanide (mg/kg)																														
Aluminum	7429-90-5	12	12	100%	12000 - 21000	16500	1	1	100%	19000 - 19000	19000	1	1	100%	19000 - 19000	19000	5	5	100%	15000 - 21000	18000	7	7	100%	12000 - 20000	15428.57143	100000			18000
Arsenic	7440-38-2	12	12	100%	0.2 - 5.7	2.583333333	1	1	100%	3 - 3	3.000	1	1	100%	3 - 3	3.000	5	5	100%	2 - 3	2.460	7	7	100%	0.2 - 5.7	2.671428571	1.590	0.251396321	18	22
Barium	7440-39-3	12	12	100%	31 - 730	129.0833333	1	1	100%	71 - 71	71.000	1	1	100%	71 - 71	71.000	5	5	100%	59 - 100	81.400	7	7	100%	31 - 730	163.1428571	66577.34934	5400	330	174
Beryllium	7440-41-7	12	12	100%	0.39 - 0.57	0.496666667	1	1	100%	0.55 - 0.55	0.550	1	1	100%	0.55 - 0.55	0.550	5	5	100%	0.48 - 0.55	0.522	7	7	100%	0.39 - 0.57	0.478571429	1940.690		10	0.91
Cadmium	7440-43-9	12	12	100%	0.58 - 2	0.911666667	1	1	100%	0.67 - 0.67	0.670	1	1	100%	0.67 - 0.67	0.670	5	5	100%	0.67 - 0.85	0.734	7	7	100%	0.58 - 2	1.038571429	451.413		0.36	3.2
Calcium	7440-70-2	12	12	100%	2200 - 7800	4775	1	1	100%	3500 - 3500	3500.000	1	1	100%	3500 - 3500	3500.000	5	5	100%	3500 - 7800	4940.000	7	7	100%	2200 - 6400	4657.142857				
Chromium	7440-47-3	12	12	100%	13 - 50	19.66666667	1	1	100%	17 - 17	17.000	1	1	100%	17 - 17	17.000	5	5	100%	13 - 22	17.8	7	7	100%	14 - 50	21	448.317		0.4	47
Cobalt	7440-48-4	12	12	100%	3.1 - 11	5.975	1	1	100%	5.6 - 5.6	5.600	1	1	100%	5.6 - 5.6	5.600	5	5	100%	4 - 8.1	5.720	7	7	100%	3.1 - 11	6.157142857	1921.353		13	20
Copper	7440-50-8	12	12	100%	9.1 - 20	12.34166667	1	1	100%	13 - 13	13.000	1	1	100%	13 - 13	13.000	5	5	100%	10 - 16	12.400	7	7	100%	9.1 - 20	12.3	40876.65792		28	19
Iron	7439-89-6	12	12	100%	17000 - 33000	23500	1	1	100%	22000 - 22000	22000	1	1	100%	22000 - 22000	22000	5	5	100%	19000 - 29000	22600	7	7	100%	17000 - 33000	24142.85714	100000			25000
Lead	7439-92-1	3	12	25%	12 - 15	13.33333333	1	1	100%	13 - 13	13.000	1	1	100%	13 - 13	13.000	1	5	20%	13 - 13	13.000	2	7	29%	12 - 15	13.5	800		11	11.9
Magnesium	7439-95-4	12	12	100%	4600 - 6600	5191.666667	1	1	100%	6100 - 6100	6100	1	1	100%	6100 - 6100	6100	5	5	100%	4800 - 6600	5520.000	7	7	100%	4600 - 6000	4957.142857				55000
Manganese	7439-96-5	12	12	100%	61 - 410	156.6666667	1	1	100%	170 - 170	170.000	1	1	100%	170 - 170	170.000	5	5	100%	110 - 270	172.000	7	7	100%	61 - 410	145.7142857	19458.10708			330
Mercury	7439-97-6	9	12	75%	0.011 - 0.073	0.024	1	1	100%	0.012 - 0.012	0.012	1	1	100%	0.012 - 0.012	0.012	5	5	100%	0.012 - 0.073	0.029	4	7	57%	0.011 - 0.022	0.01825	306.600		0.1	0.026
Molybdenum	7439-98-7	11	12	92%	0.95 - 3.6	1.995454545	1	1	100%	1.4 - 1.4	1.400	1	1	100%	1.4 - 1.4	1.400	5	5	100%	0.95 - 3.6	1.890	6	7	86%	1.1 - 2.9	2.083333333	5109.948		2	10
Nickel	7440-02-0	12	12	100%	24 - 45	32.25	1	1	100%	28 - 28	28.000	1	1	100%	28 - 28	28.000	5	5	100%	26 - 35	29.600	7	7	100%	24 - 45	34.14285714	20439.16445		30	49
Potassium	7440-09-7	12	12	100%	1800 - 3500	2441.666667	1	1	100%	2800 - 2800	2800	1	1	100%	2800 - 2800	2800	5	5	100%	2100 - 3500	2600.000	7	7	100%	1800 - 3200	2328.571429				
Selenium	7782-49-2	2	12	17%	0.98 - 1.1	1.04	0	1	0%	- 0		0	1	0%	-		2	5	40%	0.98 - 1.1	1.040	0	7	0%	- 0		5109.948		1	3.3
Sodium	7440-23-5	12	12	100%	1500 - 3600	2366.666667	1	1	100%	3500 - 3500	3500	1	1	100%	3500 - 3500	3500	5	5	100%	1600 - 3600	2660	7	7	100%	1500 - 3400	2157.142857				
Thallium	7440-28-0	2	12	17%	0.4 - 2.3	1.35	0	1	0%	- 0.45		0	1	0%	-		1	5	20%	2.3 - 2.3	2.300	1	7	14%	0.4 - 0.88	0.4	67.4519909		1	0.64
Tin	7440-31-5	7	12	58%	13 - 20	14.57142857	0	1	0%	- 0		0	1	0%	-		2	5	40%	14 - 15	14.500	5	7	71%	13 - 20	14.6	100000.000		50	65
Vanadium	7440-62-2	12	12	100%	27 - 50	36.33333333	1	1	100%	39 - 39	39.000	1	1	100%	39 - 39	39.000	5	5	100%	27 - 50	37.200	7	7	100%	30 - 42	35.71428571	1021.997911		2	81
Zinc	7440-66-6	12	12	100%	41 - 380	95.75	1	1	100%	46 - 46	46	1	1	100%	46 - 46	46	5	5	100%	42 - 380	124.400	7	7	100%	41 - 230	75.28571429	100000.000		50	104
Total Cyanide	57-12-5	2	12	17%	0.113 - 0.114	0.114	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.113 - 0.113	0.113	1	7	14%	0.114 - 0.114	0.114	12313.1014			
VOCs (mg/kg)																														
1,2,4-Trimethylbenzene	95-63-6	1	12	8%	0.0014 - 0.0014	1.400E-03	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0014 - 0.0014	0.001	0	7	0%	- 0		170.272			
1,2-Dichloroethene	540-59-0	1	12	8%	0.00072 - 0.00072	7.20E-04	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.00072 - 0.00072	0.001	0	7	0%	- 0					
Acetone	67-64-1	1	12	8%	0.085 - 0.085	0.085	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.085 - 0.085	0.085	54320.98608			
Benzene	71-43-2	2	12	17%	0.00076 - 0.0035	0.002	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		2	7	29%	0.00076 - 0.0035	0.00213	1.409			
Ethylbenzene	100-41-4	2	12	17%	0.00082 - 0.0066	0.004	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.00082 - 0.00082	0.001	1	7	14%	0.0066 - 0.0066	0.0066	395			
Isopropylbenzene	98-82-8	1	12	8%	0.00041 - 0.00041	0.000	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.00041 - 0.00041	0.000	0	7	0%	- 0		1977.450			
Methyl ethyl ketone	78-93-3	3	12	25%	0.0074 - 0.013	9.667E-03	0	1	0%	- 0		0	1	0%	-		2	5	40%	0.0074 - 0.0086	0.008	1	7	14%	0.013 - 0.013	0.013	113264.388			
n-Butylbenzene	104-51-8	1	12	8%	0.00088 - 0.00088	8.800E-04	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.00088 - 0.00088	0.001	0	7	0%	- 0		240.000			
n-Propylbenzene	103-65-1	1	12	8%	0.0012 - 0.0012	0.001	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0012 - 0.0012	0.001	0	7	0%	- 0		240.000			
o-Xylene	95-47-6	1	12	8%	0.0022 - 0.0022	0.002	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.0022 - 0.0022	0.0022				
p-Isopropyltoluene	99-87-6	1	12	8%	0.0012 - 0.0012	0.001	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0012 - 0.0012	0.001	0	7	0%	- 0					
Styrene	100-42-5	1	12	8%	0.00065 - 0.00065	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00065 - 0.00065	0.00065	1700			
Tetrachloroethylene	127-18-4	1	12	8%	0.0055 - 0.0055	0.006	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0055 - 0.0055	0.006	0	7	0%	- 0		1.308620966			
Toluene	108-88-3	1	12	8%	0.0014 - 0.0014	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.0014 - 0.0014	0.0014	520		200	
Total Xylenes	1330-20-7	1	12	8%	0.0039 - 0.0039	3.900E-03	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.0039 - 0.0039	0.0039	420.000			
Trichloroethylene	79-01-6	1	12	8%	0.0012 - 0.0012	0.001	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0012 - 0.0012	0.0012	0	7	0%	- 0		0.114737659	6.46752801		
SVOCs (mg/kg)																														
(-)-Globulol	489-41-8	1	1	100%	1.6 - 1.6	1.600				-					-		1	1	100%	1.6 - 1.6	1.6				-					
1H-Cycloprop[e]azulene, decahydro-	25246-27-9	1	1	100%	2 - 2	2.000				-					-		1	1	100%	2 - 2	2				-					
1R- alpha.-Pinene	7785-70-8	1	1	100%	2.3 - 2.3	2.300				-					-		1	1	100%	2.3 - 2.3	2.3				-					
2,4-Dinitrotoluene	121-14-2	1	12	8%	0.024 - 0.024	0.024	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.024 - 0.024	0.024	1231.213			
2-Nitroaniline	88-74-4	1	12	8%	0.02 - 0.02	0.020	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.02 - 0.02	0.02	1830.232			
cyclic octaatomic sulfur	010544-50-0	2	3	67%	5.1 - 5.4	5.250				-					-		1	1	100%	5.1 - 5.1	5.1	1	2	50%	5.4 - 5.4	5.4				
Di-n-butylphthalate	84-74-2	1	12	8%	0.014 - 0.014	0.014	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.014 - 0.014	0.014	61560.629		200	
Ethylmethanesulfonate	62-50-0	1	12	8%	0.095 - 0.095	0.095	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.095 - 0.095	0.095	0	7	0%	- 0					
Eucalyptol	470-82-6	1	1	100%	1.9 - 1.9	1.900				-					-		1	1	100%	1.9 - 1.9	1.9				-					
Phenanthrene	85-01-8	1	12	8%	0.023 - 0.023	0.023	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.023 - 0.023	0.023				
PAHs (mg/kg)																														
Acenaphthene	83-32-9	3	12	25%	0.0025 - 0.032	0.012	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.032 - 0.032	0.032	2	7	29%	0.0025 - 0.0027	0.0026	29219.327		20	
Acenaphthylene	208-96-8	2	12	17%	0.0038 - 0.004	0.004	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.004 - 0.004	0.004	1	7	14%	0.0038 - 0.0038	0.0038				
Anthracene	120-12-7	2	12	17%	0.0015 - 0.0016	0.002	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0016 - 0.0016	0.002	1	7	14%	0.0015 - 0.0015	0.0015	100000			
Benzo(a)anthracene	56-55-3	4	12	33%	0.0025 - 0.051	0.016	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0025 - 0.0025	0.0025	3	7	43%	0.0027 - 0.051	0.015866667	2.110			
Benzo(b)fluoranthene	205-99-2	1	12	8%	0.015 - 0.015	0.015	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.015 - 0.015	0.015	2.110			
Benzo(k)fluoranthene	207-08-9	1	12	8%	0.14 - 0.14	0.140	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.14 - 0.14	0.140	0	7	0%	- 0		21.096	1.283424799		
Chrysene	218-01-9	4	12	33%	0.0029 - 0.089	0.029	0	1	0%	- 0		0	1	0%	-		2	5	40%	0.0029 - 0.017	0.010	2	7	29%	0.007 - 0.089	0.048	210.9622922	12.83424799		
Fluoranthene	206-44-0	2	12	17%	0.002 - 0.0066	0.004	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0066 - 0.0066	0.007	1	7	14%	0.002 - 0.002	0.002	22000.353			
Fluorene	86-73-7	4	12	33%	0.011 - 0.15	0.055	0	1	0%	- 0		0	1	0%	-		2	5	40%	0.011 - 0.042	0.0265	2	7	29%	0.016 - 0.15	0.083	26281.433		30	
Indeno[1,2,3-c,d]pyrene	193-39-5	2	12	17%	0.0032 - 0.0037	0.003	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0032 - 0.0032	0.0032	1	7	14%	0.0037 - 0.0037	0.0037	2.110			
Naphthalene	91-20-3	2	12	17%	0.0025 - 0.0026	0.003	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.0025 - 0.0025	0.003	1	7	14%	0.0026 - 0.0026	0.0026	187.691	4.2		
N-Nitrosodiethylamine	55-18-5	3	12	25%	0.34 - 0.96	0.623	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.34 - 0.34	0.340	2	7	29%	0.57 - 0.96	0.765	0.011			
N-Nitrosodimethylamine	62-75-9	1	12	8%	0.14 - 0.14	0.140	1	1	100%	0.14 - 0.14	0.140	1	1	100%	0.14 - 0.14	0.140	1	5	20%	0.14 - 0.14	0.140	0	7	0%	- 0		0.034			
N-Nitrosodi-n-butylamine	924-16-3	3	12	25%	0.37 - 0.68	0.523	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.37 - 0.37	0.370	2	7	29%	0.52 - 0.68	0.6	0.058			
N-Nitrosomethylethylamine	10595-95-6	5	12	42%	0.11 - 0.15	1.280E-01	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.15 - 0.15	0.150	4	7	57%	0.11 - 0.14	0.1225	0.078			
Pyrene	129-00-0	4	12	33%	0.0041 - 0.088	0.030	0	1	0%	- 0		0	1	0%	-		2	5	40%	0.0052 - 0.024	0.015	2	7	29%	0.0041 - 0.088	0.04605	29126.201			
PCBs (mg/kg)																														
Aroclor 1260	11096-82-5	1	12	8%	0.36 - 0.36	0.360	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.36 - 0.36	0.36	0.74			
Pesticides (mg/kg)																														
Aldrin	309-00-2	1	12	8%	0.0007 - 0.0007	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.0007 - 0.0007	0.0007	0.101			
alpha-BHC	319-84-6	1	12	8%	0.00036 - 0.00036	0.000	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00036 - 0.00036	0.00036	0.359			
beta-BHC	319-85-7	1	12	8%	0.00063 - 0.00063	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00063 - 0.00063	0.00063	1.258			
delta-BHC	319-86-8	1	12	8%	0.00063 - 0.00063	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00063 - 0.00063	0.00063				
Dieldrin	60-57-1	2	12	17%	0.00043 - 0.00077	0.001	0	1	0%	- 0		0	1	0%	-		1	5	20%	0.00043 - 0.00043	0.000	1	7	14%	0.00077 - 0.00077	0.00077	0.108			
Endosulfan II	33213-65-9	1	12	8%	0.00092 - 0.00092	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00092 - 0.00092	0.00092	3700.000			
gamma-BCH (Lindane)	58-89-9	1	12	8%	0.0004 - 0.0004	0.000	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.0004 - 0.0004	0.0004	1.741270679			
Kepone	143-50-0	1	12	8%	0.019 - 0.019	0.019	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.019 - 0.019	0.019	0.215462202			
PCNB (pentachloronitrobenzene)	82-68-8	1	12	8%	0.00082 - 0.00082	0.001	0	1	0%	- 0		0	1	0%	-		0	5	0%	-		1	7	14%	0.00082 - 0.00082	0.00082	6.630			

Notes:
[1] FOD = Percent Frequency of Detection
[2] Minimum value detected above MDL
[3] UTL = Upper Threshold Limit
mg/kg = milligrams/kilogram